FOREST MANAGEMENT AND STUMP-TO-FOREST GATE CHAIN-OF-CUSTODY CERTIFICATION EVALUATION REPORT

Minnesota Department of Natural Resources
Minnesota, USA

SCS-FM/COC-00088N
500 Lafayette Road
St. Paul, MN 55155-4040 USA
Tim Beyer
MN DNR Website

CERTIFIED	EXPIRATION
31 December 2021	30 December 2026

DATE OF FIELD EVALUATION
24 September, 27 September – 1 October 2021
DATE OF REPORT FINALIZATION
23 December 2021

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Foreword

SCS Global Services (SCS) is a certification body accredited by the Forest Stewardship Council to conduct forest management and chain of custody evaluations. Under the FSC / SCS certification system, forest management enterprises (FMEs) meeting international standards of forest stewardship can be certified as "well managed," thereby permitting the FME's use of the FSC endorsement and logo in the marketplace subject to regular FSC / SCS oversight.

SCS deploys interdisciplinary teams of natural resource specialists and other experts in forested regions all over the world to conduct evaluations of forest management. SCS evaluation teams collect and analyze written materials, conduct interviews with FME staff and key stakeholders, and complete field and office audits of subject forest management units (FMUs) as part of certification evaluations. Upon completion of the fact-finding phase of all evaluations, SCS teams determine conformance to the FSC Principles and Criteria.

Organization of the Report

This report of the results of our evaluation is divided into two sections. Section A provides the public summary and background information that is required by the Forest Stewardship Council. This section is made available to the public and is intended to provide an overview of the evaluation process, the management programs and policies applied to the forest, and the results of the evaluation. Section A will be posted on the FSC Certificate Database (FSC Website) no less than 90 days after completion of the on-site evaluation. Section B contains more detailed results and information for required FSC record-keeping or the use by the FME.

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SECTION A – PUBLIC SUMMARY

1. General Information

1.1 Certificate Registration Information

Name and Contact Information

Organization name	Minnesota Department of Natural Resources, SCS-FM/COC-00088N		
Contact person	Tim Beyer, Forest Certification Program Consultant		
Address	500 Lafayette Road St. Paul, MN 55155-4040 USA	Telephone	(651) 259-5256
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		e-mail	Tim.Beyer@state.mn.us
		Website	MN DNR Website

FSC Sales Information

☒*FSC Sales contact information same as above.*			
FSC salesperson			
Address		**Telephone**	
		Fax	
		e-mail	
		Website	

Scope of Certificate

Certificate type	☒ Single FMU	☐ Multiple FMU
	☐ Group	
SLIMF *if applicable*	☐ Small SLIMF certificate	☐ Low intensity SLIMF certificate
	☐ Group SLIMF certificate	
# Group Members (*if applicable)*		
Number of FMU's in scope of certificate	1	
Geographic location of non-SLIMF FMU(s)	*Latitude: 93 degrees 05 minutes W* *Longitude: 44 degrees 57 minutes N*	
Forest zone	☐ Boreal	☒ Temperate
	☐ Subtropical	☐ Tropical
Total forest area in scope of certificate which is:	**Units: ☐ ha or ☒ ac**	
privately managed		
state managed	4,997,383	
community managed		

Number of FMUs in scope that are:			
less than 100 ha in area	0	100 - 1000 ha in area	0

1000 - 10 000 ha in area	0	more than 10 000 ha in area	1
Total forest area in scope of certificate which is included in FMUs that: Units: ☐ ha or ☒ ac			
are less than 100 ha in area	0		
are between 100 ha and 1000 ha in area	0		
meet the eligibility criteria as *low intensity* SLIMF FMUs	0		
Division of FMUs into manageable units:			
Minnesota DNR develops forest resource management plans using the section level of its ecological classification system rather than administrative areas. Seven Section Forest Resource Management Plans (SFRMP) cover DNR-administered forest lands. Forest management is managed across three Administrative Regions and 15 Forestry Areas.			

Social Information

Number of forest workers (including contractors) working in forest within scope of certificate (differentiated by gender):		
Male workers: 817	Female workers: 193	
Number of accidents in forest work since previous evaluation:	Serious: NA	Fatal: NA

Pesticide and Other Chemical Use

☐ *FME does not use pesticides.*

Commercial name of pesticide / herbicide	Active ingredient	Quantity applied since previous evaluation (kg or lbs.)	Total area treated since previous evaluation (ha or ac)	Reason for use
Accord XRT	Glyphosate	187.1 gallons	460.1 ac	Site Prep
Bark Oil Blue	Aliphatic Oil	170.3 gallons	66.1 ac	Invasives
Chopper	Imazapyr	20 ounces	24 ac	Site Prep
Garlon/Element 4, Pathfinder II (same CAS#)	Triclopyr	311.2 gallons	945.1	Invasives, Site Prep, Release
Escort XP	Metsulfuron Methyl	214 ounces	348.7 ac	Invasives
Milestone VM	Aminopyralid	6.1 gallons	174.5 ac	Invasives
Opensight	Metsulfuron Methyl	2.6 gallons	159.0 ac	Invasives
Oust XP	Sulfometuron Methyl	264 ounces	220.2 ac	Site Prep, Release
Rodeo, Roundup Pro (same CAS#)	Glyphosate	79.2 gallons	248.4 ac	Site Prep, Invasives, Release
Transline	Clopyralid	7.3 gallons	86.1 ac	Invasives, Release
Velpar L/DF	Hexazinone	89.4 gallons	383.3 ac	Release

Production Forests

Timber Forest Products	
Total area of production forest (i.e. forest from which timber may be harvested)	2,800,000 acres
Area of production forest classified as 'plantation'	0
Area of production forest regenerated primarily by replanting or by a combination of replanting and coppicing of the planted stems	1,075,000 acres
Area of production forest regenerated primarily by natural regeneration, or by a combination of natural regeneration and coppicing of the naturally regenerated stems	1,725,000 acres

Silvicultural system(s) and area under type of management	
Even-aged management	2,412,600 acres
Clearcut	2,051,500 acres
Shelterwood	103,700 acres
Other:	257,400 acres
Uneven-aged management	252,300 acres
Individual tree selection	5,100 acres
Group selection	
Other:	
☐ Other (e.g. nursery, recreation area, windbreak, bamboo, silvo-pastoral system, agro-forestry system, etc.)	

Non-timber Forest Products (NTFPs)	
Area of forest protected from commercial harvesting of timber and managed primarily for the production of NTFPs or services	2,209,183 acres
Other areas managed for NTFPs or services	0
Approximate annual commercial production of non-timber forest products included in the scope of the certificate, by product type	FY 2020 – 1933 cord equivalents

Species in scope of joint FM/COC certificate: *Scientific/ Latin Name* (Common/ Trade Name)

Conifers

- Pinaceae (pine family)
  - Eastern White Pine *Pinus strobus*
  - Red Pine or Norway Pine *Pinus resinosa*
  - Jack Pine *Pinus banksiana*
  - Black Spruce *Picea mariana*
  - White Spruce *Picea glauca*
  - Tamarack Larch *Larix laricina*
  - Balsam Fir *Abies balsamea*
  - Eastern Hemlock *Tsuga canadensis*
- Cupressaceae (cypress family)
  - Eastern Arborvitae *Thuja occidentalis*
  - Eastern Juniper *Juniperus virginiana*

Hardwoods

- Salicaceae (willow family)

    - Quaking Aspen *Populus tremuloides*
    - Big-tooth Aspen *Populus grandidentata*
    - Ontario Balsam Poplar *Populus balsamifera*
    - Eastern Cottonwood *Populus deltoides*
    - Black Willow *Salix nigra*
    - Peachleaf Willow *Salix amygdaloides*
- Juglandaceae (walnut family)
    - Black Walnut *Juglans nigra*
    - Butternut *Juglans cinerea*
    - Shagbark Hickory *Carya ovata*
    - Bitternut Hickory *Carya cordiformis*
- Betulaceae (birch family)
    - Paper Birch *Betula papyrifera*
    - Yellow Birch *Betula alleghaniensis*
    - River Birch *Betula nigra*
    - American Hornbeam *Carpinus caroliniana*
    - Ironwood *Ostrya virginiana*
- Fagaceae (beech family)
    - White oak *Quercus alba*
    - Bur oak *Quercus macrocarpa*
    - Swamp white oak *Quercus bicolor*
    - Chestnut oak *Quercus prinus*
    - Chinkapin oak *Quercus muhlenbergii*
    - Cottonwood " Populus Deltoides var. occidentalis'
    - Northern red oak *Quercus rubra*
    - Black oak *Quercus velutina*
    - Northern pin oak *Quercus ellipsoidalis*
- Ulmaceae (elm family)
    - Hackberry *Celtis occidentalis*
    - American Elm *Ulmus americana*
    - Slippery Elm *Ulmus rubra*
    - Rock Elm *Ulmus thomasii*
- Moraceae (mulberry family)
    - Red Mulberry *Morus rubra*
- Rosaceae (rose family)
    - American mountain ash *Sorbus americana*
    - Black Cherry *Prunus serotina*
    - Pin cherry *Prunus pensylvanica*
- Fabaceae (pea family)
    - Honey locust *Gleditsia triacanthos*
    - Kentucky coffeetree *Gymnocladus dioicus*
- Sapindaceae (soapberry family)
    - Sugar Maple *Acer saccharum*
    - Black Maple *Acer nigrum*
    - Silver Maple *Acer saccharinum*
    - Red Maple *Acer rubrum*
    - Boxelder *Acer negundo*
- Malvaceae (mallow family)

- Basswood *Tilia americana*
- Oleaceae (olive family)
  - White Ash *Fraxinus americana*
  - Black Ash *Fraxinus nigra*
  - Green Ash (also "Red Ash") *Fraxinus pennsylvanica*

Credit: List of Minnesota Trees Wikipedia (Accessed Oct 5, 2015)

FSC Product Classification

Timber products

Product Level 1	Product Level 2	Species
W1 Rough Wood	W1.1 Roundwood	See "Species in Scope Above"
W1 Rough Wood	W1.2 Fuel Wood	See "Species in Scope Above"
W3 Wood in Chips or particles.	W3.1	See "Species in Scope Above"

Conservation and High Conservation Value Areas

Conservation Area	
Total amount of land in certified area protected from commercial harvesting of timber and managed primarily for conservation objectives (includes both forested and non-forested lands).*	2,197,383 acres

**Note: Total conservation and HCV areas may differ since these may serve different functions in the FME's management system. Designation as HCV may allow for active management, including commercial harvest. Conservation areas are typically under passive management, but may undergo invasive species control, prescribed burns, non-commercial harvest, and other management activities intended to maintain or enhance their integrity. In all cases, figures are reported by the FME as it pertains local laws & regulations, management objectives, and FSC requirements.*

High Conservation Value Forest / Areas

Code	HCV Type	Description & Location	Area
HCV1	Forests or areas containing globally, regionally or nationally significant concentrations of biodiversity values (e.g. endemism, endangered species, refugia).	HCV 1-3 Statewide. Shapefile available by request. Notes: 1 - Most HCVFs are not protected from timber harvesting, and harvesting may be necessary to maintain/enhance the HCVs. Many are MCBS High or Outstanding sites. 2 - There are 35,319 acres of designated current or future old growth that are not currently part of the above number. These stands are managed passively.	262,626 acres for HCV's 1-3

HCV2	Forests or areas containing globally, regionally or nationally significant large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance.		
HCV3	Forests or areas that are in or contain rare, threatened or endangered ecosystems.		
HCV4	Forests or areas that provide basic services of nature in critical situations (e.g. watershed protection, erosion control).	Notes: 1 -These are addressed through existing DNR policies / procedures. In many situations, timber harvesting is compatible with the HCVs. 2 - These acres still being refined.	1310 acres
HCV5	Forests or areas fundamental to meeting basic needs of local communities (e.g. subsistence, health).		
HCV6	Forests or areas critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).		

Total area of forest classified as 'High Conservation Value Forest / Area'	263,936 acres

Areas Outside of the Scope of Certification (Partial Certification and Excision)

☐ N/A – All forestland owned or managed by the applicant is included in the scope.	
☐ Applicant owns and/or manages other FMUs not under evaluation.	
☒ Applicant wishes to excise portions of the FMU(s) under evaluation from the scope of certification.	
Explanation for exclusion of FMUs and/or excision:	State Parks, Scientific and Natural Areas, Agriculture lands, and power and gas line lease areas are excised as they are not managed for timber production.
Control measures to prevent mixing of certified and non-certified product (C8.3):	Certified timber sales are advertised and sold as certified in contracts. The audit reviewed non-certified timber sale contracts managed by the FME in order to confirm that these sales did not carry a certified claim.

Description of FMUs excluded from or forested area excised from the scope of certification:

Name of FMU or Stand	Location (city, state, country)	Size (☐ ha or ☐ ac)

1.2 Standards Applicable

All standards employed are available on the websites of FSC International (FSC Website) or SCS Global Services (SCS Global Services Website). All standards are available on request from SCS Global Services via the comment form on our website. When no national standard exists for the country/region, SCS Interim Standards are developed by modifying SCS' Generic Interim Standard to reflect forest management in the region and by incorporating relevant components of any Draft Regional/National Standard and comments from stakeholders. More than one month prior to the start of the field evaluation, SCS Draft Interim Standards are provided to stakeholders identified by FSC International, SCS, forest managers under evaluation, and the FSC National or Regional Office for comment. SCS' COC indicators for FMEs are based on the most current versions of the FSC Chain of Custody Standard, FSC Standard for Group Entities in Forest Management Groups (FSC-STD-30-005), and FSC Accreditation Requirements.

Standards applicable *NOTE: Please include the full standard name and Version number and check all that apply.*	☒ Forest Stewardship Standard(s), including version: FSC-US Forest Management Standard, v1-0.
	☒ SCS COC indicators for FMEs, V8-0
	☒ FSC Trademark Standard (FSC-STD-50-001 V2-0)
	☐ FSC standard for group entities in forest management groups (FSC-STD-30-005), V1-1
	☐ Other:

1.3 Conversion Table English Units to Metric Units

Length Conversion Factors

To convert from	To	multiply by
Mile (US Statute)	Kilometer (km)	1.609347
Foot (ft.)	Meter (m)	0.3048
Yard (yd.)	Meter (m)	0.9144

Area Conversion Factors

To convert from	To	multiply by
Square foot (sq. ft.)	Square meter (m^2)	0.09290304
Acre (ac)	Hectare (ha)	0.4047

Volume Conversion Factors

To convert from	To	multiply by
Cubic foot (cu ft.)	Cubic meter (m^3)	0.02831685
Gallon (gal)	Liter (l)	4.546

Quick reference	
1 acre	= 0.404686 ha
1,000 acres	= 404.686 ha

1 board foot	= 0.00348 cubic meters
1,000 board feet	= 3.48 cubic meters
1 cubic foot	= 0.028317 cubic meters

2. Description of Forest Management

2.1 Management Context

2.1.1 Regulatory Context

Pertinent Regulations at the National Level

1. Legal rights to harvest	
1.2 Concession licenses	State Forest Practice Acts (state level)
	For US Forest Service: FSH 2409.18, Ch. 50 § 53
	State lands have similar regulations to the USFS law (above) based at the state level
1.3 Management and harvesting planning	National Forest Management Policy Act of 1976 (US Forest Service lands)
	Federal business practices law
	Business & forest practices laws (state level)
1.4 Harvesting permits	For US Forest Service: FSH 2409.18, Ch. 50 § 53
2. Taxes and fees	
2.1 Payment of royalties and harvesting fees	Federal and state tax policies
2.2 Value added taxes and other sales taxes	Sales taxes administered at the State level. Most US states leverage sales taxes
2.3 Income and profit taxes	Internal Revenue Code: federal policy on income taxes, capital gains taxes, inheritance taxes, reforestation tax credits, and other relevant taxes
3. Timber harvesting activities	
3.1 Timber harvesting regulations	
	Forest Principles (UNCED) (Rio de Janeiro, Brazil, June 1992)
	International Tropical Timber Agreement (Geneva, Switzerland, 1994)
	Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)/Federal Environmental Pesticide Control Act (FEPCA) (1947, 1972)
	Federal Plant Pest Act (1957)
	Forest practices acts (state level) based on Clean Water Act (1964)
	Pollution Prevention Act (1990)
	Federal Insecticide Act (1910)
	Plant Quarantine Act (1912)
	Clean Water Act (Section 404 wetland protection)
	Fire practices laws (state level)

3.2 Protected sites and species	
	Convention on Nature Protection and Wild Life Preservation in the Western Hemisphere (Washington, DC, 1940)
	Convention on Wetlands of International Importance Especially as Waterfowl Habitat (Ramsar, Iran, 2 Feb 1971)
	Convention Concerning the Protection of the World Cultural and Natural Heritage; (Paris, France, 16 Nov 1972)
	International Plant Protection Convention (IPPC) (1979 Revised Text) (Rome, Italy, 1979)
	Endangered Species Act (1973, 1978, 1979, 1982)
	Clean Water Act (CWA) of 1972
	Clean Air Act (CAA) of 1963
	Resource Conservation & Recovery Act (RCRA) (1976, 1984).
	Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, commonly known as "Superfund") (1980, 1986)
	Convention on Biological Diversity (UNCED) (Rio de Janeiro, Brazil, 5 Jun 1992)
	Framework Convention on Climate Change, (UNCED) (Rio de Janeiro, Brazil, 1992)
	Rio Declaration on Environment and Development (UNCED) (Rio de Janeiro, Brazil, 1992)
	Convention on the Conservation of Migratory Species of Wild Animals (Bonn, Germany, 23 Jun 1979)
	Migratory Bird Treaty Act (1918, 2006)
	Endangered species acts (state level)
	Wildlife laws (state level)
3.3 Environmental requirements	Convention on Environmental Impact Assessment in a Transboundary Context (Espoo, Finland, 1991)
	National Environmental Policy Act (1969, 1975, 1982)
	Environmental quality acts (for all states)
	Water quality protection laws (for all states)
	Water resources laws (for all states)
3.4 Health and safety	National Environmental Policy Act (1969, 1975, 1982)
	Occupational Safety & Health Act (OSHA) (1970)
	OSHA 1910.266: Logging-specific regulations
	Federal Water Pollution Control Act/Clean Water Act (1972, 1977)
3.5 Legal employment	Fair Labor Standards Act (1938, 1946, 1961)
	Equal Pay Act of 1963 (amended the Fair Labor Standards Act)
	Civil Rights Act of 1964
	Occupational Safety & Health Act (OSHA) (1970)
	Americans with Disabilities Act (ADA)
3.6 Conversion	Where regulated, regulated at the state level
4. Third parties' rights	
4.1 Customary rights	Various treaties with American Indian Nations, Tribes, and Bands in the United States

4.2 Free prior and informed consent	Executive Order (EO) 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (1994)
	National Indian Forest Resources Management Act
	American Indian Religious Freedom Act
	Indian Self Determination and Education Assistance Act of 1975
	Indian Civil Rights Act of 1968
4.3 Indigenous peoples rights	Indian Self Determination and Education Assistance Act of 1975
	Native American Grave Protection and Repatriation Act
	Varied treaties with American Indian Nations, Tribes, and Bands in the United States.
	National Historic Preservation Act, including in relation to American Indian sites (1966)
	Tribes are considered Sovereign Nations (a rough legal equivalent to a US State) and have their own judicial systems
5. Trade and transport	
5.1 Classification of species, quantities, qualities	Where regulated, regulated at the state and local level
5.2 Trade and transport	The Lacey Act of 1900
5.3 Offshore trading and transfer pricing	Transfer pricing regulated by the Internal Revenue Code
5.4 Custom regulations	Lacey Act of 1900
5.5 CITES	Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) (Washington DC, 1973)
	Amendment to the Convention on International Trade in Endangered Species of Wild Fauna and Flora (Art.XI) (Bonn, Germany, 23 Jun 1979)
6. Diligence/due care procedures	
6.1 Legislation requiring due diligence/due care procedures	The Lacey Act amendment 2008, (the Food, Conservation, and Energy Act of 2008 expanded its protection to a broader range of plants and plant products (Section 8204. Prevention of Illegal Logging Practices)

Pertinent Regulations at the State / Local Level

The MN Sustainable Forest Resources Act (SFRA) guides management of DNR forests. The SFRA was set up to “ensure the sustainable management, use and protection of the state's forest resources to achieve the state's economic, environmental and social goals.” Additionally, the Minnesota Sustaianable Forest REsrouces Act (SFRA) (MS § 89) provides guidance for forest-related planning, management, finance, forest development, and research. The most relevant statute and rule chapters for DNR’s management are:

Important Statute Chapters
83A-84 Natural Resources
84A-84D Conservation
85-87 Recreation
88-91 Forestry
97-102 Game and Fish

Important Rule Chapters

6100	6102
6134	6136
6230	6240
6284	6216

Minnesota Statutes 2021: CHAPTER 89. STATE FORESTS; TREE PLANTING; FOREST ROADS

Minnesota Administrative Rules – Department of Natural Resources.

Regulatory Context Description1

Minnesota contains over 17 million acres of forest land. Almost one quarter of the forest land is owned and administered by the state. The Forestry Division in the Department of Natural Resources (DNR) manages 4.9 million acres of land.

The state's Sustainable Forest Resources Act defines a policy for all forest land in the state. The policy supports forest management "to achieve the state's economic, environmental, and social goals," now and in the future. In addition, the Legislature has specified a "forest resource management policy" for state forest land administered by DNR. Specifically, state law directs DNR to manage those lands according to the forest management principles of multiple use and sustained yield. These principles, as defined in statutes and shown in Exhibit 1.2, require the department to manage forest resources to meet various forest-related needs of the current generation without jeopardizing the ability of future generations to do the same.

Exhibit 1.2: Forest Management Principles, Minnesota Statutes 2013, Chapter 89

Multiple use: Forest resources are utilized in the combinations that will best meet the needs of the people of the state; including the harmonious and coordinated management of the forest resources, each with the other, without impairment of the productivity of the land and with consideration of the relative values of the resources, and not necessarily the combination of uses resulting in the greatest economic return or unit output Sustained yield: The achievement and maintenance in perpetuity of a high-level annual or regular periodic output of forest resources without impairment of the productivity of the land; allowing for periods of intensification of management to enhance the current or anticipated output of one or more of the resources SOURCE: Minnesota Statutes 2013, 89.001, subds. 9 and 10

2.1.2 Environmental Context

Environmental safeguards:
DNR has an extensive planning process designed to ensure that environmental safeguards are met at the stand level. Each area of the state is covered by a Section Forest Resource Management Plan (SFRMP), which contains ecological descriptions and management recommendations for the areas

[1] From the 2014 Minnesota Office of the Legislative Auditor Evaluation Report on DNR Forest Management

under the plan. At the level of a particular timber harvest, site-level guidelines are considered and, if necessary, are implemented and silviculture prescriptions are completed for each timber stand prior to active management. The silvicultural treatment and timber harvest plan are informed by the native plant communities (NPCs) and site-level ecological classification. Before prescriptions are finalized, they are shared between the Forestry Division for review and comment from the DNR's Fish and Wildlife Division and Ecological & Water Resources Divisions.
Management strategy for the identification and protection of rare, threatened and endangered (RTE) species and their habitats:
Locations of threatened and endangered species and communities are maintained in the Natural Heritage Information System (NHIS). DNR has published a Field Guide to the Native Plant Communities of Minnesota, which describes natural disturbance regimes and successional pathways for NPC classes. Minnesota's Comprehensive Wildlife Conservation Strategy and the State Wildlife Action Plan provide species distribution maps, habitat relationships, and baseline information including general description, legal status, life history, ecology, reproduction, population trends, distribution and abundance, habitat relationships, special requirements, and site- and landscape-level management. Division of Fish and Wildlife has numerous other plans for individual species or groups of wildlife that require similar habitat types.

2.1.3 Socioeconomic Context

As the largest state land management agency, the DNR has numerous direct impacts on the socioeconomic context of the state. Forest products and tourism together are major contributors to the state's economy. This was summarized in the DNR's Strategic Plan 2020-2022, which describes the goal of MN DNR's contribution to strong and sustainable job markets, economies, and communities:

"Minnesota's lands and waters define our state and are a major reason people choose to live, work, and play here. Careful management of our natural resources ensures Minnesota continues to attract future residents, businesses, tourists, and skilled workers to all parts of the state. We have been successful in the past at growing a vibrant economy and protecting the land and water that make Minnesota among the nation's leaders in quality of life measures. Sound natural-resource based economic development will ensure our competitive advantage as a top state. The following strategies serve to guide targeted actions related to Goal 3:

- Manage for healthy, productive forests. Ensure Minnesota's forests continue to provide a full range of values, including a sustainable supply of wood resources, outdoor recreation and tourism, biodiversity, and clean water.

- Develop and manage mineral resources responsibly. Ensure mineral exploration and mining is environmentally sound and benefits the state's job markets, economies, and communities.

- Sustain healthy watersheds and groundwater supplies. Manage for clean, abundant water and flood protection as essential foundations of industry, agriculture, community growth and development, as well as recreation.

- Support and grow Minnesota's nature-based tourism economy. Create and maintain exceptional outdoor recreation experiences to create jobs, generate dollars for local economies, and reduce health costs.

- Manage school trust fund lands effectively and sustainably. Provide revenue for Minnesota schools using fiscally responsible and sound natural resource management principles for oversight of school trust fund lands."

MN DNR Conservation Agenda

2.1.4 Land use, Ownership, and Land Tenure[2]

The Forestry Division manages School Trust Land, Consolidated Conservation Land, and Acquired Land (Exhibit 1.4). The status reflects the state's ownership or management interest in the land.

School Trust Land

At nearly 2.5 million acres, school trust land makes up the majority of Forestry Division-administered land, as shown in Exhibit 1.4. When Minnesota became a state, the federal government granted two sections of every township to the state to generate revenue for public schools. Over time, the state sold many sections of school trust land to generate money for the trust. However, some areas, particularly in the northeast, still contain significant acreages of original school trust land.

DNR is required to manage school trust land to maximize long-term economic return, while continuing to follow sound natural resource conservation and management principles. One source of revenue from school trust land is timber sales. Gross revenue generated from school trust land is deposited in an account, from which DNR's costs for management activities on the land are reimbursed.

Forestry Division Acres by Land Status, December 2021

Land Status	Acreage	Percentage
School Trust Land[a]	2,413,197	57.7%
Consolidated Consolidation[b]	1,223,854	29.3%
Acquired	516,581	12.3%
Volstead[c]	28,321	0.7%

[a] Trust land was granted to the state by the federal government. Most of this acreage is school trust land managed for the support of schools.
[b] Consolidated Conservation is land the state acquired after assuming responsibility for bonds issued by counties to finance drainage ditches.
[c] The federal Volstead Act of 1908 permitted states to issue liens against swampland to finance drainage ditches. Under a 1958 law, title to that land was transferred to the state.

[2] From the 2014 Minnesota Office of the Legislative Auditor Evaluation Report on DNR Forest Management

Source: Jeff Busse, Minnesota Department of Natural Resources, Division of Lands and Minerals database query results (12/17/2021)

Consolidated Conservation Land

The Forestry Division also manages over 1.2 million acres of consolidated conservation land. Consolidated conservation land, or "con-con" land, is held in trust by the state specifically for conservation purposes. In the late 1920s and early 1930s, the state acquired title to this land in return for assuming certain county debts. Several counties in northern Minnesota had issued bonds to finance drainage projects to make the land fit for agricultural purposes. However, much of the land was not suitable for agricultural use. This fact, as well as the Great Depression, put the counties at risk of defaulting on the bonds. The state paid the bonds in exchange for ownership of the land. Statutes require the state to distribute 50 percent of all timber sales revenue from con-con land to the county in which the timber sale occurred, regardless of the costs incurred managing the land. The remaining 50 percent of timber sales revenue helps fund Forestry Division forest management activities.

Acquired Land

DNR may purchase land to provide additional recreational or environmental opportunities for the public or to increase management efficiencies through land consolidation. The Forestry Division manages approximately 490,000 acres of acquired land. Land acquisition occurred through purchase, county board action, condemnation, or gifts. One-hundred percent of timber revenues from acquired forest land helps fund forest management activities.

2.2 Forest Management Plan

Management objectives:

The Department of Natural Resources Strategic Plan (2020-2022) identifies four main goals:

- GOAL 1 Minnesota's waters, natural lands, and diverse fish and wildlife habitats are conserved and enhanced.
- GOAL 2 Minnesota's outdoor recreation opportunities meet the needs of new and existing participants so all benefit from nature.
- GOAL 3 Minnesota's natural resources contribute to strong and sustainable job markets, economies, and communities.
- GOAL 4 DNR demonstrates operational excellence and continuous improvement in service to Minnesotans.

MN DNR Strategic Plan

The DNR's Sustainable Timber Harvest Determination (March 1, 2018) also identifies the following objectives be taken into account when setting the sustainable harvest level:

- "serving as a consistent, reliable source of wood for Minnesota's forest projects industry,
- ensuring DNR-managed forest lands continue to contribute to the natural resource and recreational functions Minnesotans expect, and

- fine tuning forest management objectives for different types of DNR-managed forest lands (i.e. acquired forest lands, wildlife management areas, and School Trust Lands)."

MN DNR Sustainable Timber Harvest Determination

The following from the DNR's website on Forest Management Strategic Planning also describes the framework of the DNR's planning structure:

"The DNR develops forest resource management plans on a 10-year cycle. These plans guide forest management activities on state-administered lands, including when, where, how, and how much timber is harvested. Long-term planning helps ensure that state forest management activities meet statewide goals for ecological protection, timber production, and cultural/recreational values.
The DNR's Forest Resource Management Plan has three main components:

- Sustainable timber harvest (STH) decisions – our strategic plan for how much volume the DNR will offer for sale annually from state-administered lands
- 10-year stand exam list – our operational plan for which forest stands to visit and evaluate for potential management
- Section forest resource management plans (SFRMPs) – narrative plans that provide ecological section-specific guidance for advancing landscape-level goals as we implement the 10-year stand exam list."

MN DNR Forest Resource Management Planning

Forest composition and rationale for species selection:

Designated cover types by the DNR's Cooperative Stand Assessment include: Ash, Willow, Lowland Hardwoods, Aspen, Birch, Balm of Gilead, Cottonwood, Northern Hardwoods, Walnut, Oak, Central Hardwoods, White Pine, Norway Pine, Jack Pine, Scotch Pine, White Spruce, Balsam Fir, Black Spruce, Tamarack, White Cedar, Black Spruce, and Red Cedar. Individual harvest and species selection take place at the stand level, in accordance with the DNR's silvicultural handbooks and management planning documents (Sustainable Timber Harvest Decision, 10-year stand exam list, and section forest resource management plans).

General description of land management system(s):

DNR provides Silviculture Handbooks to guide management treatments on the major forest cover types in Minnesota. The ecological characteristics and recommended silvicultural practices and regeneration systems for each cover type are described to support operational planning. Cover types with silvicultural handbooks include: aspen, black ash, black walnut, northern hardwoods, oak, paper birch, balsam fir, black spruce, jack pine, red pine, tamarack, white cedar, white pine, and white spruce.

Harvest methods and equipment used:

Clearcut, shelterwood, group and individual tree selection are all employed with standard forestry field operating equipment and machinery.

Explanation of the management structures:

DNR's operates through the following integrated organizational structure[3], with each division having some role in management of state forests. The Division of Forestry takes the lead.

- **Division of Forestry** protects citizens and property from wildfire and strives for the sustainable yield of timber resources for forest products while managing state forests for wildlife habitat and recreation. The Forestry Division has three administrative levels: a Central Office, regional offices, and area offices. Exhibit 2.2 shows this structure.

Exhibit 2.2: Forestry Division Organization

Central Office

St. Paul

Forestry Regions

Region 1	Region 2	Region 3
Northwest -Bemidji	Northeast - Grand Rapids	Central - St. Paul

Forestry Area Offices

Region 1	Region 2	Region 3
Bemidji	Deer River	Little Falls
Warroad	Aitkin	Lewiston
Baudette	Hibbing	Sandstone
Backus	Tower	
Park Rapids	Cloquet	
	Two Harbors	
	Littlefork	

- **Division of Ecological and Water Resources** works to ensure the long-term health of watersheds across the state that support water quality and maintain water quantity, biodiversity, and vital ecosystem services.
- **Division of Enforcement** enforces laws related to game and fish, wetlands, aquatic plants, and the operation of watercraft, snowmobiles, all-terrain vehicles, and other recreational vehicles, and provides conservation and safety education programs.
- **Division of Fish and Wildlife** conserves and enhances the state's fish and wildlife populations and their supporting habitats through regulation, restoration, research, monitoring, and education.
- **Division of Lands and Minerals** manages agency real estate transactions and promotes, regulates, and provides expertise on mineral exploration, mining, and mine land reclamation.
- **Division of Parks and Trails** operates a system of state park and state forest campgrounds that conserves natural, scenic, and cultural resources; maintains a statewide network of recreational trails; provides public access to lakes, rivers, and streams; and offers education opportunities.

Operations Support provides the policy, business, and managerial foundation to support DNR's mission including planning and facilitating the deployment of the agency's financial, human, and physical resources.

[3] MN Office of Management and Budget – DNR Profile, 2015

2.3 Monitoring System

Growth and yield of all forest products harvested:

DNR maintains an inventory system with several complementary components. Primarily data is collected through the Cooperative Stand Assessment process, which inventories stands on a rotational basis. DNR also relies on Forest Inventory and Analysis (FIA) plots managed by the US Forest Service, and, soon, on lidar based forest inventory. Yield of harvested forest products is monitored through routine timber sale administration and calculated each year.

See Forest Harvest Levels in Minnesota - Sustainable Timber Yield Analysis for more details.

Forest dynamics and changes in composition of flora and fauna:

DNR's inventory system also monitors changes in forest dynamics. There are dedicated programs within the DNR for monitoring these changes, including the Minnesota Biological Survey which conducts surveys of flora, fauna, and native plant communities throughout the state. DNR's Natural Heritage Information System (NHIS) is the repository for data on rare plants and NPCs, and is updated on an ongoing basis.

See Minnesota Biological Survey; Natural Heritage Information

Environmental impacts:

Direct environmental impact of timber harvesting is done through timber sale administration and inspection by DNR foresters. All timber sales receive a close out inspection form as part of the permitting process.

Social impacts:

The DNR's Conservation Agenda also monitors performances metrics for the DNR, many of which cover social impacts, such as the number of recreational visitors, participants in educational programs, availability of fish and wildlife resources, etc. see MN DNR Performance and Accountability
DNR also monitors its impact on the wood products industry in the state through periodic publication of the Minnesota Forest Resources report. MN DNR Utilization and Marketing Program
Finally, DNR monitors social impacts through collecting public input via stakeholder comments on individual timber sales, as well through focused consultations on policy changes.

Costs, productivity, and efficiency:

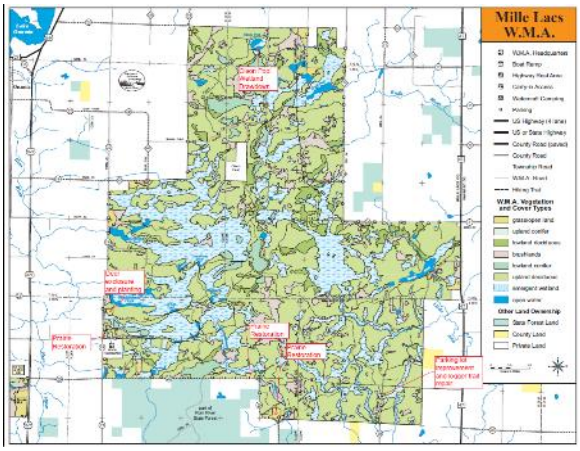
DNR monitors operational costs and revenue through its accounting systems. Revenues associated with School Trust lands managed by the DNR are tracked separately. As a state agency, the DNR is also subject to periodic audits from Office of the Legislative Auditor.

3. Certification Evaluation Process

3.1 Evaluation Schedule and Team

3.1.1 Evaluation Itinerary and Activities

Tuesday, September 28, 2021: Little Falls, Mille Lacs WMA – Watts & Jacqmain



FMU / location / sites visited	Activities / notes
Welcome and Introductions	Abbreviated Opening
1 – Native Prairie Pollinator Restoration:	Project was for conversion of grassland hay field to native prairie grass. Project for prairie restoration was done in 2 stages. Goal was to reestablish prairie fields on 185 acres of old agricultural fields on the Mille Lacs WMA to increase plant diversity and pollinator habitat. 100 acres were previously established in 2019 under an LSOHC grant with a contract with Minnesota Native Landscapes (MNL). The sites were prepped and planted in the summer of 2019, mowed by MNL in 2020. Frost seeded in March. Phase 2 remaining 85 acres identified on the map. Funding was provided through a Conservation Partners Legacy Grant to the Minnesota Sharp-tail Grouse Society. They contracted with MNL to complete the project. Fields treated in late October 2020, MNL disked and site prepped November 2020. Sites frost seeded by MNL in March of 2021. Severe drought this summer impacted growth in 2021. Planted red, burr & white oaks, white pine, black walnut. Mowing annually. Regeneration survey will be conducted at 1,3, and 5 years.
2 – Deer Enclosure and Hardwood Planting Site	**Enclosure:** This is a cooperative project between MNDNR divisions that was initiated years ago as part of an Adaptive Forest Management Project focusing on oak regeneration techniques. The fence was planned to gauge the impacts of deer on oak regeneration, but the fence wasn't funded in time and access was an issue. Funding for the fence was provided by the National Wild Turkey Federation. It was decided to install the fence and plant an old hay field with oak savannah as the desired future condition. Wildlife coordinated the fence install with the contractor and we had MNL disk the site and seed to prairie in combination with the other fields in 2021. The prairie will provide long term wildlife and pollinator habitat while the trees mature. The trees species planted were a mix of red oak, burr oak, white oak, black walnut and white pine. 10 years estimated deer fence retirement.
3 – Permit B014365	Hotsaw with skidder. Discussion: mulch mill, Silva. Waste. Block 1 & 2: Central Mesic Hardwood NPC, Oak type, 12.7 acres and 38 acres, respectively. Cutting block 1 visited. Cutting and Felling Terms: Harvest all trees except butternut, cherry, hickory, conifers and

	trees marked with "GREEN PAINT" (Cutting Block 1). Multiple cutting block sale, see individual cutting blocks for specifications (Cutting Blocks 1 and 2). Reserved all butternut, cherry, hickory, conifers and trees marked with green paint (Cutting Blocks 1 and 2). Reserve all non-hazardous snags (Cutting Block 1). Damaged reserve trees will be charged according to the liquidated damages schedule. Damage is defined as 10% of stem. Circumference and greater than 30% of live crown (Cutting Blocks 1 and 2). Do not fell timber into water, wetlands, roads, trails or adjoining timber (Cutting Blocks 1 and 2). Stump height must not exceed 12" or half the stumps diameter (Cutting Blocks 1 and 2). Damaged residuals will not be removed (Cutting Blocks 1 and 2). Seasonal considerations: Oak wilt is within 20 miles and poses a threat. No sale operations allowed from April 1st-August 1st due to oak wilt concerns, unless with written permission from State (Cutting Blocks 1 and 2). No weekend sale operation allowed between September 15th and December 15th, without written permission from State (Cutting Blocks 1 and 2). No sale operations allowed during firearms / muzzleloader deer seasons (Cutting Blocks 1 and 2). Frozen, dry soil conditions only, except with written permission from State (Cutting Blocks 1 and 2). Operate during non-rutting soil conditions. Refer to DNR rutting guidelines (Cutting Blocks 1 and 2). Permit includes Slash Disposal; Site, Soil & Water Protections, site access and adjacency information; marketing, merchandising and hauling information; financial incentives/ silviculture payments. Zajac Logging LLC, 9/12/2019. BMPs, Section 20, Page 4 of Permit to Cut Timber. Timber Appraisal Report, Biomass allowed. Minimal skinning observed. Good regeneration. Debris scattered. Snags retained. Winter logging with higher stumps.
4 – Logger Parking Lot Improvement and Trail Repair	**Trail Repair:** Trail is used for non-motorized travel. Camping allowed along trail. This trail was the main access point for a number of timber sales the last couple of years. The logger caused some fairly severe rutting and damage on approximately 0.75 miles of road by operating (mainly hauling) beyond spring break breakup in 2019. The timber sale owner spent time with an ATV attempting to do repairs in the spring of 2020 and got it back to close to pre-harvest conditions. A different logger was back in the winter of 2020-2021 to finish the sale and caused trail damage. The worst damage was from the gate north about ¼ mile. Wildlife staff went in this summer with equipment to repair the ditches and rutting. We added concrete ramps to a low area at the trail, filter fabric and paid for 250 cubic yards of pit run to be delivered to the site to finish repairs. Gate installed to control access. Native vegetation used for stabilization.
5 – Permit X015713 (Active Sale)	Permit organized into Units and Cutting blocks per images above. Walked from Unit B to Unit A checking debris bridge crossing mostly dry wetland spot. Set up not yet cut, examined and discussed marking and silviculture plan. Unit A RMZ check. Wetland buffer check. Discussions: Site level protection requirements. Unit B, cutting block 3. Unit B inspection, cutting completed Sep 2021. Wetland check and BMP buffer requirements. Unit A, 18 acres, harvested all aspen, maple, birch, ash & orange marked trees, and removed all remaining trees under 12" dbh except butternut, hickory & conifers which were retained. Unit B, 13 acres, harvest aspen, maple, elm, birch & orange marked trees, removed all remaining trees under 10" dbh except butternut, hickory and conifers which were retained. Cutting units C-G, 40 acres, harvested all but green painted and retained all conifers, hickory, cherry or butternut. Standard terms for cutting and felling. Seasonal considerations: Operations frozen, dry soil conditions only, except with written permission from State (Cutting Blocks 1, 2, and 3). Frozen ground access only (Cutting Block 2). Operate during non-rutting soil

	conditions. Refer to DNR rutting guidelines (Cutting Blocks 1, 2, and 3) Permit includes Slash Disposal; Site, Soil & Water Protections, site access and adjacency information; marketing, merchandising and hauling information; financial incentives/ silviculture payments. No slash w/in 15 feet of snowmobile trails (Cutting block 3 – WHICH UNIT?) Aspen stands clearcut with reserves, 15 acres. Commercial thinning in 80-year-old Oak types. Objectives: Aspen, regenerate to maintain type. with volume loss due to past understory fires, which impacted stand and removed some understory and is also causing mortality in stand from pathogen introduction. Logger interviewed. Observed fire extinguisher, first aid kit, and spill kit. Discussed use of spill kit. Merchandising of products discussed. Logger has completed logger training. Job is a single person job.
6 – Permit 14714 (Active)	Block 2: Orange marked to keep. Harvest all oak, maple, basswood, aspen, ash and paper birch >3" dbh. No felling into wetlands or private adjacent lands. In both retain all bitternut hickory, and American elm, stump heights <12". Reserved all non-hazardous snags. Residual damage specifications and penalties. Seasonal considerations for oak wilt, no harvest April 1- July 15. Dry-frozen ground harvest only. Slash considerations for trails, wetlands, roads, landings. Biomass possible. State set roads and landing with possible changes upon written permission (standard terms). Access and marketing/merchandising considerations in permit. Silviculture price adjustments in permit. March 2021 stopped harvested. Will return in about 2 months. Slash distributed to stabilize skid trails. Aesthetics practiced along road. No green-up issue with clearcut. Snag retention. Habitat will be improved by added diversity. Plans are in-place to underplant with White Pine. Neighbor granted access to property to access the timber sale. Adjacent landowner letter. Anytime DNR shares a common property boundary procedure is to send a template letter. Process: Flag the site and then send a letter. In this case, the neighbor then called to offer site access in exchange for some road assistance. Greg Pont 10/1/2020.
7 - Boot Spur Herbicide Prep for Planting - A Case Study Site	White pine was historically a common canopy component in the common NPCs in Mille Lacs County. Forestry has made several attempts over the years to reintroduce white pine in the Rum River State Forest and Mille Lacs WMA by planting pure stands or by interplanting with natural hardwood regeneration. Both methods of reintroduction have faced setbacks with poor recruitment, blister rust, and deer browse. This site is the setting for a case study to determine if small group plantings could prevent some of the difficulties in the other two reintroduction methods. This stand was harvested as a shelterwood cut in the winter of 2012-13. In summer 2020, 10 1/10th acre plots were randomly selected, and the brush cleared with a brush saw and chain saw. In September 2021, herbicide was applied to the cleared areas in preparation of a spring 2022 planting. White pine seedlings will be planted at 1000 trees per acre within the plots. "Clumped" Bud capping and pruning will be implemented as needed. The hope is that by grouping the trees, fewer trees will get missed during pruning and bud capping, and blister rust observations will be easier and more thorough, and therefore treatment can be more rapid.
7 – Boot Spur Herbicide Prep for Planting	Rum River State Forest Road graded and crowned. Ditches shaped. Native vegetation used for stabilization. Road gated to control access.

8 – Boot Spur Water Impoundment Replacement	30-acre open water wetlands. Impoundment, water control structure went in during the 1970's. Replaced with funding from Outdoor Heritage Fund when all failed 5 years ago. Internal engineers. New water control structure. Replaced with concrete box culvert. Seed blanket used for stabilization. Metal sheet tiling. Focus is aquatic bird species habitat. Gate installed to control access.
9 – Esker Trail Pine Planting	These sites were planted to white pine in 1999 and interplanted in 2001. According to the Area Silviculturist they were likely abandoned ag fields before planting. They were bud capped until free to grow and went through several rounds of pruning for blister rust prevention. The most recent pruning was in spring 2017 and the contractor also thinned out the heavily infected trees. The recent pruning and thinning not only raised the height of the lowest foliage (the primary route of protection conferred in pruning) but also allows more air flow in the lower canopy. This dries out the lower canopy which also helps prevent blister rust infection. The stands are looking good and will likely require one more pruning before being left to grow. These are a good example of stocking an entire site with white pine, which is one of the two methods that have been attempted in Mille Lacs County to reintroduce white pine as a forest component. The other method being interplanting after shelterwood harvests.
White Pine Group Planting – A Case Study Site BOOT SPUR	White pine was historically a common canopy component in the common NPCs in Mille Lacs County. Forestry has made several attempts over the years to reintroduce white pine in the Rum River State Forest and Mille Lacs WMA by planting pure stands or by interplanting with natural hardwood regeneration. Both methods of reintroduction have faced setbacks with poor recruitment, blister rust, and deer browse. This site is the setting for a case study to determine if small group plantings could prevent some of the difficulties in the other two reintroduction methods. This stand was harvested as a shelterwood cut in the winter of 2012-13. In summer 2020, 10 1/10th acre plots were randomly selected, and the brush cleared with a brush saw and chain saw. In September 2021, herbicide was applied to the cleared areas in preparation of a spring 2022 planting. White pine seedlings will be planted at 1000 trees per acre within the plots. "Clumped" Bud capping and pruning will be implemented as needed. The hope is that by grouping the trees, fewer trees will get missed during pruning and bud capping, and blister rust observations will be easier and more thorough, and therefore treatment can be more rapid. Will plant spring 2022.
Reforestation Project BOOT SPUR	This herbicide treatment is intended to prepare 10 1/10th acre plots for planting in spring 2022 as part of a case study. The study aims to compare scattered group plantings of white pine with the standard inter/underplanting that has historically taken place on mesic hardwood sites where the goal is to reintroduce white pine into the stand composition. Herbicide and labor are intended to be provided by Little Falls area forestry staff. 18 acres.

Tuesday, September 28, 2021: Park Rapids – Grady & Bergmann

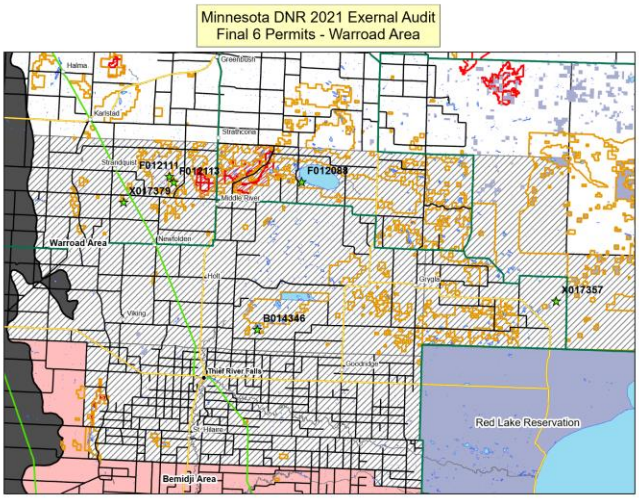
FMU / location / sites visited	Activities / notes
Park Rapids Office, Park Rapids, MN	Welcome and introductions, abbreviated opening meeting.
Permit X016495	65-acre harvest across two stands: pine and spruce. Harvested species were pine, birch, spruce, and aspen. In each stand, removed every 5th row in pine stand. Aspen and birch were only removed in access rows or when in direct competition to the crown on the red pine. DNR required that a representative sample of pre-harvest tree species are left onsite, including leaving natural food sources. Several residual oaks observed.

	Cut in October and November 2019 using a cut-to-length system, operator select. Forwarded in tops to reduce impact to soil. Net entry will be in 7 to 10 years, with the third thinning to occur 10 years following that. The final harvest will occur in about 60 to 70 years. No rutting observed, although audit team discussed the FME's standards for rutting. Also discussed process for ensuring chain-of-custody onsite during harvest operations; lockbox at the harvest unit contains load tickets, which the forester picks up for DNR records when completed by the log truck driver. At this visit, DNR personnel described a case study examining the effects of herbicide applications on species richness. The study is publicly available on the Silvicultural Library.
Permit B014371	86-acre even age harvest comprised of Norway pine, aspen, jack pine, and birch. Permit is divided into three cutting blocks and included both even and uneven age silviculture. The area is used by OHVs, and care was taken to ensure no slash was list in these recreation trails did. Public kiosk contains information about the site, with a map and regulations; during the harvest, it had also contained information about the logging activities. The DNR had contacted local OHV clubs in advance of the harvesting. Parking lot had been used as the landing; it was clean and showed no sign of heavy use or damage from the logging activities. In cutting units, snags were reserved, and slash was lopped and scattered. Property boundaries were marked, as were the boundaries of each cutting unit, including buffers. These boundaries and the treatments were conveyed to the logger on Avenza maps. One ecologically sensitive area with bristleberry was delineated in advance of the harvesting, and the logger was instructed to avoid the area. The state-required 50-foot equipment exclusion buffer (" filter strip") around the bristleberry wetland area was observed; the exact width of the buffer depends on the steepness of the slope. In this area, trees for an uneven had been marked to cut with yellow paint. At this site, DNR described a case study investigating diplodia shoot blight and canker. The study involved spraying Velpar (hexazinone) in a fire-burned planted red pine stand and a natural stand, which were both infected with diplodia. It was a four-part study to test the effectiveness of the herbicide treatment on seedling growth, as well as the impact on regeneration. The study found that natural regeneration of pine is negatively impacted by both competition and diplodia, and that herbicide use may facilitate natural regeneration. DNR personnel also described the role of Ecological and Water Resources staff in forest harvest planning and implementation. These staff provide technical guidance on rare resource topics and are involved in the annual stand exam list, rare species habitat surveys, old growth guidance, SFRMP planning, and management guideline development.
Permit F011870, Crow Wing Chain	5-acre harvest comprised of red oak, aspen, and birch. Operator select,

WMA	cut in 2018. A 10-acre stand had been identified on the annual stand exam, but when the plan was prepared, the forester reduced the sale to 5 acres based on local conditions. Because of its relatively small size and proximity to another permit, the timber was sold informally to the permit holder for the nearby sale. DNR personnel described the process for determining the final area for harvest, as well as the requirements for informal sales. Only 65 of the planned 100 cords were cut by the logger due to market conditions. Biomass was offered for sale, but the material was not optimal and did not sell. The site is used by the public, and accommodations had to be made to minimize impacts. For example, the hunter walking trail was signed and flagged during the operation, and all slash was removed from the trail. Being located on a WMA, wildlife objectives were considered; the harvest was intended to increase structural and age diversity, and conifers were left as reserves because of their cover values for wildlife. Boundaries of WMA well marked with permanent signage. Entrance to logging unit blocked with tree roots wads to minimize the change of ATV or other vehicular access. At a nearby site, DNR personnel described the Crow Wing Chain WMA, including its location and significance in the state, history of land use, deed restrictions, The Nature Conservancy forest management audits, development restrictions, timber harvest coordination, and habitat improvement projects. Bud-capping activities to reduce the impact of deer browse on jack pine was also demonstrated.
Permit B014694, HCV area	75-acre harvest of Norway pine, aspen, red oak, basswood, and other northern hardwood. Target was aspen, red oak, birch, sugar maple, and basswood. Reserved white pine, balsam fir, and bur oak, as well as Norway pine not marked with yellow paint. Snags were observed as retained. A 330-foot SMZ buffer was established adjacent to a designated HCV area. The 64-acre HCV was designated for old growth and the presence of a sensitive plant species. The area has been designated as future white pine old growth; it is being maintained as a pool to potentially recruit old growth in the future and will be re-evaluated at 120 years old. The site also contains a sensitive plant species. In the SMZ, the harvest was required to leave at least 90 square feet of basal area; additionally, all oak and pine were left. 25% pf the SMZ was cut, with the rest remaining in protection. In the vicinity, there is also a 145-acre stand that has been designated as northern hardwood old growth; it scored well for continuity. This is a highly used recreation area with ATV and dirt bike trails throughout. A 1.5-mile existing trail was used as an access road for the unit. Four truckloads of chips were brought in and spread across steep sections of the road to enable log trucks to haul without damaging the road surface. The ATV club provided three of the loads, and the logger bought the fourth. None of the ATV trails were closed during the operation, although signage was present warning about log truck. There were no reported conflicts between the users and logging operation. Existing landings were used during the harvest. Operation was cut to

	length. The logger selected aggregate and dispersed reserve trees based on the equipment they chose to use. Herbicide treatment is planned for next summer. 6,000 cords were cut between this and an adjacent permit, which were held by the same logger (200 acres in total). DNR personnel explained the benefit of the sealed bid process. Local loggers buy the permits. Harvested material is merchandised such that the highest value is achieved (e.g., saw bolts get highest value). For this particular permit, the wood went to 15 different markets.

Thursday, September 30, 2021: Warroad, Watts and Bergman

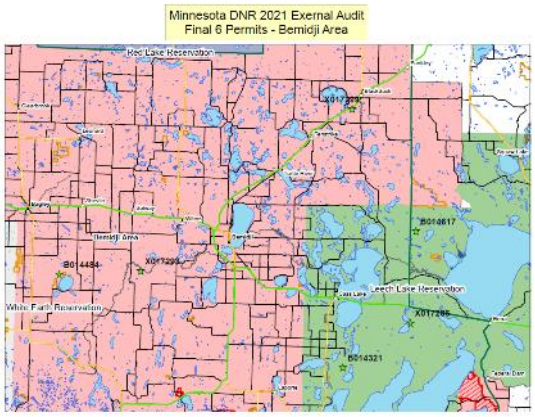


FMU / location / sites visited	Activities / notes
Thief River Falls Office – 246 125th Ave NE, Thief River Fall, MN	Welcome and Introductions, Abbreviated opening meeting
Stop 1 – Permit B014346	65.7-acre Aspen harvest. Reserve Elm and Ash. Purchased by Lyseng Logging, Inc. Snags retained. Group retention observed. Harvest conducted during frozen ground conditions. Wind throw in residual stand was critical in planning. Some wind throw observed. Debris lopped within 2' of ground and scattered. Practices enhance wildlife benefit. Ditch on North end was not crossed. Access obtained across private land by Lyseng Logging, Inc. Timber harvested for adjacent landowner of ROW. No issues. Natural regeneration by sprouting. Good Aspen regeneration. No invasives identified.
Stop 2 - Elm Lake WMA Cattail Control	Impoundment in sedge marsh with peat 3-5 feet in thickness. Colonization of peat by hybrid cattail. Contractor sprayed 875 acres August 2015. August 2020 additional 325 acres. Re-evaluate in 2-3 years. Desired outcome of significant increase in open water habitat for wildlife. During 70's drought needed waterfowl areas. Using dikes, the water was controlled. Peat would plug water control and cattails have few wildlife benefits. Burning was not effective. During August 2015, strip spray of area and allow the peat to rot was best alternative for the creation of open water. Contracted aerial application of Alligare at below maximum rate.

	Result of 100% kill based on visual observation and vegetative survey. Contracted with Two Rivers. Application report, insurance, applicators license, and application flight lines provided to DNR. No public entry allowed. In August 2020, an additional 325 acres were spray using a DNR helicopter using AquaNeat. Witnessed applicators license. Discussed handling, mixing, application, and disposal of chemicals. No issues identified. Chemical is required for control of peat and cattails. WMA is researching alternatives for control.
Stop 3 – Permit X017379	100-acre Aspen harvest with reserves. Reserve Oak Ash and 3-5 Aspen per acre > 13" DBH. Difficult finding purchaser for sale. Sold 3 times. Purchased by Gerbracht Logging, Inc. Non-hazardous snags retained. Harvest conducted during frozen ground conditions. Debris lopped within 2' of ground and scattered. Invasive Buckthorn on site. Steps taken to limit spread - Keep access routes and landings out of infested area. Equipment cleaned before leaving sale. Buckthorn berries removed with shovel during winter conditions. Natural regeneration by sprouting.
Stop 4 – East Park WMA – Oak Savannah/Nelson Slough Improvement Projects	Water Control Structure Replacement/Redesign and Levee Improvement to meet water needs of agriculture and waterfowl. Cooperative Project with public watershed district, Corp of Engineers, and DNR. Pool is at 70'. Currently higher due to drought conditions. Higher in Spring. Lower for waterfowl nesting. Seven gates in structure. Ditch can raise water 3 feet. Control can reduce flooding of agriculture, town roads, and culverts. Project is managed in conjunction with Permit 12113 for timber and prescribed burn.
Stop 5 – Permit F012111	27-acre Aspen harvest. Reserve Bur Oak. Goal is Oak Savannah with grasses and large Oak. Difficult finding purchaser for sale. Purchased by Gerbracht Logging, Inc. Fell snags within 50' of permit boundary and firebreak. Non-hazardous snags retained. Harvest conducted during frozen ground conditions. Merchandising monitored during operation. Debris lopped within 2' of ground and scattered. Slash buffer of 50' from firebreak boundary. No issues identified during harvest. Natural regeneration by sprouting. Good Aspen and Oak regeneration. Plan to establish burning cycle of 5-7 years for wildlife. Fire will encourage Oak regeneration and grasses for wildlife food. Fire will assist in controlling Aspen. Slash buffer from firebreak will assist in control of fire intensity. Burn plan developed with smoke management and wind direction. Burn Boss is responsible for burn. Post burn evaluation conducted by visual monitoring.
Stop 6 – Permit F012113	29-acre Aspen harvest. Reserve Bur Oak. Goal is Oak Savannah with grasses and large Oak. Difficult finding purchaser for sale. Purchased by Gerbracht Logging, Inc. Fell snags within 50' of boundary. Non-hazardous snags retained. Harvest conducted during frozen ground conditions. Merchandising monitored during operation. Debris lopped within 2' of ground and scattered. Slash buffer of 50' from permit boundary on the north and south lines. No issues identified during harvest. Natural regeneration by sprouting. Good Aspen and Oak regeneration. Plan to establish burning cycle of 5-7 years for wildlife. Fire will encourage Oak regeneration and grasses for wildlife food. Fire will assist in controlling Aspen. Slash buffer from firebreak will assist in control of fire intensity. Burn plan developed with smoke management and wind direction. Burn Boss is responsible for burn. Post burn evaluation conducted by visual monitoring.

Stop 7 – Pesticide Storage, Theif River Falls Office	Trays on shelves for spill containment. Witnessed Use Approval Form for use of chemicals and disposal of containers. Containers were observed to be clean. Application mix written on container. Label remains on containers in locked storage closet. SDS on file in binder in designated area. SDS and label for chemicals verified. There was one SDS not in binder. Habitat is a new chemical received last week. The SDS has been added to the binder. Reviewed and discussed disposal of used containers. No issues identified.

Thursday, September 30, 2021: Bemidji, Grady and Jacqmain



FMU / location / sites visited	Activities / notes
Bemidji Area Office – 2220 Bemidji Ave N, Bemidji MN	Welcome and Introductions, Abbreviated opening meeting
Stop 1 – Permit B014484	Aspen clearcut in 2 blocks, maintain in aspen, healthy aspen stand with a component of ash, birch, and balsam to be regenerated by coppice. 20 acres. Red pine thinning 7 acres, 50-year-old stands. Aspen with 5% reserve. Historical context considered and interpreted. Used existing roads. Some lowland grass areas protected from equipment and debris. Presale meeting, presale form used to review harvest specifications with logger prior to starting sale. TOPS, Timber operator purchaser system used for communication with logger. Also, logger has to enter their information including qualifications before starting sale for forester review and qualification confirmation. Kept smaller noncommercial timber for retention. BA 120 sq ft of retention. Using ECS for climate change considerations. Plot sites done for ECS. Guidance documents based on NPCs, climate change effects on ECS zones, reference table. Blue paint boundary confirmed. Harvested 2/21/2020.
Stop 2 – HCV Monitoring	Brendan notes
Stop 3 – Permit X017293	Two cutting blocks. Cutting block 1 is a first thinning with good access. Cutting block 2 is a final harvest with quality red pine and good access. Balsam Fir Pulpwood: Average 5" DBH, Red Pine: Average 7" DBH, Jack Pine: Average 7" DBH. School trust. Did 2 ECS plots here. Blowdown event throughout stand. Mississippi River filter/buffer requirements discussed. Consulted with ECR per advisory placed by ECR after their stand exam review based on native plant community. Areas with advanced regen. Blue painted boundary confirmed. Will plant after a spray in some

	areas. Forester reviewed SEL annual list, looked up info and found the comments made by ECR. Per procedures forester contacted ECR to lose the loop. Features of identified of interest by ECR were rare plant communities. Green tree retention in part based on objective to promote local seed source. RMZ along Mississippi was examined. Some uncertainty about correct buffer width (50' or 120'). Forester described measuring and marking the buffer in an air photo (GIS) prior to establishing buffer onsite. See reference to Page 39 of general guidelines, 2012 full MN Site Level Guidelines.
Stop 4 – Henry Bjoring WMA – Overview and Management	Mowing was done on the trail earlier in the year to avoid invasive flowering. Old fields restored to native warm seasons grasses, along with some Jack pine and crabapple to emulate natural invasive behavior by jack pine and crabapple in prairie conditions. Crabapples in protective cages. Waited 3-4 years, then scarified JP in the rows with goal to emulate JP-type savanna conditions. Trees were bud capped to protect against deer browsing of planted seedlings. Discussion: F&W restructuring combined 4 areas in this region. Bemidji & Park Rapids into 1 region. Uncertainties in funding for completion of ensuring planting success (I may be misstating this).
Stop 5 – Regeneration Project	Oct 17/18. One growing season. Herbicide, scarification map/planting prep and planting in 2019 sent landowner letters for herbicide use. See landowner docs. Signs for spraying were posted at common points of entry. 2019 sprayed, disc trenched right after. Seed supplied to PRT, seedling grower. Planted May 2020. Deer browse anticipated so fall 2020 started bud capping to protect against deer browsing. Regen check done in the spring for deer browsing damage. 2021 spring determined 98% survival. Anticipate/planning for 2 more years of bud capping and regular check through 2030. Although DNR regen monitoring is planned for 1,3, 5, and 7 years after planting but forester is planning to do a reconnaissance check annually. Used new project form and finds system useful.
Stop 6 – Fosston Trail Road Management	System road, contract grading road, double grading. Not a high travel road usually, used for logging. "Vertical road brushing" from edge of gravel straight up to protect logger mirrors. Fosston Trail Road is about 3.5-mile stretch. 1 culvert at one low spot. Beaver trapping done by retainer; contractor must have insurance. State and county ownerships use the road. High recreation uses during hunting. No restrictions for hunting. Discussions: Forester - Silviculture, roads, and timber set up
Stop 7 – Permit X017299	Aspen CC. Access by permission w landowner. Discussed species and patterns for green tree retention. Power ROW. Stand structure and diversity.

3.1.2 Total Time Spent on Evaluation

Number of days spent on-site for evaluation:	5
Number of auditors participating in on-site evaluation:	4
Number of days spent by any technical experts (in addition to amount in line A):	0
Additional days spent on preparation, stakeholder consultation, and post-site follow-up:	3
Total number of person days used in evaluation:	**23**

3.1.3 Evaluation Team

Auditor name:	Brendan Grady	**Auditor role:**	FSC Lead Auditor & SFI Team Auditor
Qualifications:	Mr. Grady is the Director, Forest Management Certification for SCS. In that role, he provides daily management and quality control for the program. He participated as a		

	team member and lead auditor in forest certification audits throughout the United States, Europe, and South East Asia. Brendan has a B.S. in Forestry from the University of California, Berkeley, and a Juris Doctorate from the University of Washington School of Law. Brendan is a member of the State Bar of California, and was an attorney in private practice focusing on environmental law before returning to SCS.		
Auditor name:	Tucker Watts	**Auditor role:**	SFI Lead Auditor & FSC Team Auditor
Qualifications:	Tucker Watts is a partner in Watts Consulting LLC. His primary focus is forest certification through auditing. Since 2008, Watts has been involved with SFI Forest Management, Fiber Sourcing, Certified Sourcing, and Chain of Custody auditing, FSC Forest Management and Chain of Custody auditing, Programme for the Endorsement of Forest Certification Chain of Custody auditing, auditing of the American Tree Farm System's Group certification, auditing of the Responsible Procurement Program of the National Wood Flooring Association and auditing of the Sustainable Biomass Partnership. Watts has 30 years of experience in forest management with a large forest products corporation involved in the manufacturing of paper, lumber and plywood. For 10 years, Watts was a system manager for the forest certification system.		
Auditor name:	Stefan A. Bergmann	**Auditor role:**	FSC & SFI Team Auditor
Qualifications:	Mr. Bergmann has been in the forestry and wood products field for nearly 20 years, working across the US on forest policy, landowner extension, and forest certification. He also has senior staff executive experience with two forestry non-profits in the Midwest. Prior to joining SCS in 2017, he worked for Rainforest Alliance, overseeing the Forest Stewardship Council® (FSC®) Forest Management auditing program in the US. He has successfully completed FSC Forest Management Lead Auditor training, ISO 9001 Lead Auditor training, and is qualified to be an SFI team auditor. He has served as lead and team auditors on numerous FSC FM audits around the country. He holds a BS in Wildlife Science and an MS in Forest Resources, both from Oregon State University, and recently completed an MBA at the University of California Davis.		
Auditor name:	Beth Jacqmain	**Auditor role:**	FSC & SFI Team Auditor
Qualifications:	Senior Certification Forester at SCS Global Services, Forest Ecologist and Certified Forester (SAFCF#1467). Beth has 20+ years' experience in forestry including public land management, private consulting, and private corporate forest management working with landowners and harvest crews. Qualified ANSI RAB accredited ISO14001 EMS, certified ISO17021 QMS, ISO19011 MS. FSC®, SFI®, and RW® Lead Auditor for Forest Management/Chain of Custody. Audited and led FSC evaluations, harvest and logging operations certification audits; and joint/combined PEFC® FM (AFS®, RW, SFI, ATFS®). An 11-year member of the Forest Guild, 21-year adjunct-Faculty with Itasca Community College, NR Department. Member 20+ years Society of American Foresters. Served SAF MN State Chair 2010 and multiple committees, state and national, throughout. Past and current member on committee revising the SAF CF certification exam. Original lead instructor of UMN "Ecosystem Silviculture" certificate course for professional foresters. BS Forest Management from Michigan State University and MS Forest Biology/Ecology from Auburn University.		

3.2 Evaluation of Management System

3.2.1 Methodology and Strategies Employed

SCS deploys interdisciplinary teams with expertise in forestry, social sciences, natural resource economics, and other relevant fields to assess an FME's conformance to FSC standards and policies. Evaluation methods include reviewing documents and records, interviewing FME personnel and contractors, implementing sampling strategies to visit a broad number of forest cover and harvest prescription types, observing implementation of management plans and policies in the field, and collecting and analyzing stakeholder input. When there is more than one team member, each member may review parts of the standards based on her or his background and expertise. On the

final day of an evaluation, team members convene to deliberate the findings of the assessment jointly. This involves an analysis of all relevant field observations, interviews, stakeholder comments, and reviewed documents and records. Where consensus among team members cannot be achieved due to lack of evidence, conflicting evidence or differences of interpretation of the standards, the team is instructed to report these in the certification decision section and/or in observations.

3.2.2 Pre-evaluation

☒ A pre-evaluation of the FME *was not* required by FSC norms.

☐ A pre-evaluation of the FME was conducted as required by and in accordance with FSC norms.

3.3 Stakeholder Consultation Process

In accordance with SCS protocols, consultation with key stakeholders is an integral component of the evaluation process. Stakeholder consultation takes place prior to, concurrent with, and following field evaluations. Distinct purposes of such consultation include:

- To solicit input from affected parties as to the strengths and weaknesses of the FME's management, relative to the standard, and the nature of the interaction between the company and the surrounding communities.

- To solicit input on whether the forest management operation has consulted with stakeholders regarding identifying any high conservation value forests (HCVFs).

Stakeholder consultation activities are organized to give participants the opportunity to provide comments according to general categories of interest based on the three FSC chambers, as well as the SCS Interim Standard, if one was used. A public notice was sent to stakeholders at least 6 weeks prior to the audit notifying them of the audit and soliciting comments.

3.3.1 Stakeholder Groups Consulted

Principal stakeholder groups are identified based upon results from past evaluations, lists of stakeholders from the FME under evaluation, and additional stakeholder contacts from other sources. Stakeholder groups who are consulted as part of the evaluation include FME management and staff, consulting foresters, contractors, lease holders, adjacent property owners, local and regionally-based social interest and civic organizations, purchasers of logs harvested on FME forestlands, recreational user groups, tribal members and/or representatives, members of the FSC National Initiative, members of the regional FSC working group, FSC International, local and regionally-based environmental organizations and conservationists, and forest industry groups and organizations, as well as local, state, and federal regulatory agency personnel and other relevant groups.

3.3.2 Summary of Stakeholder Comments and Evaluation Team Responses

The table below summarizes the major comments received from stakeholders and the evaluation team's response. Where a stakeholder comment has triggered a subsequent investigation during the evaluation, the corresponding follow-up action and conclusions from SCS are noted below.

Stakeholder Comment	SCS Response

The state has done a good job of addressing "mature or over mature" aspen, stated stakeholders. They applauded the state for this management approach.	Noted as evidence of conformance. The audit team visited numerous aspen harvest sites during the audit and generally found these sites in conformance with the standard.
Stakeholders urged the state to do more outreach with private forest landowners as a way to support the industry.	DNR is clearly an integral member of forest products industry in the state. In addition to managing its own land, the DNR provides assistance and outreach to private landowners through its cooperative forest management unit. This unit has directly assisted thousands of private woodland owners with forest management planning and technical forestry assistance. While there could always be additional support, the audit team found that the DNR exceeds the requirements of the FSC standard in this topic.
Stakeholders perceive that there is "little overlap" between younger and older staff within the MN DNR and that younger staff tend to be focused on enforcement. This perception may contribute to the notion, among some stakeholders, that the agency is increasingly difficult to work with.	The audit team had the opportunity to interview DNR staff of a variety of ages during the audit, including younger staff new to the audit process. In general, the audit found the department staff functioning well as unit across divisions and positions. It should be noted that DNR's role as an enforcement agency is outside the scope of this audit and is does not pertain directly to their forest management certification.
Stakeholders raised concern about the current process for identification and designation of Lowland Conifer Old Growth (LCOG). In particular The DNRs current proposed shift from a complex to a stand based approach will result in less acres protected. Stakeholders explained that one of the factors that complicates current discussions about Lowland Conifer Old Growth (LCOG) in the state, particularly as it relates to the MN DNR's forestry certification to the FSC standards, is that the definition of LCOG does not fit FSC's definition of old growth very well.	The DNR's LCOG policy approach is still undergoing finalization at the time of the audit, including seeking consultation on key aspects such as designation criteria and LCOG management policies. Currently, all candidate areas are reserved and unavailable for harvest while the policy is being developed. The policy development over the past year has shifted away from the concept of old forest management complexes with a variety of management options, and towards the identification of the specific old growth stands within those complexes with more restrictive management options. This approach would result in a smaller amount of land eventually being formally designated as old growth, since the potential stand age was raised from 90 years to 150 years. This age cutoff was developed based on consultation with technical

	stakeholders as to when old growth features begin to occur in lowland conifer stands. It should be noted that the FSC-US standard does not specify a date or particular tree age past which an area would be classified as old growth, but uses the presence of past management and stand level old growth characteristics to define the stands. The FSC standards old-growth definitions, which are meant to be applied at the level of particular stands with discrete locations (e.g. Type 1 Old Growth defined as three acres or more that have never been logged and that display old-growth characteristics, and Type 2 Old Growth defined as 20 acres that have been logged, but which retain significant old-growth structure and functions.) The proposed shift from a complex to stand based designation also has the implication that areas of unproductive stagnant forest that were being considered for inclusion in the LCOG complex would not be considered for formal old growth designation under the policy. However, these stagnant stands are not available for timber harvest under DNR's current policies, since they lack enough merchantable material. This means they are by default meeting the FSC's requirement that these stands are not harvested, should they meet the old growth definition. However there remains the possibility that these stands may be impacted by other management activities, such as Christmas tree harvesting. The LCOG policy is still being developed, and will continue to be monitored during future audits. However, presently the proposed policy appears to be in conformance with FSC requirements.
Stakeholders expressed concern over the environmental impact and assessment process for the proposed Border to Border Touring route for off highway vehicles (OHV) and the management of OHV and ATV use generally.	In proposing the Border to Border trail, the DNR's planning office determined that the preparation of an Environmental Assessment Worksheet (EAW) was not required, primarily because the proposed touring route relies on existing roads rather than creating new ones. The DNR instead opted to create a route management plan in

	order to formalize management and monitoring of the route. The decision not to complete an EAW is currently subject to litigation by environmental stakeholders. The certification process needs to wait for this legal process to be resolved before determining whether there is an issue with the DNR's conformance to the standard. OHV/ATV use is managed and monitored through a combination of DNR enforcement staff and recreation user groups through its trail ambassador program. While OHV use has the potential for significant impact on the forest, the sites reviewed during this audit found that generally the OHV and other recreation use was being well monitored and controlled by the DNR. This will continue to be followed up on during future surveillance audits.
There is cautious optimism that future forest management planned for Land Utilization Project (LUP) lands will be aligned with the original wildlife purposes of the properties. This optimism is a direct result of the virtual meetings that the MN DNR has convened between DNR Forestry, DNR Wildlife, and US Fish and Wildlife Service. The fact that the agency has not appraised nor sold any timber on LUP lands, and has implied that it will not do so until the issue is resolved, has also contributed to this optimism.	Noted as evidence of conformance.
Stakeholders noted that it is challenging to trace the decision-making processes that lead to forest management on Wildlife Management Areas (WMAs). The most successful forestry operations on WMAs, stakeholders say, occurs when the local DNR forester and local wildlife area manager have a working relationship and agree on the wildlife benefits of specific proposed forest management activities before they occur. Stakeholders stressed that for both LUP and WMA lands, there needs to be a clear link between improving wildlife habitat and forest management. To date, say stakeholders, it has been difficult to tease out the wildlife	The audit team found that management activities on WMAs should be monitored in order to ensure that management objectives are being met. See CAR 2021.2

justification for some of the forest management activities.	

4. Results of Evaluation

4.1 Notable Strengths and Weaknesses of the FME Relative to the FSC P&C

Table below contains the evaluation team's findings as to the strengths and weaknesses of the subject forest management operation relative to the FSC Principles of forest stewardship. Weaknesses are noted as Corrective Action Requests (CARs) related to each principle.

Principle / Subject Area	Identified Strengths Relative to Conformity to the Standard	Identified Weaknesses Relative to Conformity to the Standard
P1: FSC Commitment and Legal Compliance	• As a state agency, DNR maintains its own enforcement division to protect the management unit from unauthorized activities.	None noted
P2: Tenure & Use Rights & Responsibilities	• DNR is a state agency with clear tenure rights to the land it manages. • DNR manages multiple user groups on a daily basis, including timber harvesting, motorized and non-motorized recreational users, hunters and anglers.	None noted
P3: Indigenous Peoples' Rights	• DNR has a dedicated tribal liaison to facilitate government to government level interactions with recognized tribes in the state. • DNR works with the state archeologist office to identify and protect sites of cultural significance on its land.	None noted
P4: Community Relations & Workers' Rights	• DNR has extensive opportunities for public engagement at multiple planning stages. Examples include regional planning process, public review of annual stand lists, open houses on deer management, and stakeholder advisory groups on the Sustained Timber Yield Analysis.	None noted

P5: Benefits from the Forest	• The state sustainable harvest level was set after a multi-year analysis relying on modern inventory and modeling systems. Harvest levels have been within the established allowable cut level. • DNR provides for multiple uses on the forest in addition to timber harvesting, such as hunting, fishing, recreation, and NTFP gathering.	None noted
P6: Environmental Impact	• The Native Plant Community classification system has categorized plant communities throughout the state at a fine grain detail. This allows for site-level guidelines and silviculture prescriptions to be created based on the individual NPCs. • Minnesota Biological Survey routinely conducts surveys for rare, threatened, & endangered species. • Field interviews showed strong cooperation between DNR divisions in considering the environmental impact of forest management activities.	• Implementation of riparian management zones needs to be improved, see CAR 2021.1
P7: Management Plan	• DNR has a robust management planning system. All documents are publicly available on the DNR's website.	None noted
P8: Monitoring & Assessment	• DNR conducts regular monitoring of a wide variety of metrics, including traditional and lidar based inventory, long term monitoring of ecological trends and changes in vegetation, and species specific fauna monitoring for game and non-game species. • All monitoring results are publicly available.	• Monitoring of implementation of management objectives needs to be improved, See CAR 2021.2
P9: High Conservation Value Forests	• DNR has identified HCVs on their land base and created	None noted

	management strategies to maintain and enhance these values. • Over the past year, monitoring of HCVs was revised and strengthened (see response to CAR 2019.5).	
P10: Plantations	Not Applicable	Not Applicable
Chain of Custody	None noted	None noted
Group Management	Not Applicable	Not Applicable

4.2 Process of Determining Conformance

4.2.1 Structure of Standard and Degrees of Nonconformance

FSC-accredited forest stewardship standards consist of a three-level hierarchy: principle, the criteria that correspond to that principle, and the performance indicators that elaborate each criterion. Consistent with SCS Forest Conservation Program evaluation protocols, the team collectively determines whether or not the subject forest management operation is in conformance with every applicable indicator of the relevant forest stewardship standard. Each nonconformance must be evaluated to determine whether it constitutes a major or minor nonconformance at the level of the associated criterion or sub-criterion. Not all indicators are equally important, and there is no simple numerical formula to determine whether an operation is in nonconformance. The team therefore must use their collective judgment to assess each criterion and determine if the FME is in conformance. If the FME is determined to be in nonconformance at the criterion level, then at least one of the applicable indicators must be in major nonconformance.

Corrective action requests (CARs) are issued for every instance of a nonconformance. Major nonconformances trigger Major CARs and minor nonconformances trigger Minor CARs.

4.2.2 Interpretations of Major CARs, Minor CARs and Observations

Major CARs: Major nonconformances, either alone or in combination with nonconformances of all other applicable indicators, result (or are likely to result) in a fundamental failure to achieve the objectives of the relevant FSC Criterion given the uniqueness and fragility of each forest resource. These are corrective actions that must be resolved or closed out before a certificate can be awarded. If Major CARs arise after an operation is certified, the timeframe for correcting these nonconformances is typically shorter than for Minor CARs. Certification is contingent on the certified FME's response to the CAR within the stipulated time frame.

Minor CARs: These are corrective action requests in response to minor nonconformances, which are typically limited in scale or can be characterized as an unusual lapse in the system. Most Minor CARs are the result of nonconformance at the indicator-level. Corrective actions must be closed out within a specified time period of award of the certificate.

Observations: These are subject areas where the evaluation team concludes that there is conformance, but either future nonconformance may result due to inaction or the FME could achieve exemplary status through further refinement. Action on observations is voluntary and does not affect the maintenance of the certificate. However, observations can become CARs if performance with respect to the indicator(s) triggering the observation falls into nonconformance.

4.3. Existing Corrective Action Requests and Observations

<table>
<tr><td colspan="4">Finding Number: FSC 2019.5</td></tr>
<tr><td>Select one:</td><td>☐ Major CAR</td><td>☒ Minor CAR</td><td>☐ Observation</td></tr>
<tr><td colspan="4">FMU CAR/OBS issued to (when more than one FMU):</td></tr>
<tr><td>Deadline</td><td colspan="3">☐ Pre-condition to certification/recertification
☐ 3 months from Issuance of Final Report
☒ 12 months or next regularly scheduled audit (surveillance or re-evaluation)
☐ Observation – response is optional
☐ Other deadline (specify):</td></tr>
<tr><td>FSC Indicator:</td><td colspan="3">FSC-US 9.4.a</td></tr>
<tr><td colspan="4">Non-Conformity (or Background/ Justification in the case of Observations):
Interviews with FME staff and review of documentation revealed that FME’s occasional monitoring of HCVs does not fully conform with 9.4.a. There is a lack of systematic monitoring of HCV management guideline effectiveness. The audit team understands that there are aspects of HCV monitoring that are difficult to accomplish in a robust manner, however, FME approved its current list of HCVs in 2011 and thus has had some time to implement a monitoring system. Note that the 9.4.a does not specify the types of monitoring that are required, i.e., frequent field visits are not specifically required for monitoring, particularly for passively managed HCVs.</td></tr>
<tr><td colspan="4">Corrective Action Request (or Observation): FME shall monitor, or participate in a program to annually monitor, the status of the specific HCV attributes, including the effectiveness of the measures employed for their maintenance or enhancement. The monitoring program shall be designed and implemented consistent with the requirements of Principle 8.</td></tr>
<tr><td>FME response (including any evidence submitted)</td><td colspan="3">Updated Response for the 2021 Audit

In 2017, teams were chartered to begin the prioritization and development of management guidelines for selected HCV’s. To date, guidelines have been developed for 7 HCVs that are commonly encountered in management of our certified lands. These HCV’s include rare native plant communities, rare species, and ecosystems of significance. In 2020 a Project Team was formed to modify these HCV guidelines to incorporate a monitoring approach that will;
• Focus on data that are of sufficient detail to evaluate current conditions so they can be compared at future intervals,
• Evaluate the effects of management and progress towards desired future conditions and management objectives,
• Describe the monitoring procedures and their frequency,</td></tr>
</table>

	• Recognize the constraints of existing Department staff workload and in-place systems. • The Project Team completed their work and submitted their recommendations to leadership. Leadership is assessing this new work and its impact on existing staff workload. Implementation of HCV monitoring was completed at a trial scale in 2021 for two of the 7 aforementioned HCV's (one species, one plant community) to further assess the impact on workload and budgets. Results of that trial will be presented to the Executive Forest Resources Issues Team (ExFRIT) for their recommendations of monitoring implementation in 2022 and beyond. The HCV Monitoring trial is attached here.
SCS review	2020 Review: This non-conformance is extended until the 2021 audit based on the exceptional circumstances of the Covid 19 pandemic. FSC protocols allow for a one time extension of non-conformance deadlines based on exceptional circumstances. Additionally, mitigating the finding here is that monitoring of HCVs did still occur since the last audit, albeit in an informal matter. 2021 Review: DNR took a multi-step approach to revising its monitoring protocol for HCVF, using a combination of detailed quantitative assessments and more qualitative rapid assessments. The new approach was implemented on selected HCVs in 2021, including one rare plant HCV (Ram's Head Lady Slipper) and one native plant community HCV (FDc23). The audit team reviewed field monitoring sites during the audit. The actions taken have directly addressed the CAR.
Status of CAR:	☒ Closed ☐ Upgraded to Major ☐ *Other decision (refer to description above)*

Finding Number: 2020.1			
Select one:	☐ **Major CAR**	☐ **Minor CAR**	☒ **Observation**
FMU CAR/OBS issued to (when more than one FMU):			
Deadline	☐ Pre-condition to certification/recertification ☐ 3 months from Issuance of Final Report ☒ 12 months or next regularly scheduled audit (surveillance or re-evaluation) ☐ Observation – response is optional ☐ Other deadline (specify):		
FSC Indicator:	FSC-US 9.3.a		
Non-Conformity *(or Background/ Justification in the case of Observations)*: In conversations during the audit it was identified that there may be a difference in management approaches applied to High Conservation Values (HCV) depending on whether or not they are found within the DNR's designated High Conservation Value Forests. In past audits the audit team had understood that that the features that make up high conservation values have received equivalent			

protection by the DNR whether or not they are found within a designated HCVF. Additionally, impending changes to the FSC-US National Standard may result in changes to the DNR's HCV identification and management system. Some features currently classified as HCV may not meet the definition in the new standard, and conversely some areas not currently identified as High Conservation Value Forests may meet the new definitions of High Conservation Value Areas.	
Corrective Action Request *(or Observation)*: With the impending revision to the FSC-US National Standard, the requirement for identification, management, and monitoring of High Conservation Values will be placed on HCVs regardless of where they occur in the management unit. In addition, the High Conservation Value Framework in the draft standard has updated guidance for the identification of HCVs that may affect the DNRs current designation of these values. This could result in fewer features being identified as HCV In preparation for these changes in the new standard, the DNR should, using the High Conservation Value Framework, review and reconsider directly how their High Conservation Values are defined in accordance with the new HCV Framework, and how these HCVs will be maintained or enhanced and monitored, regardless of whether they occur in the currently designated HCVFs or not. This finding is graded as an observation because it primarily pertains to a requirement of the new standard not yet in effect. Also, no direct harm to HCVs was observed during the audit, and so a non-conformance was not currently warranted.	
FME response *(including any evidence submitted)*	With the new FSC National Forest Stewardship Standard (NFSS) planned to be effective in 2023 or 2024, this finding is a timely opportunity to reassess MN DNR's HCV's 1-3. In part, this assessment will be a re-cataloging exercise to determine if our current HCV's are adequately assessed, protected, and monitored under Principle 6 (Environmental Values and Impacts) or if they rise to the emerging definitions of HCV's under Principle 9 (High Conservation Values). Concurrently, this assessment, using the tools and resources provided in Annex K of the draft FSC National Forest Stewardship Standards, will allow us to explore if there are HCV's that were overlooked in our previous assessment. Given the new definitions of HCV's 1 (significant concentrations of biodiversity) and 2 (significant landscape level ecosystems) are assessed at a global, national, and regional (ecological province) scale, we started this process investigation with conservation biologists from Wisconsin and Michigan DNR as well as our Forest Ecologist and Minnesota Biological Survey supervisor, focusing on the Laurentian Mixed Forest Province (LMF). LMF is one of two provinces in Minnesota that make up our certified lands and is shared by the other two states. We had a check-in meeting in mid-August to explore the assessment tools in Annex K. Assignments were made to contact organizations such as The Nature Conservancy and NatureServe to determine if they can retool their national level databases and maps to a province scale. Those contacts have been made. The multi-state team plans to reconnect in October to discuss the database and mapping retooling goals and to further outline how this reassessment process could proceed across state lines.
SCS review	The audit team is satisfied that the DNR is acutely aware of the impending standard changes and is working to adapt their current HCVF system to these changes, as described in their response to this finding. On this basis the observation is closed.
Status of CAR:	☒ Closed ☐ Upgraded to Major ☐ *Other decision (refer to description above)*

4.4. New Corrective Action Requests and Observations

	Finding Number: 2021.1
Finding and Deadline	
☐ **Major CAR**: Pre-condition to certification/recertification ☐ **Major CAR**: 3 months from Issuance of Final Report ☒ **Minor CAR**: 12 months or next regularly scheduled audit, whichever comes first (*surveillance or re-evaluation*) ☐ **Observation** – response is optional ☐ **Other** and deadline (specify):	
FMU CAR/OBS issued to (when more than one FMU):	
Standard and Indicator	FSC-US Forest Management Standard, Indicator 6.5.e.1
☒ **Non-Conformity Evidence** ☐ **Observation Justification and/or Explanation** While reviewing the site for permit number X017293, it was unclear whether a riparian management zone had been implemented as intended. The harvest in question was a clearcut in a stand bordering a river that had previously suffered blowdown from a wind event. In discussing the site there was initial confusion over whether the appropriate RMZ width should be 50 ft or 120 ft (later confirmed to be 120 ft). In practice the RMZ seemed to have placed using an existing road as a border, with the area on the side of the road next to the river uncut, and the harvest beginning on the other side of the road. A GIS layer later confirmed that the road was within 120 ft of the river, meaning that the road was too close to the river to act as an RMZ boundary. While acknowledging that the Minnesota Forest Management guidelines allow for some flexibility in establishing RMZ and the activities within them, this case did not demonstrate that RMZs were being implemented as designed in accordance with these guidelines.	
☒ **Non-Conformity Corrective Action Request** ☐ **Observation; no Corrective Action is required** DNR must ensure that that its guidelines for Riparian Management Zones are being properly implemented.	
FME response *(including any evidence submitted)*	
SCS review	
Status of CAR:	☐ Closed ☐ Upgraded to Major ☐ *Other decision (refer to description above)*

	Finding Number: 2021.2
Finding and Deadline	

☐ **Major CAR**: Pre-condition to certification/recertification ☐ **Major CAR**: 3 months from Issuance of Final Report ☒ **Minor CAR**: 12 months or next regularly scheduled audit, whichever comes first (*surveillance or re-evaluation*) ☐ **Observation** – response is optional ☐ **Other** and deadline (specify):	
FMU CAR/OBS issued to (when more than one FMU):	
Standard and Indicator	FSC-US Forest Management Standard, Indicator 8.4.a
☒ **Non-Conformity Evidence** ☐ **Observation Justification and/or Explanation** Review of a 6 year old restoration planting on Henry Bjoring WMA indicated a high degree of mortality in the planted jack pine seedlings, as well as bur oak and crab apple trees. The management objectives for the site are a conversion to a jack pine savannah, so a fully stocked stand to timber levels is not expected. But even allowing for some loss, the tree mortality on the site was significant. Discussions with the wildlife manager indicated that there was not a formal process for monitoring the success of the planting, and whether additional management activities will be needed. It is noteworthy that the funding for these activities is reliant on grants. A significant investment was made in the site, and more may be needed from uncertain funding sources in order to accomplish the objectives.	
☒ **Non-Conformity Corrective Action Request** ☐ **Observation; no Corrective Action is required** DNR needs to ensure that it is monitoring and documenting the degree to which its objectives in the management plans are being fulfilled, in order to enable revisions to the plan and objectives as necessary.	
FME response *(including any evidence submitted)*	
SCS review	
Status of CAR:	☐ Closed ☐ Upgraded to Major ☐ *Other decision (refer to description above)*

4.5 Major Nonconformances

X	No Major CARs were issued to the FME during the evaluation. Any Minor CARs from previous surveillance audits have been reviewed and closed prior to the issuance of a certificate.
	Major CARs were issued to the FME during the evaluation, which have all been closed to the satisfaction of the audit team and meet the requirements of the standards. Any Minor CARs from previous surveillance audits have been reviewed and closed prior to the issuance of a certificate.
	Major CARs were issued to the FME during the evaluation and the FME has not yet satisfactorily closed all Major CARs.

5. Certification Decision

Certification Recommendation	
FME be awarded FSC certification as a "Well-Managed Forest" subject to the minor corrective action requests stated in Section 4.2.	**Yes ☒ No ☐**
The SCS evaluation team makes the above recommendation for certification based on the full and proper execution of the SCS Forest Conservation Program evaluation protocols. A positive certification decision indicates that: • Any Minor CARs from previous surveillance audits have been reviewed and closed prior to the issuance of a new certificate; • No Major CARs were issued to the FME during the evaluation; • Any Major CARs issued during the audit were closed prior to report finalization; • The FME has demonstrated that its system of management is capable of ensuring that all of the requirements of the applicable standards (see Section 1.6 of this report) are met over the forest area covered by the scope of the evaluation; • The FME has demonstrated that the described system of management is being implemented consistently over the forest area covered by the scope of the certificate.	
Comments:	

SECTION B – APPENDICES (CONFIDENTIAL)

Appendix 1 – Current and Projected Annual Harvest

The sustainable rate of harvest (usually Annual Allowable Harvest or AAH where available) of commercial timber (m3 of round wood):	870,000 cords
Explanation of the assumptions, methodology, and reference to the data source upon which AAH and NTFP harvest rates estimates are based:	
DNR engaged in a multi-year Sustainable Timber Harvest Analysis, which identified a sustainable harvest goal of 870,000 cords offered per year, plus an additional 30,000 cords of selected species with high mortality risk. DNR announced the results of its Sustainable Timber Harvest Analysis on March 1, 2018, and set a goal of 870,000 cords per year. There is also the possibility of an additional 30,000 per year of ash and tamarack over the next five years, because of increasing insect mortality on these species (from emerald ash borer and eastern larch beetle). The extensive analysis behind the new harvest level can be found on the DNR website: MN DNR Sustainable timber harvest analysis, decisions, and planning DNR employed an outside contractor to assist in the analysis, although the final decision was taken by the department. The analysis followed techniques standard in the forestry industry, planning software and growth and yield data to analyze a variety of timber production scenarios, from most to least aggressive. The final determination of 870,000 cords did not follow any single modelled scenario but represented a compromise that allowed the DNR to increase its harvest level while still being able to meet its environmental and social management goals. Areas restricted from harvest production, such as designated old growth, were not considered as growing stock contributing the allowable harvest.	

Appendix 2 – List of FMUs Selected for Evaluation

☒ FME consists of a single FMU

☐ FME consists of multiple FMUs or is a Group

SCS staff establishes the design and level of sampling prior to each group or multiple FMU evaluation according to FSC-STD-20-007. A list of the FMUs sampled and the rationale behind their selection is listed below.

FMU Name	FMU Size Category: - SLIMF - non-SLIMF - Large > 10,000 ha	Forest Type: - Plantation - Natural Forest	Rationale for Selection: - Random Sample - Stakeholder issue - Ease of access - Other – please describe

Appendix 3 – Additional Evaluation Techniques Employed

☒ None.

☐ Additional techniques employed (*describe*):

Appendix 4 - Staff and Stakeholders Consulted

List of FME Staff Consulted

To protect privacy, only FME staff who have expressly provided written permission are listed. **These records are retained by SCS and subject to FSC or ASI examination.**

Name	Position Title
Sarah Strommen	Commissioner
Barb Naramore	Deputy Commissioner
Shannon Lotthammer	Assistant Commissioner
Bob Meier	Assistant Commissioner
Jess Richards	Assistant Commissioner
Theresa Ebbenga	NW Regional Director
Bradley Harrington	Tribal Liaison
Forrest Boe	Director – Forestry Division
Dave Olfelt	Director – Fish and Wildlife Division (FAW)
Pat Rivers	Deputy Director – FAW
Ann Pierce	Deputy Director – Ecological and Water Resources (EWR)
Jan Shaw Wolff	Section Chief – Ecosystem Management and Protection (EWR) & Certification Oversight Team (COT)
Adam Munstenteiger	NW Region Forestry Manager
Andrew Arends	Section Chief – State Forest Lands
Aaron VandeLinde	Director, Office of School Trust Lands (non-DNR staff)
Amber Ellering	Forest Policy and Planning Supervisor

Name	Position Title
Emily Peters	Forest Ecology and Policy Program Consultant (EWR)
Lacy Levine	Forest Policy Analyst & Forest Certification Implementation Team (FCIT)
Jon Drimel	Timber Program Supervisor & FCIT
Tim Quincer	Forest Wildlife Habitat Specialist &FCIT
Nick Jensen	NW Regional Ecologist &FCIT
Tim Beyer	Forest Certification Program Consultant & FCIT lead
Doug Tillma	Section Chief – Forestry Planning and Policy & COT
Nathan Kestner	NW Region EWR Manager
Ted Dick	Forest Wildlife Habitat Supervisor
David Wilson	BMP Monitoring Program Consultant & FCIT
Grant Wilson	Central Regional Director
Katie Smith	Wildlife Section Manager (FAW)
Blaine Klemek	NW Region Assistant Wildlife Manager
Joel Lemberg	Central Region Forestry Manager
Gretchen Miller	Acting Central Region Wildlife Manager
Dan Lais	Central Region EWR Manager
Lori Knosalla	Timber Sale Administration Coordinator
Michelle Martin	Central Region ECS Coordinator
Paul Dubuque	Forestry Silviculture Consultant
Tavis Westbrook	Resource Program Coordinator (Parks & Trails)
Name	Position Title
Mike Lichter	Area Forestry Leader - Park Rapids (PR)
Kyle Anderson	Area Timber Program Forester (PR)

Name	Position Title
Brian Hoffmann	Area Silviculture Program Forester (PR)
Dawn Plattner	Park Rapids Assistant Area Wildlife Manager
Amy Westmark	NW Regional Non-Game Specialist (EWR)
Steve Bade	Forestry Technician (PR)
John Korzeniowski	Area Forestry Leader – Little Falls (LF)
Peter Willis	Assistant Area Forestry Leader (LF)
Ross Meyer	Area Silviculture Program Forester (LF)
Steve Piepgras	Mille Lacs Area Wildlife Supervisor
Tim Stai	Forestry Specialist (LF)
Tom Young	Forestry Technician (LF)
Paul Kedrowski	Forestry Specialist (LF)
Joe Rucinski	Area Forestry Leader - Bemidji (B)
Andy Kernan	Area Timber Program Forester (B)
Nick Severson	Area Silvics Program Forester (B)
Justin Pitt	Assistant Area Wildlife Manager
Lori Barrow	Forester
Douglas Sirrine	Area Forestry Leader – Warroad (W)
Shane Delaney	Assistant Area Forestry Leader (W)
Jon Stelter	Timber Program Forester (W)
Sarah Brown	Silviculture Program Forester (W)
Doug Franke	Thief River Falls Area Wildlife Manager
Jason Wollin	Karlstad Area Wildlife Manager
Kyle Arola	Thief Lake Area Wildlife Manager
Rebecca Rickaby	Forestry Specialist (W)

Name	Position Title
Tyler Hasbargen	Forestry Technician (W)

List of other Stakeholders Consulted*

To protect privacy, only stakeholders who have expressly provided written permission are listed. **These records are retained by SCS and subject to FSC or ASI examination.**

Name	Organization	Contact Information	Consultation method	Requests Cert. Notf.
Jim Hodgson	Assistant Regional Director, US Fish and Wildlife Service	Jim_Hodgson@fws.gov	Phone	Yes
Tom Kerr	Refuge Supervisor MN/IA, US Fish and Wildlife Service	tom_kerr@fws.gov	Phone	Yes
Rick Horton	Vice President of Forest Policy, Minnesota Forest Industries	RHorton@MFITPA.com	Phone	Yes
James Graham	US Fish and Wildlife Service	james_graham@fws.gov	Phone	Yes
Lois Norgarrd	Sierra Club	Withheld	Video conference	Yes
Kurt Rusterholz	Sierra Club (retired DNR)	Withheld	Video conference	Yes
Craig Sterle	Sierra Club (retired DNR)	Withheld	Video conference	Yes
Jim Hawkins	Sierra Club	withheld	Video conference	Yes
Don Arnosti	Sierra Club (environmental representative)	Withheld	Video conference	Yes
Brett Smith	Sierra Club	Withheld	Video conference	Yes

** Note: SCS may maintain additional records of stakeholder consultation activities (e.g., email notifications) in its recordkeeping system. Anonymous stakeholders may have provided comments as a part of stakeholder outreach activities.*

Appendix 5 – Required Tracking

Pesticide Derogations

☒ There are no active pesticide derogations for this FME.

Name of pesticide / herbicide (active ingredient)	Date derogation approved

Condition	Conformance (C / NC)	Evidence of progress

Progressive HCVF Assessments

☒ FME does not use partial or progressive HCVF assessments.

Note: In the case the FME is not operating in the entire management unit, it is permissible to only complete an HCVF assessment for the portion of the unit in which they are operating under special conditions. In such cases, the HCVF assessment must be extended if new areas are entered without an existing, appropriate HCVF assessment having been completed. An example includes a large forest concession where harvesting is initially limited to a smaller geographic scope.

Partial or progressive HCV must be noted in SCS tracking system for monitoring. Describe below the FME monitoring plan to ensure additional HCVF assessments are completed as necessary: HCV Monitor Plan

Special Instructions or Scoping Notes for Next Regularly Scheduled Annual Audit

☐	Not applicable; no significant issues identified that may impact the next audit.
Some issues were identified during this audit that the next audit team could consider in the next audit, such as:	
☐	Scope of certificate:
☐	Audit sampling:
☐	Audit time:
☐	Audit season:
☐	Travel time between sites or FMUs:
☐	Audit frequency:
☐	Suggested audit team competency for next audit:
☐	Suggested requirements to include during the next audit:
☐	Suggested issues investigate during the next audit: Impacts from OHV/ATV use continue to be a cause of concern to stakeholders and should be reviewed in future audits.
☐	Suggested sites for inspection:
☐	Stakeholders to be consulted:
☐	Other(s) – please describe: Ongoing processes that should be followed by future audits include the designation of Lowland Confier Old Growth, and the establishment of the Border to Border OHV route.

Appendix 6 – Forest Management Standard Conformance Table

Principle #1: Compliance with Laws and FSC Principles Forest management shall respect all applicable laws of the country in which they occur, and international treaties and agreements to which the country is a signatory, and comply with all FSC Principles and Criteria.

1.1 Forest management shall respect all national and local laws and administrative requirements.	C	
1.1.a *Forest* management plans and operations demonstrate compliance with all applicable federal, state, county, municipal, and tribal laws, and ***administrative requirements*** (e.g., regulations). Violations, outstanding complaints or investigations are provided to the ***Certifying Body*** (CB) during the annual audit.	C	There have been no enforcement actions in recent years against the MN DNR related to compliance with applicable federal, state, or local forestry and related environmental laws and regulations. The audit team also did not detect any violations or outstanding complaints.
1.1.b To facilitate legal compliance, the ***forest owner*** or ***manager*** ensures that employees and contractors, commensurate with their responsibilities, are duly informed about applicable laws and regulations.	C	MN DNR internal administrative policies and procedures are designed to address legal compliance. Regular training is provided to MN DNR staff and contractors, as evidenced through a review of a sample of training records.
1.2. All applicable and legally prescribed fees, royalties, taxes and other charges shall be paid.	C	-
1.2.a The forest owner or manager provides written evidence that all applicable and legally prescribed fees, royalties, taxes and other charges are being paid in a timely manner. If payment is beyond the control of the landowner or manager, then there is evidence that every attempt at payment was made.	C	As a state agency, the MN DNR is tax exempt from property taxes. The MN DNR has responsibility to generate revenue through school trust lands; no evidence on nonpayment from these trust lands was detected.
1.3. In signatory countries, the provisions of all binding international agreements such as CITES, ILO Conventions, ITTA, and	**C**	-

Convention on Biological Diversity, shall be respected.		
1.3.a. Forest management plans and operations comply with relevant provisions of all applicable binding international agreements.	C	International treaties are implemented through federal legislation (e.g., Migratory Bird Treaty Act). The MN DNR has internal procedures demonstrating conformance to this and other applicable treaties. State statutes include protocols for implementation of binding international agreements. No evidence of non-compliance with relevant provisions was detected.
1.4. Conflicts between laws, regulations and the FSC Principles and Criteria shall be evaluated for the purposes of certification, on a case by case basis, by the certifiers and the involved or affected parties.	C	-
1.4.a. Situations in which compliance with laws or regulations conflicts with compliance with FSC Principles, Criteria or Indicators are documented and referred to the CB.	C	The audit team found no evidence of conflicts between laws or regulations applicable to the MN DNR and the FSC-US Forest Management Standard. The agency actively communicates with SCS and the United States office of the FSC on concerns related to the standard.
1.5. Forest management areas should be protected from illegal harvesting, settlement and other unauthorized activities.	C	-
1.5.a. The forest owner or manager supports or implements measures intended to prevent illegal and unauthorized activities on the ***Forest Management Unit*** (FMU).	C	Per interviews with staff, the DNR has law enforcement and state lands staff that handle access, theft, trespass, and other issues related to illegal and unauthorized activities. State Forest rules, as well as hunting, fishing, ATV, and other recreation use regulations, are available to the public online. Additionally, as evidenced through site visits, the state lands sampled for the audit were well marked with signage describing allowed and disallowed uses. Several sites also had kiosks at parking lots and other access points that prominently displayed the regulations and communicated other information (e.g., active timber sales) to the public.
1.5.b. If illegal or unauthorized activities occur, the forest owner or manager implements actions designed to curtail such activities and correct the situation to the extent possible for meeting all land	C	The MN DNR Timber Manual includes procedures for handling illegal activities such as trespass. As described in the evidence of conformance for Indicator 1.5.a, the DNR has law enforcement; those individuals are trained to handle situations of illegal or unauthorized activities and will bring in other enforcement personnel if needed.

management objectives with consideration of available resources.		Interviews with DNR staff and field observations confirmed that OHV clubs are active in self-policing and try to keep their membership from riding on unauthorized trails. Observed posting of numerous signs instructing riding to act responsibly. Efforts to block unauthorized access to ATCs were viewed at numerous field sites during the 2020 audit. Per interviews with field staff and observation during site visits, the audit team confirmed that there are FME staff that can issue citations when unauthorized or illegal activities occur. There is also law enforcement available to conduct investigations when necessary.
1.6. Forest managers shall demonstrate a long-term commitment to adhere to the FSC Principles and Criteria.	C	-
1.6.a. The forest owner or manager demonstrates a long-term commitment to adhere to the FSC Principles and Criteria and FSC and FSC-US policies, including the FSC-US Land Sales Policy, and has a publicly available statement of commitment to manage the FMU in conformance with FSC standards and policies.	C	The MN DNR has a written statement of commitment to the FSC Principles and Criteria on its website. Moreover, DNR's land management policies across the state demonstrate evidence of commitment to the FSC Standard.
1.6.b. If the certificate holder does not certify their entire holdings, then they document, in brief, the reasons for seeking partial certification referencing FSC-POL-20-002 (or subsequent policy revisions), the location of other managed forest units, the natural resources found on the holdings being excluded from certification, and the management activities planned for the holdings being excluded from certification.	C	DNR manages other land that is not included in the scope of the certificate. The primary reason for excluding these areas is that they do not have timber management as a primary objective, and therefore certification is less applicable. These lands include State Parks, most other Parks and Trails lands, most Fisheries lands, Scientific and Natural Areas, agricultural lands, and utility leases
1.6.c. The forest owner or manager notifies the Certifying Body of significant changes in ownership and/or significant changes in management planning within 90 days of such change.	C	The MN DNR Forest Certification Program Consultant is in frequent communication with SCS. Changes in ownership are reported during the annual audits, as are changes in planning policy.

Principle #2: Long-term tenure and use rights to the land and forest resources shall be clearly defined, documented and legally established.

2.1. Clear evidence of long-term forest use rights to the land (e.g., land title, customary rights, or lease agreements) shall be demonstrated.	C	-
2.1.a The forest owner or manager provides clear evidence of ***long-term*** rights to use and manage the FMU for the purposes described in the management plan.	C	As a state agency, long-term rights to use and manage lands that are in the FSC certificate are granted by statute. For example: • Commissioner of Natural Resources is granted the power and responsibility to manage state lands through MS 84.027. • Lands covered in the FSC certificate are part of the Outdoor Recreation System, authorized under MS 86A. • Types and classes of land acquired by various means from federal land grants to purchase are authorized to be controlled by the DNR under MS 94, specifically MS 94.342. • State Forests and related activities are authorized under MS 89 with the authority to harvest timber under MS 90. Ownership records are stored in hard copy with paper records of deeds and land transaction files file in a fire safe in the DNR Central Office. Electronic copies of all land ownership records and transaction files are also part of the LRS (Land Record System) that is accessible via a secure Internet portal. All employees have access to this portal with read only access. Those involved with land transactions, have access to the LRS to initiate and carry out land transactions, providing a repository for additional land ownership records. The DNR Division of Lands and Minerals manages both systems.
2.1.b The forest owner or manager identifies and documents legally established use and access rights associated with the FMU that are held by other parties.	C	The DNR Division of Lands and Minerals is responsible for real estate services such as deeds and easements. The division provides real estate services to the MN DNR agency, including maintenance of deeds, leases, and easements. Rights held by third parties are identified prior to management commencing, with the most common example being utility rights of ways and similar easements.
2.1.c Boundaries of land ownership and use rights are clearly identified on the ground and on maps prior	C	As evidenced through review of site-level harvest maps, boundaries are identified on operational maps. While property boundaries on the ground can vary by region

to commencing management activities in the vicinity of the boundaries.		and division, site visits demonstrated clear property lines through signage and other visual markings. DNR foresters explained that boundaries are checked during timber sale set-up, though not always using official survey boundaries. If an official survey is needed, as in the case of encroachment or timber trespass, this may be requested. In the case of timber trespass or building a structure on state land, these are dealt with on a case by case basis, but there has been no systematic review at the state level. These types of trespass have statutory procedures.
2.2. Local communities with legal or customary tenure or use rights shall maintain control, to the extent necessary to protect their rights or resources, over forest operations unless they delegate control with free and informed consent to other agencies. *Applicability Note: For the planning and management of publicly owned forests, the local community is defined as all residents and property owners of the relevant jurisdiction.*	C	-
2.2.a The forest owner or manager allows the exercise of ***tenure*** and ***use rights*** allowable by law or regulation.	C	Rights held by third parties are identified prior to management commencing, with the most common example being utility rights of ways and similar easements. Utility powerline corridors and other rights-of-ways were observed during the audit include.
2.2.b In FMUs where tenure or use rights held by others exist, the forest owner or manager consults with groups that hold such rights so that management activities do not significantly impact the uses or benefits of such rights.	C	Rights held by third parties are identified prior to management commencing, with the most common example being utility rights of ways and similar easements. Utility powerline corridors and other rights-of-ways were observed during the audit include. While not officially “use rights,” the MN DNR does make ATV clubs, snowmobile clubs, and adjacent landowners aware of planned harvest units. Examples of how the MN DNR has implemented practices to minimize the impact of harvest operations on user groups was observed during the audit.
2.3. Appropriate mechanisms shall be employed to resolve disputes	C	-

over tenure claims and use rights. The circumstances and status of any outstanding disputes will be explicitly considered in the certification evaluation. Disputes of substantial magnitude involving a significant number of interests will normally disqualify an operation from being certified.		
2.3.a If ***disputes*** arise regarding tenure claims or use rights then the forest owner or manager initially attempts to resolve them through open communication, negotiation, and/or mediation. If these good-faith efforts fail, then federal, state, and/or local laws are employed to resolve such disputes.	C	FME staff reported that there are no new or unresolved disputes over tenure claims and use rights. During virtual field visits and review of maps, timber sale and property boundaries were clearly marked.
2.3.b The forest owner or manager documents any significant disputes over tenure and use rights.	C	No significant disputes over tenure or use rights were detected during the audit.

Principle #3: The legal and customary rights of indigenous peoples to own, use and manage their lands, territories, and resources shall be recognized and respected.

3.1. Indigenous peoples shall control forest management on their lands and territories unless they delegate control with free and informed consent to other agencies.	C	-
3.1.a Tribal forest management planning and implementation are carried out by authorized tribal representatives in accordance with tribal laws and customs and relevant federal laws.	NA	The FME is not a tribal entity.
3.1.b The manager of a tribal forest secures, in writing, informed consent regarding forest management activities from the tribe or individual forest owner prior to commencement of those activities.	NA	The FME is not a tribal entity.
3.2. Forest management shall not threaten or diminish, either directly or indirectly, the	C	-

resources or tenure rights of indigenous peoples.		
3.2.a During management planning, the forest owner or manager consults with American Indian groups that have legal rights or other binding agreements to the FMU to avoid harming their resources or rights.	C	In 2014, the MN NDR issued Operational Order 129, which covers procedures for communications, coordination, and documentation of work between DNR and Minnesota's 11 federally recognized Tribal Nations on coordinated conservation, resource protection and land management activities. The DNR provides tribes with the annual stand exam list. The department works with the 1854 Treaty Authority and the Great Lakes Fish and Wildlife Council. Minnesota Indian Affairs Council of the State of Minnesota, established in 1963, serves as a liaison between Indian tribes and the state of Minnesota. It promotes inter-governmental cooperation on fish and game regulations, forestry, mining and other natural resources and cultural issues. The MN DNR maintains a database to record contacts between staff and tribal representatives. It includes thousands of records compiled since the 2014 Operational Order. The MN DNR has reported no known locations where management activities have affected resources or tenure rights of indigenous peoples in the last year. Field staff interviewed confirmed that there were no special sites that required additional protections from management activities. In 2020, MN DNR hired a full-time tribal liaison. The incumbant is a member of the Mille Lacs Band of Ojibwe where he had served as the Band's Commissioner of Natural Resources. The tribal liaisons roles is specifically focused on engagement (formal government-to-governement consultation, technical coordination, etc) with tribal governments though their elected leaders and staff. The liaison and the departments Commissioner meet annually, and separately, with Minnesota's tribal nations to consult on a range of issues that may affect their rights and resources. Additionally, the departments regional directors meet regularly with tribal natural resources directors to coordinate on a range of issues of mutual interest.
3.2.b Demonstrable actions are taken so that forest management does not adversely affect tribal	C	The MN DNR has dedicated archeological staff to protect cultural resources. The State Archaeologist publishes an annual Forest Heritage Program Report. The program

resources. When applicable, evidence of, and measures for, protecting tribal resources are incorporated in the management plan.		conducts reviews of timber sales and other division activities that were considered to have the potential to affect known or previously undocumented heritage resources. Archival and field research is conducted for Division of Forestry and Division of Fish and Wildlife projects. Archaeological sites or other potentially significant properties are identified. The MN DNR has reported no known locations where management activities have affected resources or tenure rights of indigenous peoples in the last year. Field staff interviewed confirmed that there were no special sites that required additional protections from management activities. As explained under the evidence of conformance for Indicator 3.2.a, in 2020, MN DNR hired a full-time tribal liaison. The incumbant is a member of the Mille Lacs Band of Ojibwe where he had served as the Band's Commissioner of Natural Resources. The tribal liaisons roles is specifically focused on engagement (formal government-to-governement consultation, technical coordination, etc) with tribal governments though their elected leaders and staff. The liaison and the departments Commissioner meet annually, and separately, with Minnesota's tribal nations to consult on a range of issues that may affect their rights and resources. Additionally, the departments regional directors meet regularly with tribal natural resources directors to coordinate on a range of issues of mutual interest.
3.3. Sites of special cultural, ecological, economic or religious significance to indigenous peoples shall be clearly identified in cooperation with such peoples, and recognized and protected by forest managers.	C	-
3.3.a. The forest owner or manager invites consultation with tribal representatives in identifying sites of current or traditional cultural, archeological, ecological, economic or religious significance.		Operational Order 129, noted in the evidence of conformance for Indicator 3.2.1, requires consultation. To that end, the DNR archeologist in consults with tribal historic preservation officers. The DNR maintains a cultural/historic features GIS layer, which is used for forestry planning. Additionally, the annual stand exam list is provided to tribes.

		Additionally, as explained under the evidence of conformance for Indicator 3.2.a, in 2020, MN DNR hired a full-time tribal liaison. The incumbant is a member of the Mille Lacs Band of Ojibwe where he had served as the Band's Commissioner of Natural Resources. The tribal liaisons roles is specifically focused on engagement (formal government-to-governement consultation, technical coordination, etc) with tribal governments though their elected leaders and staff. The liaison and the departments Commissioner meet annually, and separately, with Minnesota's tribal nations to consult on a range of issues that may affect their rights and resources. Additionally, the departments regional directors meet regularly with tribal natural resources directors to coordinate on a range of issues of mutual interest.
3.3.b In consultation with tribal representatives, the forest owner or manager develops measures to protect or enhance areas of special significance (see also Criterion 9.1).		Working with the Minnesota Indian Affairs Council, the State Historical Society and Tribal Historic Preservation Officers, special sites of tribal significance are mapped and protected from any negative impacts from logging. No evidence to the contrary was detected by the audit team.
3.4. Indigenous peoples shall be compensated for the application of their traditional knowledge regarding the use of forest species or management systems in forest operations. This compensation shall be formally agreed upon with their free and informed consent before forest operations commence.	C	-
3.4.a The forest owner or manager identifies whether ***traditional knowledge*** in forest management is being used.	C	The MN DNR does not use traditional knowledge in the forest management it conducts.
3.4.b When traditional knowledge is used, written protocols are jointly developed prior to such use and signed by local tribes or tribal members to protect and fairly compensate them for such use.	NA	The MN DNR does not use traditional knowledge in the forest management it conducts.
3.4.c The forest owner or manager respects the confidentiality of tribal traditional knowledge and assists in the protection of such knowledge.	NA	The MN DNR does not use traditional knowledge in the forest management it conducts.

Principle #4: Forest management operations shall maintain or enhance the long-term social and economic well-being of forest workers and local communities.

4.1. The communities within, or adjacent to, the forest management area should be given opportunities for employment, training, and other services.	C	
4.1.a Employee compensation and hiring practices meet or exceed the prevailing ***local*** norms within the forestry industry.	C	FME provides quality employment opportunities using civil service hiring practices and negotiated compensation packages. See the Minnesota Management and Budget (accessed 9/29/21) website for details. Minnesota public employee salary information is available online for everyone to review.
4.1.b Forest work is offered in ways that create high quality job opportunities for employees.	C	State laws and collective bargaining agreements establish transfer and promotion eligibility standards. FME staff interviewed stated that they have fair wages and ample opportunities for further training and career advancement, both laterally (i.e., across other departments and divisions) and vertically (i.e., within the same department).
4.1.c Forest workers are provided with fair wages.	C	A fair wages requirement is part of the state request for bids. Contractors and vendors must comply with the Minnesota Fair Labor Standards Act. The federal Fair Labor Standards Act also covers employees of companies whose workers are engaged in interstate commerce or handle goods that have been moved over state lines. Per national salary data viewed on 09/28/21, "The average Logger salary in Minnesota is $40,039 as of August 27, 2021, but the range typically falls between $37,881 and $45,714." Salary ranges can vary widely depending on the city and many other important factors, including education, certifications, additional skills, the number of years you have spent in your profession." Per the same website, nationally, "The average Logger salary in the United States is $39,139 as of August 27, 2021, but the range typically falls between $37,029 and $44,686. Salary ranges can vary widely depending on many important factors, including education, certifications, additional skills, the number of years you have spent in your profession. With more online, real-time compensation data than any other website, Salary.com helps you determine your exact pay target."

		Minnesota established four minimum wage categories. A typical wage range for forestry, logging, and related work would therefore be between $7.87-$9.65/hr., or roughly $16,369.60-$20,072 per calendar year based on a 40-hr work week for 52 weeks/year. Thus, average wages are roughly double the minimum wage.
4.1.d Hiring practices and conditions of employment are non-discriminatory and follow applicable federal, state and local regulations.	C	In addition to federal anti-discrimination laws, Minnesota labor law includes the Minnesota Human Rights Act (MHRA) to protect employees from employer discrimination based on classifications such as gender, age, disability, religion and national origin. Employment discrimination based on a prohibited classification is illegal and subject to both federal penalties and sanctions defined in the MHRA.
4.1.e The forest owner or manager provides work opportunities to qualified local applicants and seeks opportunities for purchasing local goods and services of equal price and quality.	C	FME sells timber and non-timber forest products to local producers, as confirmed via review of timber harvest permits. In 2021, FME staff and contractors interviewed were from Minnesota and worked in Minnesota or Wisconsin. Forest products are processed within the state and region. Supplies and services are typically purchased from local vendors as they must adhere to state purchasing policies per interviews with staff.
4.1.f Commensurate with the size and scale of operation, the forest owner or manager provides and/or supports learning opportunities to improve public understanding of forests and forest management.	C	Employees at all levels and locations regularly speak to youth groups, school groups, and civic groups about forestry and related issues, as confirmed in interviews with staff. The FME's Office of Communication and Outreach (accessed 9/28/21) provides communication services to help DNR programs, projects and units effectively develop and deliver useful, accurate and relevant information to their audiences. The bureau coordinates a network of information and education staff within the central and regional offices to provide a variety of services aimed at increasing public awareness of the state's natural resources. The FME's information specialists answer approximately 86,000 telephone and 23,000 email questions and requests annually on Minnesota's natural resources and outdoor recreational opportunities on Minnesota's natural resources and outdoor recreational opportunities. The Information Center provides DNR brochures, maps and other information to the public.

4.1.g The forest owner or manager participates in local economic development and/or civic activities, based on scale of operation and where such opportunities are available.	C	In cooperation with the State Legislature, the Minnesota Forest Resources Council and the University of Minnesota, FME studies and funds research related to forest-based economic development. A primary mission of 2.5 million acres of State School Trust Lands administered by the FME is financial support for schools. The FME's Utilization and Marketing Program provides technical assistance to public and private individuals and organizations and maintains publications and statistics on the forest products industry.
4.2. Forest management should meet or exceed all applicable laws and/or regulations covering health and safety of employees and their families.	C	
4.2.a The forest owner or manager meets or exceeds all applicable laws and/or regulations covering health and safety of employees and their families (also see Criterion 1.1).	C	FME reported that there have been work related accidents on the FMU in the past year as recorded in the following: "Monthly Injury and Illness Performance Summary Report June 2021". A variety of changes have occurred during 2020-2021 related to Covid-19 pandemic and employees are made aware of changes in a timely manner per interviews with staff. 2021 continues to present a significant challenge in the wake of Covid 19. The DNR maintains a webpage on how operations will continue in the wake of the pandemic, MN DNR COVID-19 Response
4.2.b The forest owner or manager and their employees and contractors demonstrate a safe work environment. Contracts or other written agreements include safety requirements.	C	Timber harvest permits reviewed in the 2021 audit have clauses that refer to related timber purchasing documentation, such as the purchaser registration authority, which requires that the purchase submit evidence of licenses/training certification to conduct timber harvests per applicable laws and regulations. No safety issues were observed during field visits. Each day began with a safety briefing describing any site specific hazards the audit team should be aware of. A variety of changes have occurred during 2020-2021 related to Covid-19 pandemic and employees are made aware of changes in a timely manner per interviews with staff. 2021 continues to present a significant challenge in the wake of Covid 19. The DNR maintains a webpage on how operations will continue in the wake of the pandemic, MN DNR COVID-19 Response

4.2.c The forest owner or manager hires well-qualified service providers to safely implement the management plan.	C	Interviews with logging contractors confirm that they are trained. Per interviews with FME staff, loggers must submit evidence of training and qualification via an online system so that the FME can verify trainings, insurance, and other required records before loggers can begin work.
4.3 The rights of workers to organize and voluntarily negotiate with their employers shall be guaranteed as outlined in Conventions 87 and 98 of the International Labor Organization (ILO).	C	
4.3.a Forest workers are free to associate with other workers for the purpose of advocating for their own employment interests.	C	Per interviews with employees and observation of union postings at FME field offices visited during the audit, workers are free to associate per US and State Law. Since Minnesota is not a "right-to-work" state, workers in any workforce that is unionized must pay union dues.
4.3.b The forest owner or manager has effective and culturally sensitive mechanisms to resolve disputes between workers and management.	C	Employees are represented by unions under collective bargaining agreements. See the Minnesota Labor Relations Board (accessed 9/29/21) website for contracts, grievance procedures, etc. Collective bargaining agreements provide for grievance procedures. Employees also have grievance procedures under PELRA , the Fair Labor Act, the Minnesota Human Rights Act and internal department procedures. Per interviews with employees, the FME has procedures established through its human resources divisions, as confirmed via the following weblinks, for example: MN DNR Notice of Non-Discrimination and Complaint/Request Procedures; MN DNR Grievance Handling; and MN DNR Human Resources
4.4. Management planning and operations shall incorporate the results of evaluations of social impact. Consultations shall be maintained with people and groups (both men and women) directly affected by management operations.	C	
4.4.a The forest owner or manager understands the likely social impacts of management activities, and incorporates this	C	FME reported the follow activities related to social impacts since the last audit:

understanding into management planning and operations. Social impacts include effects on: • Archeological sites and sites of cultural, historical and community significance (on and off the FMU; • Public resources, including air, water and food (hunting, fishing, collecting); • Aesthetics; • Community goals for forest and natural resource use and protection such as employment, subsistence, recreation and health; • Community economic opportunities; • Other people who may be affected by management operations. A summary is available to the CB.		1. Annual Stand Exam List (ASEL): Public review of the DNR FY 2022 ASEL was completed March 18, 2021. 2. Annual Plan Additions (APA): These review opportunities occur every few months as needed; at this time no APAs have occurred in FY 2022. 3. Lowland Conifer Old Growth Designation (LCOG): DNR provided a designation status update to tribal governments and stakeholders in June – September 2021. Continuing work to implement Deer Management Plan , DNR surveyed landowners and hunters to assess preferences for populations, hunting experiences, and impacts of deer populations to inform goal setting work for 41 deer permit areas, then sought public comments on proposed goals. DNR also held a Deer Open House to take public input on concerns or questions regarding deer and deer managementMN DNR Forest resource management planning (accessed 9/29/21). There is a DNR Sustainable Timber Harvest Analysis (STHA) stakeholder advisory group (SAG) that provides input to the Governor-directed analysis of (and resulting decision on) sustainable timber harvest levels on the FMU http://www.dnr.state.mn.us/forestry/harvest-analysis/index.html (accessed 9/29/21). The MN DNR has dedicated archeological staff to protect cultural resources. The State Archaeologist publishes an annual Forest Heritage Program Report. The program conducts reviews of timber sales and other division activities that were considered to have the potential to affect known or previously undocumented heritage resources. Archival and field research is conducted for Division of Forestry and Division of Fish and Wildlife projects. Archaeological sites or other potentially significant properties are identified. FME engages with local citizens, trail users and stakeholder groups on the proposed forest management of DNR lands.
4.4.b The forest owner or manager seeks and considers input in management planning from people who would likely be affected by management activities.	C	The DNR seeks and considers input on management planning annually. For example, the “Summary of NMOP SFRMP Comments and Responses” dated January 12, 2021. A novel survey was used to solicit more detailed feedback on the use of the SFRMP process. Other activities used to evaluate social impacts:

		1. Annual Stand Exam List (ASEL): Public review of the DNR FY 2022 ASEL was completed March 18, 2021. 2. Annual Plan Additions (APA): These review opportunities occur every few months as needed; at this time no APAs have occurred in FY 2022. 3. Lowland Conifer Old Growth Designation (LCOG): DNR provided a designation status update to tribal governments and stakeholders in June – September 2021. Continuing work to implement Deer Management Plan , DNR surveyed landowners and hunters to assess preferences for populations, hunting experiences, and impacts of deer populations to inform goal setting work for 41 deer permit areas, then sought public comments on proposed goals. DNR also held a Deer Open House to take public input on concerns or questions regarding deer and deer management
4.4.c People who are subject to direct adverse effects of management operations are apprised of relevant activities in advance of the action so that they may express concern.	C	All management planning documents (accessed 9/29/21) are posted on the FME's website prior to the commencement of operations so that the public may comment. Per interviews with staff, FME also contacts adjacent land managers or owners to avoid any potential negative impacts near property boundaries. For example, permit B014714 in Little Falls had 2 landowner adjacency letters sent during set up for the timber sale. 1. ASEL: FME received comments from private individuals and the Sierra Club. The Division of Forestry responded to their comments. 2. APAs: At this time, no APAs have occurred in FY 2022. 3. LCOG: FME did not broadly solicit comments as part of the designation status update in June-September 2021. Theydid answer questions during meetings with tribal governments and stakeholders. Work with stakeholder groups on STH implementation concerns and federal aid grant conditions with the UWFWS Region 3 Wildlife and Sport Fish Restoration Program is ongoing.
4.4.d For ***public forests,*** consultation shall include the following components: 1. Clearly defined and accessible methods for public participation are provided in both long and short-term planning processes, including harvest plans and operational plans; 2. Public notification is sufficient to allow interested	C	The MN DNR Internet provides links to the following current public input opportunities, MN DNR engage platform (accessed 9/29/21). Upcoming timber harvest plans are listed and mapped on an "Annual stand exam lists" (accessed 9/29/21) and Forest View web pages. Public comments on preliminary harvests are welcomed. The 2022 Annual Stand Exam List link provided the following: "This list of forest stands will be examined during the fiscal year 2022, which begins July 1, 2021, and ends June 30, 2022. DNR field staff will consider about 4,100 forest stands on 80,000 acres for potential timber

stakeholders the chance to learn of upcoming opportunities for public review and/or comment on the proposed management; 3. An accessible and affordable appeals process to planning decisions is available. Planning decisions incorporate the results of public consultation. All draft and final planning documents, and their supporting data, are made readily available to the public.		sales. Of this amount, an estimated 45,000 acres of timber will be offered for sale. Of these, approximately 37,000 acres receive harvest annually. • Fiscal Year 2022 Annual Stand Exam List Interface – Includes stands from which timber may be offered for sale between July 1, 2021, and June 30, 2022. Timber permits are typically harvested up to five years after the date of sale. • Fiscal Year 2021 Annual Stand Exam List Interface – The forest stands displayed here for the last fiscal year and provided for your reference. Comments are closed. • To view forest inventory data for state-administered lands, go to ForestView." Minnesota statutes and administrative rules provide for an appeals process (e.g., Minnesota Administrative Rules).
4.5. Appropriate mechanisms shall be employed for resolving grievances and for providing fair compensation in the case of loss or damage affecting the legal or customary rights, property, resources, or livelihoods of local peoples. Measures shall be taken to avoid such loss or damage.	C	
4.5.a The forest owner or manager does not engage in negligent activities that cause damage to other people.	C	The department checks property boundaries and consults neighbors before cutting timber. Trained prescribed burning and fire suppression personnel are used. Safety parameters for pesticide application and controlled fires are established and followed.
4.5.b The forest owner or manager provides a known and accessible means for interested stakeholders to voice grievances and have them resolved. If significant disputes arise related to resolving grievances and/or providing fair compensation, the forest owner or manager follows appropriate dispute resolution procedures. At a minimum, the forest owner or manager maintains open communications, responds to grievances in a timely manner, demonstrates ongoing good faith efforts to resolve the grievances,	C	DNR maintains a database of over 400 stakeholders that are routinely contacted. DNR's web site has public input features. The department has a legal staff with qualified attorneys. Public contact links and information are provided here, MN DNR Contacts (accessed 9/29/21). The About Us DNR webpage provides a variety of public means to engage in submitting input, MN DNR About Us.

and maintains records of legal suites and claims.		
4.5.c Fair compensation or reasonable mitigation is provided to local people, communities or adjacent landowners for substantiated damage or loss of income caused by the landowner or manager.	C	The state tort system allows claims.

Principle #5: Forest management operations shall encourage the efficient use of the forest's multiple products and services to ensure economic viability and a wide range of environmental and social benefits.

5.1. Forest management should strive toward economic viability, while taking into account the full environmental, social, and operational costs of production, and ensuring the investments necessary to maintain the ecological productivity of the forest.	C	
5.1.a The forest owner or manager is financially able to implement core management activities, including all those environmental, social and operating costs, required to meet this Standard, and investment and reinvestment in forest management.	C	Funding for state agencies is contained in the Biennial (two-year) Budget that is presented by the Governor to the State Legislature for review and passage into law during the odd-year legislative session. Review of land management activities during the audit demonstrated that the FME is generally able to implement its planned activities.
5.1.b Responses to short-term financial factors are limited to levels that are consistent with fulfillment of this Standard.	C	Harvest levels have been set through DNR's Sustainable Timber Harvest Analysis and are not modified based on short-term financial factors.
5.2. Forest management and marketing operations should encourage the optimal use and local processing of the forest's diversity of products.	C	
5.2.a Where forest products are harvested or sold, opportunities for forest product sales and services are given to local harvesters, value-added processing and manufacturing facilities, guiding services, and other operations that	C	Timber sales are offered for sale in a way that provides opportunities for small and local harvesters. Of the harvests reviewed during this audit, all had taken place with logging companies based in the county the forest was located.

are able to offer services at competitive rates and levels of service.		
5.2.b The forest owner or manager takes measures to optimize the use of harvested forest products and explores product diversification where appropriate and consistent with management objectives.	C	Utilization monitoring protocols are enforced through timber sale administration and documented in inspection forms. Loggers are assessed for merchantable material left in woods. Appraisal processes assures appropriate value and use. The state permits harvest of decorative trees and boughs. The paper sector, saw timber markets, biofuels, recreation, and hunting are promoted.
5.2.c On public lands where forest products are harvested and sold, some sales of forest products or contracts are scaled or structured to allow small business to bid competitively.	C	Half of all timber sales are listed as intermediate auctions, in which bidding companies cannot have more than 30 employees.
5.3. Forest management should minimize waste associated with harvesting and on-site processing operations and avoid damage to other forest resources.	C	
5.3.a Management practices are employed to minimize the loss and/or waste of harvested forest products.	C	Loss and waste of forest products is minimized through sale supervision, and contract penalties if necessary.
5.3.b Harvest practices are managed to protect residual trees and other forest resources, including: • soil compaction, ***rutting*** and erosion are minimized; • residual trees are not significantly damaged to the extent that health, growth, or values are noticeably affected; • damage to NTFPs is minimized during management activities; and • techniques and equipment that minimize impacts to vegetation, soil, and water are used whenever feasible.	C	Soil compaction, rutting, and erosion are controlled through sale supervision. Contracts and harvesting permits specify best management practices required to be followed. Sales are routinely limited to frozen ground harvesting in order to protect soil resources. Harvest units reviewed during this audit did not show any significant cases of residual tree damage.
5.4. Forest management should strive to strengthen and diversify	C	

the local economy, avoiding dependence on a single forest product.		
5.4.a The forest owner or manager demonstrates knowledge of their operation's effect on the local economy as it relates to existing and potential markets for a wide variety of timber and non-timber forest products and services.	C	As the state natural resource department, the DNR tracks its impact on the forest products industry and statewide economy. The recent STHA was primarily conducted in response to a request from the forest products industry to see whether the allowable harvest could be raised.
5.4.b The forest owner or manager strives to diversify the economic use of the forest according to Indicator 5.4.a.	C	In addition to traditional timber resources, the DNR manages diverse economic uses, such as recreation, watershed management, and non-timber forest products.
5.5. Forest management operations shall recognize, maintain, and, where appropriate, enhance the value of forest services and resources such as watersheds and fisheries.	C	
5.5.a In developing and implementing activities on the FMU, the forest owner or manager identifies, defines and implements appropriate measures for maintaining and/or enhancing forest services and resources that serve public values, including municipal watersheds, fisheries, carbon storage and sequestration, recreation and tourism.	C	It is part of DNR's core mission to manage for a variety of public values, including having forestland open for a variety of public recreation, maintaining habitat for fish and game populations, and preserving forests for municipal water sources.
5.5.b The forest owner or manager uses the information from Indicator 5.5.a to implement appropriate measures for maintaining and/or enhancing these services and resources.	C	DNR's mandate to manage for multiple uses is considered and implemented through its management planning process.
5.6. The rate of harvest of forest products shall not exceed levels which can be permanently sustained.	C	
5.6.a In FMUs where products are being harvested, the landowner or manager calculates the sustained yield harvest level for each sustained yield planning unit, and provides clear rationale for	C	DNR engaged in a multi-year Sustainable Timber Harvest Analysis, which identified a sustainable harvest goal of 870,000 cords offered per year, plus an additional 30,000 cords of selected species with high mortality risk.

determining the size and layout of the planning unit. The sustained yield harvest level calculation is documented in the Management Plan. The sustained yield harvest level calculation for each planning unit is based on: • documented growth rates for particular sites, and/or acreage of forest types, age-classes and species distributions; • mortality and decay and other factors that affect net growth; • areas reserved from harvest or subject to harvest restrictions to meet other management goals; • silvicultural practices that will be employed on the FMU; • management objectives and desired future conditions. The calculation is made by considering the effects of repeated prescribed harvests on the product/species and its ecosystem, as well as planned management treatments and projections of subsequent regrowth beyond single rotation and multiple re-entries.		DNR announced the results of its Sustainable Timber Harvest Analysis on March 1, 2018, and set a goal of 870,000 cords per year. There is also the possibility of an additional 30,000 per year of ash and tamarack over the next five years, because of increasing insect mortality on these species (from emerald ash borer and eastern larch). The extensive analysis behind the new harvest level can be found on the DNR website: MN DNR Sustainable timber harvest analysis, decisions, and planning (accessed 9/29/21). DNR employed an outside contractor to assist in the analysis, although the final decision was taken by the department. The analysis followed techniques standard in the forestry industry, planning software and growth and yield data to analyze a variety of timber production scenarios, from most to least aggressive. The final determination of 870,000 cords did not follow any single modelled scenario but represented a compromise that allowed the DNR to increase its harvest level while still being able to meet its environmental and social management goals. Areas restricted from harvest production, such as designated old growth, were not considered as growing stock contributing the allowable harvest. There has been no change in this approach in the last year. In February 2018, DNR determined that the sustainable harvest level from DNR-managed forestlands for the next 10-years is 870,000 cords annually. This 10-year number reflects careful balancing of the multiple purposes for which state forestlands are managed. Above the 870,000-cord target, DNR will undertake a special initiative to offer up to an additional 30,000 cords of ash and tamarack annually for up to five years. This is an effort to make productive use of these species, which are threatened by insect problems, while also maximizing the likelihood of successful reforestation.
5.6.b Average annual harvest levels, over rolling periods of no more than 10 years, do not exceed the calculated sustained yield harvest level.	C	See 5.6.a. Established Annual Allowable Harvest: Average of 900k cords offered per year over the 10-year period FY2021 Harvest: 662k cord equivalents FY2020 Harvest: 706k cord equivalents FY2019 Harvest: 821k cord equivalents
5.6.c Rates and methods of timber harvest lead to achieving desired conditions, and improve or maintain health and quality across	C	Field sites reviewed during the 2021 audit confirmed that individual stands are being managed in a way to achieve desired future conditions and maintain health and quality

the FMU. Overstocked stands and stands that have been depleted or rendered to be below productive potential due to natural events, past management, or lack of management, are returned to desired stocking levels and composition at the earliest practicable time as justified in management objectives.		across the FMU. Numerous examples including harvesting of ash in response to emerald ash borer.
5.6.d For NTFPs, calculation of quantitative sustained yield harvest levels is required only in cases where products are harvested in significant commercial operations or where traditional or customary use rights may be impacted by such harvests. In other situations, the forest owner or manager utilizes available information, and new information that can be reasonably gathered, to set harvesting levels that will not result in a depletion of the non-timber growing stocks or other adverse effects to the forest ecosystem.	C	Commercial harvest of NTFPs is regulated through a permit system, although the extent of these were not found to be significant enough to require a separate sustained harvest yield calculation. None have been sold with an FSC claim to date.

Principle #6: Forest management shall conserve biological diversity and its associated values, water resources, soils, and unique and fragile ecosystems and landscapes, and, by so doing, maintain the ecological functions and the integrity of the forest.

6.1. Assessments of environmental impacts shall be completed -- appropriate to the scale, intensity of forest management and the uniqueness of the affected resources -- and adequately integrated into management systems. Assessments shall include landscape level considerations as well as the impacts of on-site processing facilities. Environmental impacts shall be assessed prior to commencement of site-disturbing operations.	C	

6.1.a Using the results of ***credible scientific analysis, best available information*** (including relevant databases), and local knowledge and experience, an assessment of conditions on the FMU is completed and includes: 1) Forest community types and development, size class and/or successional stages, and associated ***natural disturbance regimes***; 2) ***Rare, Threatened and Endangered (RTE) species*** and ***rare ecological communities*** (including plant communities); 3) Other habitats and species of management concern; 4) Water resources and associated riparian habitats and hydrologic functions; 5) ***Soil resources***; and 6) ***Historic conditions*** on the FMU related to forest community types and development, size class and/or successional stages, and a broad comparison of historic and current conditions.	C	MN DNR employs an extensive set of databases to assess conditions on the FMU, and the uses of these data provide the foundation for each of the seven SFRMPs. MN DNR is using a "refreshed" intranet system, the "Interdisciplinary Forest Management Policy System", that was completed in summer 2021. Along with Quicklayers and other GIS feature classes, the DNR maintain a continuously updated reference database. Locations of rare and threatened species and communities are maintained in the Natural Heritage Information System (NHIS). DNR has published a Field Guide to the Native Plant Communities of Minnesota, which describes natural disturbance regimes and successional pathways for Native Plant Community (NPC) classes. Minnesota's Comprehensive Wildlife Conservation Strategy and the State Wildlife Action Plan provide species distribution maps, habitat relationships, and baseline information including general description, legal status, life history, ecology, reproduction, population trends, distribution and abundance, habitat relationships, special requirements, and site- and landscape-level management. Division of Fish and Wildlife (FAW) has numerous other plans for individual species or groups of wildlife that require similar habitat types. Water and soil resources are maintained in GIS and is used in all levels of assessment. 1840s pre-settlement vegetation information is another GIS layer used in assessments.
6.1.b Prior to commencing site-disturbing activities, the forest owner or manager assesses and documents the potential short and long-term impacts of planned management activities on elements 1-5 listed in Criterion 6.1.a. The assessment must incorporate the ***best available information***, drawing from scientific literature and experts. The impact assessment will at minimum include identifying resources that	C	SFRMPs are a detailed list of DFFCs for both long and short term, and a list of stands to be treated over a seven-year period. Development of SFRMPs is interdisciplinary as is an annual examination of stands scheduled for treatment. Each year, a list of stands is proposed for appraisals by foresters, wildlife biologists, ecologists, and fisheries biologist, where applicable. For a 30-day period, the list of stands is available for review by personnel in FAW and EWR. Most of the examination is a desk review using GIS data layers, but joint site visits are conducted upon request by FAW or EWR personnel. Auditors confirmed the cross-disciplinary approach to stand appraisals, but noted that personnel vacancies and allocations in FAW and EWR may be compromising the effectiveness of this approach.

may be impacted by management (e.g., streams, habitats of management concern, soil nutrients). Additional detail (i.e., detailed description or quantification of impacts) will vary depending on the uniqueness of the resource, potential risks, and steps that will be taken to avoid and minimize risks.		
6.1.c Using the findings of the impact assessment (Indicator 6.1.b), management approaches and field prescriptions are developed and implemented that: 1) avoid or minimize negative short-term and long-term impacts; and, 2) maintain and/or enhance the long-term ecological viability of the forest.	C	Site-level guidelines and silviculture prescriptions are completed for each timber stand prior to active management. Both are based on the identification of native plant communities (NPCs) and site-level ecological classification. These are shared with staff from EWR and FAW for comments and/or joint site visits before prescriptions are finalized.
6.1.d On public lands, assessments developed in Indicator 6.1.a and management approaches developed in Indicator 6.1.c are made available to the public in draft form for review and comment prior to finalization. Final assessments are also made available.	C	DNR has an extensive library of plans, forms, and worksheets, which are available to the public through web pages supported by the Department. Among these are SFMRPs, lists and maps of stands selected for appraisal, silvicultural interpretations, and more. Development and revision of SFMRPs has a clearly defined role for public involvement. A review of the Mille Lacs Uplands Plan, for example, lists five stages in plan development, and each has a place for public involvement.
6.2 Safeguards shall exist which protect rare, threatened and endangered species and their habitats (e.g., nesting and feeding areas). Conservation zones and protection areas shall be established, appropriate to the scale and intensity of forest management and the uniqueness of the affected resources. Inappropriate hunting, fishing, trapping, and collecting shall be controlled.	C	
6.2.a If there is a likely presence of RTE species as identified in Indicator 6.1.a then either a field survey to verify the species' presence or absence is conducted	C	The Natural Heritage Information System database is used prior to site-disturbing management activities to identify locations of threatened and endangered species. All area foresters questioned confirmed that they review the GIS layer for rare species. During planning, either at

prior to site-disturbing management activities, or management occurs with the assumption that potential RTE species are present. Surveys are conducted by biologists with the appropriate expertise in the species of interest and with appropriate qualifications to conduct the surveys. If a species is determined to be present, its location should be reported to the manager of the appropriate database.		the time of selecting the annual stand exam list or when there is an annual plan addition, the heritage database is referenced by the appraisal forester, wildlife biologists, plant ecologists, and fisheries biologists, where appropriate. Joint site visits are scheduled, when needed, for additional surveys and to discuss needed modifications to harvest planning. Auditors examined stand maps to confirm overlays of rare species and communities, and questioned field foresters about examples where they have recorded locations of rare species that should be added to the database. Beyond information in easily accessible databases, numerous surveys are conducted each year by plant and animal biologists. The MBS surveys are the most intensive, but many other field studies are focused on individual species, e.g., northern long-eared bats, northern goshawks, sharp-tailed grouse, wood turtles, sliders, bees, moths, and gopher snakes—all discussed during field visits. Area foresters confirmed that new information on rare species is submitted to MBS ecologists whenever such plants are discovered during NPC surveys. Site visits confirmed the DNR process of the reviewing the database of rare species, via the Natural Heritage Database as part of timber harvest planning. Additionally, during planning, either at the time of selecting the annual stand exam list or when there is an annual plan addition, the heritage database is referenced by the appraisal forester, wildlife biologists, plant ecologists, and fisheries biologists in an interdisciplinary review process. Joint site visits are scheduled, when needed, for additional surveys and to discuss needed modifications to harvest planning. Minnesota Biological Survey (MBS) conducts surveys throughout the state for rare plants and animals. MBS plant ecologists conducted the following surveys provided for the 2021 audit: ▪ Baseline botanical field surveys occurred in St. Louis County in northern MN. Baseline surveys include searching for and documenting rare species and county and sub-county records. ▪ In Pine, Carlton, Mahnomen, Norman, and Becker counties, completed targeted rare plant surveys in MBS Sites of Outstanding and High Biodiversity Significance last surveyed about 20 years ago.

		▪ Botanical surveys focused on species of ferns and fern allies on lands of many ownerships, including certified Wildlife and Forestry lands. This is work towards a final manuscript for a Ferns of Minnesota book publication. ▪ Various site or project-specific surveys occurred that involved documenting rare plant species in Carlton and Pine counties. MBS zoologists conducted the following surveys: ▪ Rare mammal/bat surveys in Itasca, St. Louis and central Minnesota counties. ▪ Rare bird surveys of sites last surveyed more than 20 years ago targeted Yellow rails, Sharp-tailed Sparrow and other species in greatest conservation need in western MN counties. ▪ Wood Turtle surveys and telemetry in Wabasha and other SE MN counties ▪ Wild bee surveys in north-central and northeast Minnesota counties ▪ Rare prairie butterfly surveys in NW, SW and SE Minnesota counties. Baseline surveys for native and rare moths in Beltrami, Koochiching, Lake of the Woods, Roseau, Goodhue, and Washington counties that yielded thousands of specimens and include numerous new county records as well as potential new state records (identifications pending) and possible yet-to-be determined new species to science. Nongame Wildlife Program staff were involved in surveys for the following species on DNR Forestry and/or Wildlife lands: ▪ Red-shouldered Hawk (Species of Special Concern, SPC) reassessment of historic observations ▪ Monitoring four-toed salamanders presence and refining scientifically sound methodology. ▪ Monitored wood turtle nesting activity and road mortality. ▪ Monitored breeding activity of Common Terns on WMAs and SNAs. ▪ Monitored breeding activity in high priority Northern Goshawk territories. ▪ Surveyed activity of Richardson ground squirrels

		colonies. ▪ Surveyed reported stick nests for goshawks when the stick nest had high potential for goshawk use. ▪ Wood turtle surveys were conducted in SE MN including radio-telemetry on a WMA to better understand habitat use. ▪ Tested a pilot protocol for monitoring Blanding's turtles on and adjacent to a WMA in southern Minnesota. ▪ Implementing habitat projects in Conservation Focus Areas (CFAs); 4 CFAs statewide, 3 of these in forested landscapes Regional Ecologist staff were involved in surveys for the following species on DNR Forestry and/or Wildlife lands to inform planned management activities: ▪ Clustered and one-flowered broomrape surveys of existing occurrences. ▪ Butternut surveys of existing and potential habitat. ▪ Ram's head lady's-slipper and white adder's mouth orchid surveys of existing and potential habitat. ▪ Several rare fern species (moonworts, grapeferns) surveys of existing and potential habitat. Hill's thistle and gray ragwort surveys of existing and potential habitat.
6.2.b When RTE species are present or assumed to be present, modifications in management are made in order to maintain, restore or enhance the extent, quality and viability of the species and their habitats. ***Conservation zones*** and/or ***protected areas*** are established for RTE species, including those S3 species that are considered rare, where they are necessary to maintain or improve the short and long-term viability of the species. Conservation measures are based on relevant science, guidelines and/or consultation with relevant, independent experts as necessary to achieve the conservation goal of the Indicator.	C	The system for reviewing appropriate databases, interdisciplinary review of annual stand exam lists, and joint site visits assures that the appropriate experts are available to recommend and enforce conservation measures for RTE species, notwithstanding staff shortages for some of these experts. Interviews with Ecological and Water Resources (EWR) staff confirmed that the process is working as intended. If a joint site visit leads to a disagreement over planned harvest, an internal dispute resolution process is used to resolve the issue. The new interdisciplinary system offers Quicklayers with Management Opportunity Areas (MOAs). MOAs are geographic areas where collaboration is front-loaded. They are specific to sub-landscape scales where it benefits the foresters for advanced planning. Timber management, wildlife habitat management, and forest road construction are the primary activities that occurred on DNR certified lands near existing protected areas or conservation zones. Forest management activities are reviewed by Fish and Wildlife and Ecological and Water Resources staff during development of the annual stand exam lists. Additional EWR and FAW input is

		typically required if an initial screening identifies the occurrence of a rare species, habitat, or plant community. Measures are implemented to mitigate impacts to those rare features as defined by state and federal law and department policy. Often, protective measures include seasonal avoidance, buffering, or changing of a harvest prescription. Some sites get deferred from harvest to provide survey opportunities to refine RTE species distribution in these stands to minimize impacts when harvest does take place. Timber management, wildlife habitat management, and forest road construction, are the primary activities that occurred on DNR certified lands near existing protected areas or conservation zones. Forest management activities are reviewed by Fish and Wildlife (FAW) and Ecological and Water Resources (EWR) staff during development of the 10 year stand list (occurred summer 2019) and annual stand exam lists (every year in September). Additional EWR and FAW input is typically required if an initial screening identifies the occurrence of a rare species, habitat, or plant community. Measures are implemented to mitigate impacts to those rare features as defined by state and federal law and department policy. Often, protective measures include seasonal avoidance, buffering, or changing of a harvest prescription. Some sites get deferred from harvest to provide survey opportunities to refine RTE species distributions or in cases where active management may be detrimental to the species persistence on a site. Infrequently, departures from these approaches occur, including the use of interdisciplinary dispute resolution. Differences in management priorities regarding RTE species, habitats and plant community management can be addressed through formal or informal dispute processes involving multiple DNR Divisions (for example, formal dispute in progress in Region 2 about Botrychium management). Sites reviewed during the 2021 audit included examples of conservation guidelines in effect, including seasonal restrictions for oak wilt and buffer zones for wetlands.
6.2.c For medium and large public forests (e.g. state forests), forest management plans and operations are designed to meet species'	C	The SFRMP framework is designed to address landscape composition goals developed by the MFRC. Additionally, the NPC-based system for Desired Future Forest

recovery goals, as well as landscape level biodiversity conservation goals.		Condition (DFFC) and management prescriptions address biodiversity goals. DNR participates in recovery plans for species that are listed federally and within the state. Some of the most notable examples are the eastern timber wolf, timber rattlesnake, and Karner blue butterfly.
6.2.d Within the capacity of the forest owner or manager, hunting, fishing, trapping, collecting and other activities are controlled to avoid the risk of impacts to vulnerable species and communities (See Criterion 1.5).	C	Interdisciplinary Forest Management Policy System provides protection measures for rare species guide. MN DNR Rare Species Guide. DNR's Enforcement Division takes the lead in controlling hunting, fishing, trapping, collecting and other such activities. DNR administers a host of regulations, licenses, and permits to protect state resources. ATV trail ambassadors have increased in number. Over 200 clubs now participate in that program. Interviews conducted in the field confirmed that law enforcement officers respond readily to requests from other DNR personnel. Management activities that impact RTE species and habitats could happen, only after consultation with FAW and EWR staff. Some high level protection measures are outlined in the department's online rare species guide. Application of these measures varies by land status and endangerment status. State listed species of special concern and species in greatest conservation need (which are not statutorily protected) are more likely to be impacted on lands where economic objectives are prioritized.
6.3. Ecological functions and values shall be maintained intact, enhanced, or restored, including: a) Forest regeneration and succession. b) Genetic, species, and ecosystem diversity. c) Natural cycles that affect the productivity of the forest ecosystem.	C	
6.3.a. Landscape-scale indicators		
6.3.a.1 The forest owner or manager maintains, enhances, and/or restores under-represented ***successional*** stages in the FMU that would naturally occur on the types of sites found on the FMU. Where old growth of different community types that would	C	Landscape planning and Section level forest resource management plans: ▪ Forest age classes are managed using an adaptive management approach during landscape planning. All ownership age-class information was considered in conjunction with the results of the Sustainable Timber Harvest Analysis (STHA) to inform the Department decision on harvest levels and management regimes by cover type,

naturally occur on the forest are under-represented in the landscape relative to natural conditions, a portion of the forest is managed to enhance and/or restore old growth characteristics.		which influence age class distributions on state-administered forest land. ▪ The STHA team assessed current age class distributions by cover type and ecological classification system (ECS) subsection using USFS's FIA (Forest Inventory and Analysis) data, CSA (Cooperative Stand Assessment) public inventory data, and DNR's FIM (Forest Inventory Module) inventory data. Staff compared current age class distributions across all ownerships to the age class goals identified in previous Section Forest Resource Management Plans (SFRMP)s. The Mason, Bruce and Girard harvest schedule model was used to project future age class distributions on DNR managed lands under different harvest scenarios. Based on these data and scenarios, DNR leadership considered the amount of older forest to maintain by cover type on DNR managed lands over the next 10 years as part of the STHA decision. ▪ The STHA implementation team is incorporating elements of the Department decision on the harvest level goals from state managed forestland. The decision includes managing Wildlife Management Areas under regimes designed to specifically benefit wildlife habitat, incorporate Special Management Area objectives that address diverse forest composition patterns and conditions, as well as purposefully maintaining an amount of older aspen on DNR managed lands. STHA decisions were applied immediately in FY19 and we've since incorporated them into the DNR 10 year spatial plan as well as SFRMP narratives. ▪ As noted in DNR's all-ownerships age-class monitoring approach, not all acres on annual stand exam lists result in timber harvest (some are deferred or altered). A portion of these deferrals and alterations will continue to provide older forest/growth stage characteristics into the future (above and beyond what is projected in modeling and planning direction). ▪ Geography and implementation strategies for management opportunity areas (MOAs) are being finalized for in the forested ecological sections on the state. These include old forest management complexes, old forest patches, and habitat MOAs to emphasize older forest. The SFRMPs and MOAs will include conversion goals that were developed considering, among other things, distribution of successional stages. The SFRMPs will also provide guidance and strategies on maintaining characteristics of older forest, representing all native plant community (NPC) growth stages on state lands, and diversifying stands appropriately given their NPC. ▪ Forest age classes are managed using an adaptive management approach during landscape planning. All ownership age-class information was considered in conjunction with the results of the Sustainable Timber Harvest Analysis (STHA) to inform the Department decision

		on harvest levels and management regimes by cover type, which influence age class distributions on state-administered forest land. ▪ This year we continued implementing the STH decisions through the DNR's 10-year stand exam list (FY 22). This "spatial plan" was built on modeling decisions to address multiple values, including managing Wildlife Management Areas and Special Management Areas under differing regimes designed to specifically benefit wildlife habitat and foster forest characteristics that address diverse forest composition patterns and conditions. In addition, modeling intentionally planned to maintain an amount of older aspen on DNR managed lands for wildlife habitat. Implementation of the 10-year stand exam list (spatial plan), starting with the FY 21 annual stand exam list, thus ensures that these values are addressed. ▪ As noted in DNR's all-ownerships age-class monitoring approach, not all acres on the annual stand exam lists will result in a timber harvest (for some stands management is deferred to the next planning cycle or the stand may be altered). A portion of these deferrals and alterations will continue to provide older forest or growth stage characteristics into the future (above and beyond what is projected in modeling and planning direction). Further, some stands are not harvested and have the opportunity to develop into older age classes if they are inoperable or designated as old growth. Site-level management: ▪ During interdisciplinary site-level review and management, staff in EWR, FAW, and FOR look for opportunities to maintain older forest characteristics on DNR managed lands, particularly in special management areas (SMAs) such as Old Forest Management Complexes (OFMCs), High Conservation Value Forests (HCVF), Management Opportunity Areas (MOAs), and large old patches. ▪ Older forest or growth stage characteristics are enhanced or maintained through application of best management practices (riparian management zones; legacy patches; retention of characteristics like snags, leave trees, and course woody debris). ▪ Stands are converted to other cover types appropriate to their native plant community to contribute to SFRMP cover type goals for the section when opportunities arise. ▪ During interdisciplinary stand review, EWR staff (Nongame Program, Regional Plant Ecologists) provide comments on opportunities to maintain or enhance under-represented successional stages, including maintaining older forest characteristics on DNR managed lands, particularly in Old Forest Management Complexes (OFMCs), High

		Conservation Value Forests (HCVF), Management Opportunity Areas (MOAs), and large old patches. In addition, EWR staff provide comments on maintaining or enhancing plant species composition and distribution, especially as it relates to rare species and species with conservation statuses. In addition, DNR site-level management maintains or enhances plant species composition and distribution through 1) following SFRMP guidance related to cover type distribution, which generally guides staff to maintain the distribution of cover types in the ecological section, while moving toward goals for some amount of cover type change (usually approximately 1% over 10 years) to meet various goals associated with forest values such as habitat and addressing climate change and 2) as standard practice, the DNR manages sites appropriately given their native plant community.
6.3.a.2 When a ***rare ecological community*** is present, modifications are made in both the management plan and its implementation in order to maintain, restore or enhance the viability of the community. Based on the vulnerability of the existing community, ***conservation zones*** and/or ***protected areas*** are established where warranted.	C	The Minnesota Biological Survey (MBS) conducts surveys, county-by-county, to search for and map rare ecological communities as well as individual plants and animals. MBS surveys have been completed in most areas of the State. These are the most remote areas of the State and encompass vast natural landscapes, so the surveys in these areas will require several more years to complete. NCS plot sampling, conducted by field foresters, also function to identify rare communities if encountered. Information on rare communities is entered into the Natural Heritage database, which is reviewed prior to harvests. SFRMPs goals for DFFC of vegetation communities include rare, as well as common, communities. Form the Mille Lacs Uplands plan, for instance: "native plant communities that were historically well represented in the planning area are well represented today." Many rare natural communities are protected as State Natural Areas (SNAs), or HCVFs. Many of the wetland communities benefit from state BMPs. As confirmed in review of timber sale documentation and permits during the audit, modifications are made and implemented during harvest. The auditors observed the use of riparian buffers to protect plant species and communities. Rare ecological communities are typically identified by EWR during the annual stand exam list process. There is an existing Minnesota DNR policy regarding management in (see Amendment 2) or adjacent to designated old growth stands (see Amendment 5). DNR is

		in the process of revising the Old Growth Forest Policy as part of the lowland conifer old growth (LCOG) project. A query of the FY21 stand exam list shows that 209 out of 4117 stands evaluated for harvest were within 330 feet of candidate or designated old growth stands. These stands were reviewed and management coordinated across divisions as part of regular DNR forest coordination processes. As of 8/30/21, DNR has 47,900 acres of designated old growth, 4,100 acres of candidate "upland" old growth, and 41,200 acres of candidate lowland conifer old growth (LCOG) (detail available upon request). Old Growth stands are buffered with a 330' Special Management Zone (SMZ).
6.3.a.3 When they are present, management maintains the area, structure, composition, and processes of all ***Type 1*** and ***Type 2 old growth***. Type 1 and 2 old growth are also protected and buffered as necessary with conservation zones, unless an alternative plan is developed that provides greater overall protection of old growth values. Type 1 Old Growth is protected from harvesting and road construction. Type 1 old growth is also protected from other timber management activities, except as needed to maintain the ecological values associated with the stand, including old growth attributes (e.g., remove exotic species, conduct controlled burning, and thinning from below in dry forest types when and where restoration is appropriate). Type 2 Old Growth is protected from harvesting to the extent necessary to maintain the area, structures, and functions of the stand. Timber harvest in Type 2 old growth must maintain old growth structures, functions, and components including individual	C	DNR began to address the protection of old-growth forests in 1983; produced the first draft of Old-Growth Forest Guidelines in 1988; and implemented the guidelines with a systematic inventory in 1998. As field staff encountered and scored candidate stands, those stands were dropped from the listing of stands to be appraised for harvest, and coded for protection instead. Currently, 44,000 acres of old-growth forest are protected on lands managed by the Division of Forestry. There is no distinction between Type 1 and Type 2 old growth—all designated old-growth stands are protected from harvesting. An old-growth red pine stand was visited during the audit. The process continues today, with an emphasis on lowland conifer types, which were not included in old-growth designation to date. Lowland conifers are abundant in Minnesota, comprising about 50 percent of state lands with ample opportunity to identify and reserve old-growth types. Seventeen NPC types have been identified and as being evaluated as SFRMPs are revised. This includes 41,200 acres of lowland conifers that arereserved from harvest while the process of designating old-growth in lowland conifers proceeds. There is an existing Minnesota DNR policy regarding management in (see Amendment 2) or adjacent to designated old growth stands (see Amendment 5). DNR is in the process of revising the Old Growth Forest Policy as part of the lowland conifer old growth (LCOG) project. A query of the FY21 stand exam list shows that 209 out of 4117 stands evaluated for harvest were within 330 feet of

trees that function as refugia (see Indicator 6.3.g). On public lands, old growth is protected from harvesting, as well as from other timber management activities, except if needed to maintain the values associated with the stand (e.g., remove exotic species, conduct controlled burning, and thinning from below in forest types when and where restoration is appropriate). On American Indian lands, timber harvest may be permitted in Type 1 and Type 2 old growth in recognition of their sovereignty and unique ownership. Timber harvest is permitted in situations where: ▪ Old growth forests comprise a significant portion of the tribal ownership. ▪ A history of forest stewardship by the tribe exists. ▪ High Conservation Value Forest attributes are maintained. ▪ Old-growth structures are maintained. ▪ Conservation zones representative of old growth stands are established. ▪ Landscape level considerations are addressed. re species are protected.		candidate or designated old growth stands. These stands were reviewed and management coordinated across divisions as part of regular DNR forest coordination processes. As of 8/30/21, DNR has 47,900 acres of designated old growth, 4,100 acres of candidate "upland" old growth, and 41,200 acres of candidate lowland conifer old growth (LCOG) (detail available upon request).
6.3.b To the extent feasible within the size of the ownership, particularly on larger ownerships (generally tens of thousands or more acres), management maintains, enhances, or restores habitat conditions suitable for well-distributed populations of animal species that are characteristic of forest ecosystems within the landscape.	C	DNR actively manages game and non-game wildlife directly and indirectly. Direct management takes place where habitat is managed for a featured species, e.g., sharp-tailed grouse, rugged grouse, golden-winged warbler; or on state WMAs, such as Kimberly WMA visited during the audit. Indirect management is a product of subsection planning. Representative wildlife species are selected for each subsection, followed by management recommendations. The newly revised SWAP provides excellent guidance to habitat priorities, with numerous overlays that define priority sites and landscapes. A portion of the statewide

		sales tax helps fund habitat projects. Two such cooperative projects were inspected during the audit. See evidence provided in 6.3.a.1. DNR actively manages game and non-game wildlife directly and indirectly. Direct management takes place where habitat is managed for a featured species, e.g., sharp-tailed grouse, rugged grouse, golden-winged warbler; or on state WMAs. Indirect management is a product of subsection planning. Representative wildlife species are selected for each subsection, followed by management recommendations. Management of wildlife habitats in forested areas of Minnesota includes forest and open brushland management activities on WMAs, state forests, and other public lands. This activity is needed to mitigate habitat loss, fragmentation, and degradation that are identified as the primary challenges facing forest wildlife. Almost one third of the state's 292 Species of Greatest Conservation Need (SGCN) inhabit forests. Staff were involved in the following habitat management projects over the past year: ▪ Wood turtle – maintained 1 restored nesting area. ▪ Common Tern – a large island restoration and enhancement project was conducted on a WMA to restore nesting habitat for Common Terns and migratory habitat for Piping Plovers. In addition, vegetation was removed in the Common Tern nesting colony. Additional habitat enhancements include a network of fencing and string grids around the nesting area, deploying chick shelters, and gull control. ▪ Habitat management projects on Forestry administered land for listed timber rattlesnake; projects include prescribed fire, invasive control, and brush removal ▪ In FY2021, 1,139 acres of northern and southeastern forests were treated to enhance wildlife habitat for the benefit of a wide range of game and non-game species, including mammals, birds, reptiles and amphibians, as well as pollinating insects. Treatments consisted of tree girdling and brush saw removal of undesired vegetation to release oaks and conifers, and tree planting to restore a riparian forest impacted by severe flooding.

		▪ Management of wildlife habitats in forested areas of Minnesota includes forest and open brushland management activities on WMAs, state forests, and other public lands. This activity is needed to mitigate habitat loss, fragmentation, and degradation that are identified as the primary challenges facing forest wildlife. Almost one third of the state's 292 Species of Greatest Conservation Need (SGCN) inhabit forests. FAW Program expenses contributed to the following accomplishments reported in FY21 (note—the extent of many accomplishments were hampered by impacts of Covid-19 on work requirements and safety protocols): ▪ 1,710 acres in 2 brushland prescribed burns to enhance the quality of brushland habitats for wildlife ▪ 3,923 acres in brushland management on 31 sites to enhance the quality of brushland habitats for wildlife ▪ 548 acres in 8 forest prescribed burns to enhance the quality of forest habitats for wildlife ▪ 152 acres of forest opening management on 53 openings to enhance forest habitat for wildlife that thrive on small forest openings ▪ 5,790 acres of Forest Stand Improvements on 181 sites to enhance forest habitat for wildlife ▪ A portion of wetland habitat maintenance, enhancement and restoration also occurs on forested lands but is not split out by certified/non-certified lands. A northern goshawk territory in the northwest region had harvest activity deferred to avoid immediate impacts to the forest habitat around an active nest location.
6.3.c Management maintains, enhances and/or restores the plant and wildlife habitat of ***Riparian Management Zones (RMZs)*** to provide: a) habitat for aquatic species that breed in surrounding uplands; b) habitat for predominantly terrestrial species that breed in adjacent ***aquatic habitats***; c) habitat for species that use riparian areas for feeding, cover, and travel;	C	RMZs are addressed in Minnesota's Forest management Guidelines. The guidelines are a 590-page document, but a smaller pocket-sized handbook was printed more recently, and was observed frequently in vehicles and cruiser's vests during the audit. Site visits featured several examples of buffer strips along RMZs, where foresters routinely left more than the minimum BA and often delineated a buffer strip that was wider than required. No vernal pools were observed during site visits, but field interviews revealed familiarity by foresters and cited examples of appropriate management around such pools. Management activities near riparian areas are guided by Minnesota Forest Resources Councils Site-Level Forest Management Guidelines. Site visits during the 2021 audit repeatedly demonstrated proper use of RMZs.

d) habitat for plant species associated with riparian areas; and, e) stream shading and inputs of wood and leaf litter into the adjacent aquatic ecosystem.		Management activities near riparian areas are guided by Minnesota Forest Resources Councils Site-Level Forest Management Guidelines. There is no current way to evaluate the number of departmental management activities that occurred near riparian areas over the course of a specific year.
Stand-scale Indicators **6.3.d** Management practices maintain or enhance plant species composition, distribution and frequency of occurrence similar to those that would naturally occur on the site.	C	DNR staff use an ecological classification system to identify the native plant community for each stand. This information is then used to guide the desired plant species composition for the site. The DFFC prescribed for each stand reflects the strategies that will achieve the compositional goals. However, as pointed out by stakeholders, red pine stands rotated at 60-70 years—in line with new ERA policy-- likely will not have a natural understory composition found in red pine stands rotated at 120 years. DNR staff use an ecological classification system to identify the native plant community for each stand. This information is then used to guide the desired plant species composition for the site. The DFFC prescribed for each stand reflects the strategies that will achieve the compositional goals.
6.3.e When planting is required, a local source of known provenance is used when available and when the local source is equivalent in terms of quality, price and productivity. The use of non-local sources shall be justified, such as in situations where other management objectives (e.g. disease resistance or adapting to climate change) are best served by non-local sources. ***Native species*** suited to the site are normally selected for regeneration.	C	Over 90% of all reproductive materials used on state forest land are native Minnesota materials. Materials are collected and deployed based on seed zones described in Division of Forestry Policy 5 – Nursery Seed Source Control nursery-seed-source-control-2016, MN DNR Seed Source Control. (accessed 9/29/21) In the event a match between seed source and planting site is unavailable, the SFNP deploys seedlings from an adjacent seed zone. In some instances, the SFNP will purchase seedlings from other public or private nurseries because the SFNP cannot supply either the number of seedlings requested or the species of seedlings requested. When this is the case, purchased seedlings are from the seed source of the planting site or from an adjacent source. Adjacency may cross statutory boundaries. For example, some plantings and sowings in southern Minnesota may be from a northern Iowa seed source. In CY2021, 99% of all reproductive materials used on state forest land are native Minnesota materials. Materials are collected and deployed based on seed zones described in Division of Forestry Policy 5 – Nursery Seed Source Control. The Silviculture Program used seed sources that included Jack Pine zones 101, 102 and 105.

		26k jack pine containers were originally sourced from a genetically superior tree orchard managed by the Tree Improvement Program. Red Pine bare root and container stock was grown from seed cones purchased by MN DNR from sources identified to the MN township level. The State Forest Nursery (SFN) deploys seedlings from an adjacent seed zone when necessary. In some instances, the SFN will purchase seedlings from other public or private nurseries because the SFN cannot supply either the number of seedlings requested or the species of seedlings requested. When this is the case, purchased seedlings are from the seed source of the planting site or from an adjacent source. Adjacency may cross statutory boundaries. For example, some plantings and sowings in southern Minnesota may be from a northern Iowa or southwest Wisconsin seed source. The Division of Forestry will be updating seed source control policy in 2022 to include seed transfer guidance for common Lakes States species and provide additional direction for climate related assisted migration projects. The SFN, Silviculture and Tree Improvement Programs will adopt the USDA Forest Service Eastern Seed Zones as part of its policy revision.
6.3.f Management maintains, enhances, or restores habitat components and associated stand structures, in abundance and distribution that could be expected from naturally occurring processes. These components include: a) large live trees, live trees with decay or declining health, ***snags***, and well-distributed coarse down and dead woody material. ***Legacy trees*** where present are not harvested; and b) vertical and horizontal complexity. Trees selected for ***retention*** are generally representative of the dominant species found on the site.	C	The criteria to retain stand-level wildlife habitat elements such as snags, stumps, mast trees, down woody debris, den trees and nest trees are detailed in the Minnesota Forest Management Guidelines and summarized in the field handbook. Harvested stands inspected generally had legacy and leave tree retention levels consistent with these guidelines. A Green Tree Retention Tipsheet was developed in response to a previous CAR, and is being used as a field reference for retention guidance. Legacy trees have been addressed in a separate directive from the Commissioner's Office in 2012. The department's leave tree and snag guidelines require that "a mix of species representative of the original stand be retained" unless reasons for variance are documented. Foresters interviewed understand and are increasing their compliance with the intent of the guidelines for retaining live trees in their prescriptions. Auditors observed many harvest sites that contained reserve patches. Site visits during the 2021 audit confirmed conformance with 6.3.f, see section 2.1 for field site observations. Harvested areas included reserve areas, individual snags and reserve trees, and downed woody debris.

		20,674 acres of even-aged harvests were on permits closed in FY21. DNR timber sales permits are required to follow the Minnesota Forest Resource Council's Site Level Management Guidelines that cover live, standing, and downed woody debris retention
6.3.g.1 In the Southeast, Appalachia, Ozark-Ouachita, Mississippi Alluvial Valley, and Pacific Coast Regions, when ***even-aged systems*** are employed, and during salvage harvests, live trees and other native vegetation are retained within the harvest unit as described in Appendix C for the applicable region. In the Lake States Northeast, Rocky Mountain and Southwest Regions, when even-aged silvicultural systems are employed, and during salvage harvests, live trees and other native vegetation are retained within the harvest unit in a proportion and configuration that is consistent with the characteristic natural disturbance regime unless retention at a lower level is necessary for the purposes of restoration or rehabilitation. See Appendix C for additional regional requirements and guidance.	C	Even-aged sites visited in 2021 were in conformance with FRC Site Level Management Guidelines.
6.3.g.2 Under very limited situations, the landowner or manager has the option to develop a qualified plan to allow minor departure from the opening size limits described in Indicator 6.3.g.1. A qualified plan: 1. Is developed by qualified experts in ecological and/or related fields (wildlife biology, hydrology, landscape ecology, forestry/silviculture). 2. Is based on the totality of the ***best available information*** including peer-reviewed science	C	FME reported no departures from even-age management guidelines established for 6.3.g.1, and the audit team did not observe any in the field or detect any in timber harvest prescription documentation reviewed.

regarding natural disturbance regimes for the FMU. 3. Is spatially and temporally explicit and includes maps of proposed openings or areas. 4. Demonstrates that the variations will result in equal or greater benefit to wildlife, water quality, and other values compared to the normal opening size limits, including for sensitive and rare species. 5. Is reviewed by independent experts in wildlife biology, hydrology, and landscape ecology, to confirm the preceding findings.		
6.3.h The forest owner or manager assesses the risk of, prioritizes, and, as warranted, develops and implements a strategy to prevent or control ***invasive species***, including: 1. a method to determine the extent of invasive species and the degree of threat to native species and ecosystems; 2. implementation of management practices that minimize the risk of invasive establishment, growth, and spread; 3. eradication or control of established invasive populations when feasible: and, 4. monitoring of control measures and management practices to assess their effectiveness in preventing or controlling invasive species.	C	DNR has a well-developed program for identifying, controlling, and monitoring invasive species. Responsibility is shared with the state Department of Agriculture and US Forest Service. DOA's Plant Protection Division is responsible for risk assessments related to invasive plants. The State Invasive Species Strategy categorizes risks. The department has an Invasive Species Control Program. Operational Order 113 (9/21/17) outlines invasive species control and prevention measures that occur on an annual basis. Buckthorn, barberry, and sweetfern are of most concern. Specific acres of treatment with herbicides have been reported to SCS Global. The MNDNR program includes three Regional Forest Health Specialists and a Forestry Invasives Species Consultant. Area foresters call on health specialists and the Invasives Species Consultant as needed. The Forest Health program conducts training and outreach in part through Forest Health Newsletters issued 4-6 times per year. Forest health issues of current concern include eastern larch beetle, spruce budworm, oak wilt, Heterobasidium Root Disease and Diplodia in red pine. Site visits included examples of invasive plant control. "Op. Order 113 [Invasive Species] is applicable to timber sales planning and management activities. Indeed, during the audit, the daily safety briefing in Area offices included special precautions about inadvertent transfer of seeds from one site to another.

		The Fish and Wildlife Division reported 3,349 acres of noxious weed control on 429 sites in FY21 on all lands; but this does not differentiate between certified and non-certified lands.
6.3.i In applicable situations, the forest owner or manager identifies and applies site-specific fuels management practices, based on: (1) natural fire regimes, (2) risk of wildfire, (3) potential economic losses, (4) public safety, and (5) applicable laws and regulations.	C	Due to COVID-19 and administrative policy that significantly reduced the number of prescribed and the number of suppressed fires, DNR conducted far less prescribed burning than in a normal year. FY2020 DNR responded to 73 fires for 374 acres burned. DNR conducted 24 Rx burns for 5599 acres, primarily FAW administered lands. Due to a heavy fire season in 2021 some of these figures were not available for 2021.
6.4. Representative samples of existing ecosystems within the landscape shall be protected in their natural state and recorded on maps, appropriate to the scale and intensity of operations and the uniqueness of the affected resources.	C	
6.4.a The forest owner or manager documents the ecosystems that would naturally exist on the FMU, and assesses the adequacy of their representation and protection in the ***landscape*** (see Criterion 7.1). The assessment for medium and large forests include some or all of the following: a) ***GAP analyses***; b) collaboration with state natural heritage programs and other public agencies; c) regional, landscape, and watershed planning efforts; d) collaboration with universities and/or local conservation groups. For an area that is not located on the FMU to qualify as a Representative Sample Area (RSA), it should be under permanent protection in its natural state.	C	Representative Sample Area sites have been identified by regional interdisciplinary teams. Evidence submitted for the audit was a 2015 document that summarized work done in the central region. Twenty-nine native plant communities have been designated in this region, all on state forests or WMAs. Beyond such designations, Minnesota's Scientific and Natural Areas (SNA) Program has been in existence since 1975 and has protected 160 sites as SNAs, many of which address the goals of a system of RSAs. RSA designation in other regions happens as MBS surveys are completed county by county and/or as SFRMPs are revised. As with assessments of HCVF (see 9.1.a), MBS surveys are scheduled through 2021, delaying completion of RSA designation for another 6-7 years. However, the landscape-level approach of SFRMAs and its reliance on natural community classification, together with DFFCs to sustain communities in different age classes largely assures that potential RSA candidates on state forest lands should not be lost. Old-growth forest stands also are protected and may eventually be designated as RSAs. This includes 41,200 acres of lowland conifers that have been reserved from harvest while the process of designating old-growth in lowland conifers proceeds.

6.4.b Where existing areas within the landscape, but external to the FMU, are not of adequate protection, size, and configuration to serve as representative samples of existing ecosystems, forest owners or managers, whose properties are conducive to the establishment of such areas, designate ecologically viable RSAs to serve these purposes. Large FMUs are generally expected to establish RSAs of purpose 2 and 3 within the FMU.	C	RSAs are identified and designated within state lands including those under certification: state forests and wildlife lands. Additional RSA's have been identified within State Parks and SNAs, which are not within the scope of the FME's certificate. The analysis of landscapes, and representative samples of these landscapes also considers protected sites on other ownerships, especially national forests and selected (certified) county lands.
6.4.c Management activities within RSAs are limited to low impact activities compatible with the protected RSA objectives, except under the following circumstances: a) harvesting activities only where they are necessary to restore or create conditions to meet the objectives of the protected RSA, or to mitigate conditions that interfere with achieving the RSA objectives; or b) road-building only where it is documented that it will contribute to minimizing the overall environmental impacts within the FMU and will not jeopardize the purpose for which the RSA was designated.	C	RSAs, when not designated as SNAs, are managed according to the same principles and regulations as SNAs. That is, they are managed only insofar as needed to maintain the natural community, or successional state of that community, that led to designation as an RSA. Examples would be use of prescribed burning, control of invasive species, erosion control, restoration efforts, and selected restrictions on recreational activities.
6.4.d The RSA assessment (Indicator 6.4.a) shall be periodically reviewed and if necessary updated (at a minimum every 10 years) in order to determine if the need for RSAs has changed; the designation of RSAs (Indicator 6.4.b) is revised accordingly.	C	A state SNA assessment was concluded in 2010. It has a goal to protect 500 sites total in the next 100 years (160 are currently designated). RSAs, after final declaration, will be reviewed as part of the planning cycle for SFMRP revisions if not as part of a comprehensive review such as was conducted for SNAs.
6.4.e Managers of large, contiguous public forests establish and maintain a network of representative protected areas sufficient in size to maintain	C	SFRMP development includes the important concept of natural disturbance regimes and recognition of various patch sizes on the landscape. Thus each SFRMP identifies large patches of habitat—in addition to other sizes—that function to provide core habitat e.g., the Savannah

species dependent on interior core habitats.		Hardwoods HCVF visited during audit. Many other protected areas also provide interior habitat, such as many of the 190,000 acres in SNAs.
6.5 Written guidelines shall be prepared and implemented to control erosion; minimize forest damage during harvesting, road construction, and all other mechanical disturbances; and to protect water resources.	C	
6.5.a The forest owner or manager has written guidelines outlining conformance with the Indicators of this Criterion.	C	Minnesota DNR has a comprehensive program for the protection of wetlands and watercourses and a detailed volume of guidelines developed and published by MFRC: "Sustaining Minnesota Forest Resources: Voluntary Site-Level Forest Management Guidelines for Landowners, Loggers and Resource Managers" (2012).
6.5.b Forest operations meet or exceed Best Management Practices (BMPs) that address components of the Criterion where the operation takes place.	C	BMPs are emphasized in training, sale administration, and monitoring. Trained foresters and/or biologists plan and oversee all management activities, with review and approval by senior managers. MFRC Site-Level Forest Management Guidelines are followed, and the new "Quick Reference Field Guide" version is used. Field sites inspected during the audit demonstrated compliance with BMP guidelines.
6.5.c Management activities including site preparation, harvest prescriptions, techniques, timing, and equipment are selected and used to protect soil and water resources and to avoid erosion, landslides, and significant soil disturbance. Logging and other activities that significantly increase the risk of landslides are excluded in areas where risk of landslides is high. The following actions are addressed: • Slash is concentrated only as much as necessary to achieve the goals of site preparation and the reduction of fuels to moderate or low levels of fire hazard. • Disturbance of topsoil is limited to the minimum necessary to achieve	C	DNR has developed written guidelines to avoid unacceptable levels of rutting during timber harvest, and guidelines are included as a condition in permits to cut timber. These requirements are a key part of a comprehensive program to protect soil productivity. Foresters who administer timber sales, as well as supervisors who check timber sales, are aware of them. No rutting in excess of these guidelines was observed during inspections of ongoing and completed timber harvests. Field observations also confirmed ample amounts of retained down woody debris, and planning to minimize skid trails. Foresters interviewed in the field were adept at working with harvest contractors to employ appropriate harvesting equipment, interrupting jobs during wet weather, and requiring harvests on frozen ground when appropriate. Where biomass is harvested, it is required that 20% of limbs and tops are left on the site or hauled back from the landing and redistributed. Field inspections confirmed that this practice was being followed.

successful regeneration of species native to the site. • Rutting and compaction is minimized. • Soil erosion is not accelerated. • Burning is only done when consistent with natural disturbance regimes. • Natural ground cover disturbance is minimized to the extent necessary to achieve regeneration objectives. • Whole tree harvesting on any site over multiple rotations is only done when research indicates soil productivity will not be harmed. • Low impact equipment and technologies is used where appropriate.		Controlled fire is often employed in fire-dependent community types, and DNR personnel are well-trained in the use of control fire and suppression of wildfires.
6.5.d The transportation system, including design and placement of permanent and temporary haul roads, skid trails, recreational trails, water crossings and landings, is designed, constructed, maintained, and/or reconstructed to reduce short and long-term environmental impacts, habitat fragmentation, soil and water disturbance and cumulative adverse effects, while allowing for customary uses and use rights. This includes: • access to all roads and trails (temporary and permanent), including recreational trails, and off-road travel, is controlled, as possible, to minimize ecological impacts; • road density is minimized; • erosion is minimized; • sediment discharge to streams is minimized;	C	MN Site Level Guidelines address transportation system issues, and compliance is monitored throughout the state. Roads on state lands received high marks in the most recent BMP monitoring report (2021). There are two types of State Forest Roads: System Forest Roads and Minimum Maintenance Roads. Temporary use roads are often pushed in by a logger, and the timber buyer will bear the costs of building, maintaining the road during harvest, and closing out after harvest. Activities on system roads are assigned to a forester who tracks these roads, records repair and maintenance needs into a computer database, and then develops a work plan. Recreation trails that were inspected during the audit. All were maintained and in conformance with site-level guidelines. Some trails are maintained by the Parks Division, and many are maintained by clubs and organizations. Unauthorized ATV use, often a problem on public lands, appears to be well managed and maintained on Minnesota state forest lands.

• there is free upstream and downstream passage for aquatic organisms; • impacts of transportation systems on wildlife habitat and migration corridors are minimized; • area converted to roads, landings and skid trails is minimized; • habitat fragmentation is minimized; • unneeded roads are closed and rehabilitated.		
6.5.e.1 In consultation with appropriate expertise, the forest owner or manager implements written ***Streamside Management Zone*** (SMZ) ***buffer*** management guidelines that are adequate for preventing environmental impact, and include protecting and restoring water quality, hydrologic conditions in rivers and stream corridors, wetlands, vernal pools, seeps and springs, lake and pond shorelines, and other hydrologically sensitive areas. The guidelines include vegetative buffer widths and protection measures that are acceptable within those buffers. In the Appalachia, Ozark-Ouachita, Southeast, Mississippi Alluvial Valley, Southwest, Rocky Mountain, and Pacific Coast regions, there are requirements for minimum SMZ widths and explicit limitations on the activities that can occur within those SMZs. These are outlined as requirements in Appendix E.	NC	SMZ buffers are in MFRC Site-Level Guidelines (revised 2012) to take into account the work of the Riparian Science Technical Committee. They evaluated riparian management zone width and residual basal area recommendations, even vs. uneven-aged distinctions, and applicable water features. While reviewing the site for permit number X017293, it was unclear whether a riparian management zone had been implemented as intended. The harvest in question was a clearcut in a stand bordering a river that had previously suffered blowdown from a wind event. In discussing the site there was initial confusion over whether the appropriate RMZ width should be 50 ft or 120 ft (later confirmed to be 120 ft). In practice the RMZ seemed to have placed using an existing road as a border, with the area on the side of the road next to the river uncut, and the harvest beginning on the other side of the road. A GIS layer later confirmed that the road was within 120 ft of the river, meaning that the road was too close to the river to act as an RMZ boundary. While acknowledging that the Minnesota Forest Management guidelines allow for some flexibility in establishing RMZ and the activities within them, this case did not demonstrate that RMZs were being implemented as designed in accordance with these guidelines. CAR 2021.1 was issued.
6.5.e.2 Minor variations from the stated minimum SMZ widths and layout for specific stream segments, wetlands and other	C	The MFRC Site-Level Guidelines allow variable buffer widths. Auditors most often observed that foresters exceeded guidelines when administering harvests, but noted that there is an expectation for judgements based

water bodies are permitted in limited circumstances, provided the forest owner or manager demonstrates that the alternative configuration maintains the overall extent of the buffers and provides equivalent or greater environmental protection than FSC-US regional requirements for those stream segments, water quality, and aquatic species, based on site-specific conditions and the best available information. The forest owner or manager develops a written set of supporting information including a description of the riparian habitats and species addressed in the alternative configuration. The CB must verify that the variations meet these requirements, based on the input of an independent expert in aquatic ecology or closely related field.		on site conditions, sensitive species, and condition of standing trees within streamside buffers.
6.5.f Stream and wetland crossings are avoided when possible. Unavoidable crossings are located and constructed to minimize impacts on water quality, hydrology, and fragmentation of ***aquatic habitat.*** Crossings do not impede the movement of aquatic species. Temporary crossings are restored to original hydrological conditions when operations are finished.	C	Similar to other BMPs, foresters interviewed during the audit were quite familiar with guidelines for stream and wetland crossings, and appropriate practices were implemented in the field.
6.5.g Recreation use on the FMU is managed to avoid negative impacts to soils, water, plants, wildlife and wildlife habitats.	C	Trails inspected during the audit were well maintained and in conformance with site-level guidelines. Some trails are maintained by the Parks Division, and many are maintained through cooperative agreement with clubs and organizations. Unauthorized ATV use, often a problem on public lands, appears to be well managed and maintained on Minnesota state forest lands. OHV groups are trained to monitor trail use and report trail damage to DNR officials. DNR's Enforcement Division is actively involved in enforcing compliance with laws and regulations related to hunting, fishing, trapping, collecting and other recreational activities.

6.5.h Grazing by domesticated animals is controlled to protect in-stream habitats and water quality, the species composition and viability of the riparian vegetation, and the banks of the stream channel from erosion.	C	Grazing is not allowed on Minnesota state forest lands, and no unauthorized grazing was observed during the audit. During interviews related to this indicator, there was mention of controlled grazing in one or two instances in aspen parkland prairies.
6.6. Management systems shall promote the development and adoption of environmentally friendly non-chemical methods of pest management and strive to avoid the use of chemical pesticides. World Health Organization Type 1A and 1B and chlorinated hydrocarbon pesticides; pesticides that are persistent, toxic or whose derivatives remain biologically active and accumulate in the food chain beyond their intended use; as well as any pesticides banned by international agreement, shall be prohibited. If chemicals are used, proper equipment and training shall be provided to minimize health and environmental risks.	C	
6.6.a No products on the FSC list of Highly Hazardous Pesticides are used (see FSC-POL-30-001 EN FSC Pesticides policy 2005 and associated documents).	C	MN DNR submitted a list of pesticides used in the past year. A CAS number search for the above products indicates that none are on the FSC List of 'highly hazardous' pesticides FSC-POL-30-001a EN dated May 1, 2019. Interviews with DNR staff indicate, however, an intent to use Rotenone (CAS 83–79–4) for rough fish control in lakes and ponds. That product is listed.
6.6.b All toxicants used to control pests and competing vegetation, including rodenticides, insecticides, herbicides, and fungicides are used only when and where non-chemical management practices are: a) not available; b) prohibitively expensive, taking into account overall environmental and social costs, risks and benefits; c)	C	Minnesota DNR's vegetation management approaches are consistent with minimized chemical use. "Minnesota Department of Natural Resources, Division of Forestry Pesticide Use Guidelines" was updated in 2016. DNR chemical use policies and practices are also outlined in Operational Order 59, which states "*Pest control practices on DNR administered lands and in public waters will employ integrated pest management techniques. Managers making pest management decisions will base*

the only effective means for controlling invasive and exotic species; or d) result in less environmental damage than non-chemical alternatives (e.g., top soil disturbance, loss of soil litter and down wood debris). If chemicals are used, the forest owner or manager uses the least environmentally damaging formulation and application method practical. Written strategies are developed and implemented that justify the use of chemical pesticides. Whenever feasible, an eventual phase-out of chemical use is included in the strategy. The written strategy shall include an analysis of options for, and the effects of, various chemical and non-chemical pest control strategies, with the goal of reducing or eliminating chemical use.		*all decisions on the safety of employees and the public, statutes, rules and regulations, ecological impacts, impacts to natural resources, economics and DNR management goals*".
6.6.c Chemicals and application methods are selected to minimize risk to non-target species and sites. When considering the choice between aerial and ground application, the forest owner or manager evaluates the comparative risk to non-target species and sites, the comparative risk of worker exposure, and the overall amount and type of chemicals required.	C	▪ Written strategies for control of pests are guided by Operational Order 59, which states "preference (is) given to non-pesticide management alternatives" and the "choice and methods of application will be those that will effectively control the pest species and minimize damage to non-target organisms and the environment." ▪ In addition to the Operation Order, DNR details written strategies in the Site-level Guidelines, Forest Health Protection Guidelines, the SFRMP, and stand level prescriptions. ▪ Insect and disease assessments and strategies are developed for each subsection plan. DNR supports an active Forest Health Program. This program includes four forest health specialists located in the regional offices as part of the regional staffs. The document "Forest Insects and Diseases - Assessment for Border Lakes Subsection (based on section information)"confirmed that information about forest pests, appropriate to the DNR management context, is provided by the forest health specialists.

6.6.d Whenever chemicals are used, a written prescription is prepared that describes the site-specific hazards and environmental risks, and the precautions that workers will employ to avoid or minimize those hazards and risks, and includes a map of the treatment area. Chemicals are applied only by workers who have received proper training in application methods and safety. They are made aware of the risks, wear proper safety equipment, and are trained to minimize environmental impacts on non-target species and sites.	C	A pesticide use authorization form is completed. It includes weather parameters and map, buffer setbacks from neighbors and other appropriate precautions. Training and certification are required.
6.6.e If chemicals are used, the effects are monitored and the results are used for adaptive management. Records are kept of pest occurrences, control measures, and incidences of worker exposure to chemicals.	C	The Silviculture and Roads Module (SRM) enables foresters to plan and record management objectives and actions on state lands. A SRM site is the piece of land for which the manager has a prescription developed. The site may be a FIM stand, part of a stand, or more than one stand. SRM allows for multi-year prescriptions for sites to manage the site for a specified objective. The site prescription consists of all the actions prescribed for a site to obtain a desired future condition. Actions include all the site prep, planting and seeding, TSI, pesticide use and regeneration survey work needed to manage a stand for a specified objective. This long-range schedule and record of completed work helps track management activities, obligations, and management objectives. It is the foundation for budget requests, work plans and monitoring. Vegetation control and stocking surveys are done at 1, 3, 5, 7 year intervals.
6.7. Chemicals, containers, liquid and solid non-organic wastes including fuel and oil shall be disposed of in an environmentally appropriate manner at off-site locations.	C	
6.7.a The forest owner or manager, and employees and contractors, have the equipment and training necessary to respond to hazardous spills	C	Procedures to deal with spills are listed in Operational Order 59. The DNR Pesticide Use Guidelines require that applicator vehicles associated with aerial applications have spills kits. MLEP training includes spill reporting requirements and precautions.

6.7.b In the event of a hazardous material spill, the forest owner or manager immediately contains the material and engages qualified personnel to perform the appropriate removal and remediation, as required by applicable law and regulations.		Site level guidelines have a policy on containment. Reportable spills are: ▪ 5 gallons or more of any petroleum product to ground ▪ Any quantity of chemical or petroleum product to water ▪ For chemicals other than petroleum products, the reportable quantity should be listed on the MSDS sheet. If the MSDS does not show the reportable quantity or if the operator does not know the reportable quantity, the spill is to be reported. Spills are reported to the Minnesota Pollution Control Agency (PCA) Duty Officer – 1-800-422-0798 and appropriate actions are taken. Active sales inspected had spill kits as required.
6.7.c. Hazardous materials and fuels are stored in leak-proof containers in designated storage areas that are outside of riparian management zones and away from other ecological sensitive features, until they are used or transported to an approved off-site location for disposal. There is no evidence of persistent fluid leaks from equipment or of recent groundwater or surface water contamination.	C	MN DNR and Department of Transportation regulations address the elements of the indicator. No violations were observed during site inspections. Auditors inspected harvesting equipment at several site visits, but no leaks were observed.
6.8. Use of biological control agents shall be documented, minimized, monitored, and strictly controlled in accordance with national laws and internationally accepted scientific protocols. Use of genetically modified organisms shall be prohibited.	C	
6.8.a Use of ***biological control agents*** are used only as part of a pest management strategy for the control of invasive plants, ***pathogens***, insects, or other animals when other pest control methods are ineffective, or are expected to be ineffective. Such use is contingent upon peer-reviewed scientific evidence that the agents in question are non-	C	MN DNR uses biological controls for loosestrife, Eurasian water milfoil, emerald ash borer, spotted knapweed, leafy spurge, common tansy, gypsy moth and other pests as part of an integrated pest management program. Use is approved by USDA and MN Dept. of Agriculture.

invasive and are safe for native species.		
6.8.b If biological control agents are used, they are applied by trained workers using proper equipment.	C	Requirements are the same as for pesticide application.
6.8.c If biological control agents are used, their use shall be documented, monitored and strictly controlled in accordance with state and national laws and internationally accepted scientific protocols. A written plan will be developed and implemented justifying such use, describing the risks, specifying the precautions workers will employ to avoid or minimize such risks, and describing how potential impacts will be monitored.	C	Uses are documented and monitored. Pesticide use approval form is required for biological control agents. Use example documents are online for studies in MN.
6.8.d Genetically Modified Organisms (GMOs) are not used for any purpose	C	Other than use of GMO crops in agricultural fields (which were excised from the scope of the certificate), MN DNR does not use GMOs.
6.9. The use of exotic species shall be carefully controlled and actively monitored to avoid adverse ecological impacts.	C	
6.9.a The use of ***exotic species*** is contingent on the availability of credible scientific data indicating that any such species is non-invasive and its application does not pose a risk to native biodiversity.	C	DNR does not plant exotic tree species. DNR takes measures to control and eradicate Scots pine, which were planted in the mid-1900's. MN DOT developed a Native Seed Mix Design for Roadsides (accessed 9/29/21) guide in 2010. The Minnesota Board of Water and Soil Resources cooperates with DNR on extensive materials related to using and restoring native vegetation. Per interviews with FME staff, and field observation, DNR no longer plants exotic tree species. Legacy plantings are being phased out, for example Scots pine (*Pinus sylvestris*), which was planted used for management purposes in the mid-1900s. No use of exotic species was observed on areas visited during the audit.
6.9.b If exotic species are used, their provenance and the location of their use are documented, and their ecological effects are actively monitored.	C	Site specific planting/seeding plans are used and required, even for seed mixes. Only native tree species were observed during the audit.

6.9.c The forest owner or manager shall take timely action to curtail or significantly reduce any adverse impacts resulting from their use of exotic species	C	Per interviews with FME staff and field observation, there were no instances observed of exotic species used for management purposes in the areas of the audit.
6.10. Forest conversion to plantations or non-forest land uses shall not occur, except in circumstances where conversion: a) Entails a very limited portion of the forest management unit; and b) Does not occur on High Conservation Value Forest areas; and c) Will enable clear, substantial, additional, secure, long-term conservation benefits across the forest management unit.	C	
6.10.a Forest *conversion* to non-forest land uses does not occur, except in circumstances where conversion entails a very limited portion of the forest management unit (note that Indicators 6.10.a, b, and c are related and all need to be conformed with for conversion to be allowed).	C	The DNR issued Operational Order 121 (Op Order 121) in April 2019 and in so doing created a process to modify DNR's management of school trust lands. Prior to any management modifications however, DNR understood the need to catalogue its portfolio of school trust land assets. Op Order 121 required DNR to complete a hybrid highest and best use inventory (HBU inventory). The sole purpose of the school trust inventory was to collect school trust asset information so as to inform future management decisions. As trustee the DNR must secure long-term maximum revenues consistent with its fiduciary duties while employing sound natural resource and conservation principles.[4] The HBU inventory, thus, sought to capture potential revenue sources from school trust lands in its ongoing effort not to waste school trust resources, and in turn breach its fiduciary duty. The HBU inventory did classify thousands of acres with a highest and best use as real estate development lands. However, the DNR offers a very limited acreage at public auction (accessed 9/29/21) annually (typically 200-300 acres per year). More importantly, DNR's public sale offerings have not been located within candidate high conservation value forest areas with most parcels being remnant platted parcels on Minnesota's many northern lakes.

[4] Minn. Stat. sec. 127A.31.

6.10.b Forest *conversion* to non-forest land uses does not occur on high conservation value forest areas (note that Indicators 6.10.a, b, and c are related and all need to be conformed with for conversion to be allowed).	C	DNR's limited land sales and analysis of HCVF significance for candidate sales appears to minimize risk of nonconformances with the FSC indicators.
6.10.c Forest *conversion* to non-forest land uses does not occur, except in circumstances where conversion will enable clear, substantial, additional, secure, long term conservation benefits across the forest management unit (note that Indicators 6.10.a, b, and c are related and all need to be conformed with for conversion to be allowed).	C	Op Order 121 does not call for divestment of school trust lands. However, Minnesota law does require that DNR hold frequent public auctions of school trust lands.[5] As trustee DNR must ensure that any parcels identified for possible divestiture will maximize long-term revenues and not mere boost short-term gains. DNR therefore undertakes an intensive review process prior to offering school trust land at public auction. The review process makes a determination that it is in the best interest of the school trust to offer a parcel at auction, that natural resource would not be adversely impacted by the offering, and more importantly that the parcels offered no longer fit DNR management plans. At nearly 2.5 million acres, school trust land makes up half of the five million under this certificate. If forest certification were to prohibit the limited Trust Lands sales that do occur, then participation of the entire 2.5 million acres in FSC responsible forestry would come under question. Because of state statutes that define the purpose of School Trust Lands, conducting minor land sales enables clear, substantial, additional, secure, long term conservation benefits across the forest management unit by keeping the remainder under responsible management.
6.10.d Natural or semi-natural stands are not converted to plantations. Degraded, semi-natural stands may be converted to restoration plantations.	C	No plantation forestry occurs on Minnesota state lands.
6.10.e Justification for land-use and stand-type conversions is fully described in the long-term management plan, and meets the biodiversity conservation requirements of Criterion 6.3 (see also Criterion 7.1.l)	C	SRMFP addresses the concerns in this indicator.
6.10.f Areas converted to *non-forest use* for facilities associated	C	Leasing nonferrous metallic mineral interests on School Trust Lands is one process used to generate revenue for

[5] Minn. Stat. sec. 92.12, subd. 4.

with subsurface mineral and gas rights transferred by prior owners, or other conversion outside the control of the certificate holder, are identified on maps. The forest owner or manager consults with the CB to determine if removal of these areas from the scope of the certificate is warranted. To the extent allowed by these transferred rights, the forest owner or manager exercises control over the location of surface disturbances in a manner that minimizes adverse environmental and social impacts. If the certificate holder at one point held these rights, and then sold them, then subsequent conversion of forest to non-forest use would be subject to Indicator 6.10.a-d.		the Permanent School Fund. As of May of 2012, active nonferrous metallic minerals leases on School Trust Lands makes up 30% of all active nonferrous metallic minerals leases. A number of these leases are located on known metallic mineral deposits; Maturi deposit, Birch Lake deposit, and Mesaba deposit. The potential future revenue for the Permanent School Fund from these three deposits is in the range of $2-3 billion. Active leases are excluded from the FSC certified land base. Environmental review - Even with a state or private nonferrous metallic mineral lease a mine cannot be built until a Permit to Mine is obtained. Environmental Assessment Worksheets and/or Environmental Impact Statements are required for new mining proposals and are often required for expansions or substantial changes to existing operations as stated in Minnesota Rules, part 4410.4300, subparts 11-12 & Minnesota Rules, part4410.4400, subparts 8-9. These rules were adopted under the Minnesota Environmental Policy Act, MN Statute 116D. DNR's responsibilities include providing technical assistance in the environmental review process to local units of government, other DNR Divisions, other state and federal agencies, and private industry. The Department of Natural Resources acts as RGU (Responsible Governmental Unit) when needed for ferrous, non-ferrous, and peat operations.

Principle #7: A management plan -- appropriate to the scale and intensity of the operations -- shall be written, implemented, and kept up to date. The long-term objectives of management, and the means of achieving them, shall be clearly stated.

7.1. The management plan and supporting documents shall provide: **a) Management objectives.** **b) Description of the forest resources to be managed, environmental limitations, land use and ownership status, socio-economic conditions, and a profile of adjacent lands.** **c) Description of silvicultural and/or other management system, based on the ecology of the forest in question and information gathered through resource inventories.**	C	

d) Rationale for rate of annual harvest and species selection. **e) Provisions for monitoring of forest growth and dynamics.** **f) Environmental safeguards based on environmental assessments.** **g) Plans for the identification and protection of rare, threatened and endangered species.** **h) Maps describing the forest resource base including protected areas, planned management activities and land ownership.** **i) Description and justification of harvesting techniques and equipment to be used.**		
7.1.a The management plan identifies the ownership and legal status of the FMU and its resources, including rights held by the owner and rights held by others.	C	The Division of Lands and Minerals provides real estate services to the MN DNR, including maintenance of deeds, leases and easements. Related mapping information is available as GIS data. The legal framework, including the statues that establish the DNR's authority to manage state lands, can be found on the DNR webpage and, as such, is considered part of the forest management plan.
7.1.b The management plan describes the history of land use and past management, current forest types and associated development, size class and/or successional stages, and natural disturbance regimes that affect the FMU (see Indicator 6.1.a).	C	Section Forest Resource Management Plans (SFRMPs) cover vision, goals, and objectives based on past land uses. The Ecological Classification System (ECS) includes descriptions of landscape history and natural disturbance regimes. Stand exams cover size classes and successional stages and are used to inform statewide assessments of size and age class distributions. Other management planning components, cover land use history and past management. GIS and other databases are used to track management activities.
7.1.c The management plan describes: a) current conditions of the timber and non-timber forest resources being managed; b) desired future conditions; c) historical ecological conditions; and d) applicable management objectives and activities to move the FMU toward desired future conditions.	C	SFRMPs and stand level operational plans address include current conditions, desired future conditions, historical ecological conditions, and management objectives and activities to move state lands toward desired future conditions. Specific forest management activities are described on operational plans for harvest sites.
7.1.d The management plan includes a description of the landscape within which the FMU is located and describes how	C	The Minnesota Forest Resources Council (MFRC) has identifies major forested landscapes within Minnesota in SFRMP plans. The landscape program is guided by a broad set of principles and goals set by the MFRC. These provide

landscape-scale habitat elements described in Criterion 6.3 will be addressed.		regional committees with a context for undertaking landscape-level planning and coordination. Recognizing the variability in environmental, economic and community characteristics among landscape regions, goals, and principles are well-defined yet broad. The MN DNR also has Best Management Practices and ECS manuals that are available to state forestry staff and contractors. An example of the quick reference guide, *Minnesota's Forest Management Guidelines* (dated 2014), was observed by the audit team.
7.1.e The management plan includes a description of the following resources and outlines activities to conserve and/or protect: • rare, threatened, or endangered species and natural communities (see Criterion 6.2); • plant species and community diversity and wildlife habitats (see Criterion 6.3); • water resources (see Criterion 6.5); • soil resources (see Criterion 6.3); • Representative Sample Areas (see Criterion 6.4); • High Conservation Value Forests (see Principle 9); • Other special management areas.	C	The document, *DNR's Forest Management Plan* (dated 2021), includes numerous links to other documents and information that cover this FSC requirement. For example, State Forest and State Wildlife Action Plans, which describe the high-level strategy guiding management of state lands, are included. Likewise, information about landscape and site level approaches are described. Specific, on-the-ground activities and methods to conserve and/or protect the values identified in this requirement are included in regulations and BMPs.
7.1.f If invasive species are present, the management plan describes invasive species conditions, applicable management objectives, and how they will be controlled (see Indicator 6.3.j).	C	The MN DNR has developed an Invasive Species Program for the state. Each DNR division has its own policies and separate implementation guides. Invasive species control efforts are coordinated by the DNR Ecological Resources Division and the Minnesota Invasive Species Council. An invasive species operational order 113 Invasive Species Prevention and Management is also an important document to that guides management.
7.1.g The management plan describes insects and diseases, current or anticipated outbreaks	C	The MN DNR Forest Health Monitoring Program and State Department of Agriculture assess risks and implement

on forest conditions and management goals, and how insects and diseases will be managed (see Criteria 6.6 and 6.8).		protection measures. SFRMP plans also include strategies for forest health.
7.1.h If chemicals are used, the plan describes what is being used, applications, and how the management system conforms with Criterion 6.6.	C	SFRMP operational documents describe pesticide use. Additionally, ESRAs have been developed for each of the chemicals that the MN DNR uses in forestry operations.
7.1.i If biological controls are used, the management plan describes what is being used, applications, and how the management system conforms with Criterion 6.8.	C	The Minnesota Department of Agriculture regulates use of biological control agents. The Minnesota Forest Protection Plan and SFRMP documents integrated pest control techniques that utilize biological controls. There are several resources on biological controls used by DNR, such as for purple loosestrife and buckthorn.
7.1.j The management plan incorporates the results of the evaluation of social impacts, including: • traditional cultural resources and rights of use (see Criterion 2.1); • potential conflicts with customary uses and use rights (see Criteria 2.2, 2.3, 3.2); • management of ceremonial, archeological, and historic sites (see Criteria 3.3 and 4.5); • management of aesthetic values (see Indicator 4.4.a); • public access to and use of the forest, and other recreation issues; • local and regional socioeconomic conditions and economic opportunities, including creation and/or maintenance of quality jobs (see Indicators 4.1.b and 4.4.a), local purchasing opportunities (see Indicator 4.1.e), and participation in local	C	The compendium of management plan documents includes the *Minnesota 2020 State Forest Action Plan*, which addresses the elements of the indicator. The department also has policies that address laws on historic preservation. SFRMPs consider these elements. MFRC conducts economic development studies. Planned activities on state lands are responsive to regional economic goals.

development opportunities (see Indicator 4.1.g).		
7.1.k The management plan describes the general purpose, condition and maintenance needs of the transportation network (see Indicator 6.5.e).	C	SFRMPs include road plans. Likewise, WMAs have road access plans. Additionally, the MN DNR has detailed OHV access plans and GIS transportation and road condition layers. Timber access plan are included in SFRMPs.
7.1.l The management plan describes the silvicultural and other management systems used and how they will sustain, over the long term, forest ecosystems present on the FMU.	C	Minnesota Site Level Guidelines, SFRMPs, and the Silviculture Handbook describe silvicultural systems used. Native Plant Community and ECS classifications are used to inform silvicultural approaches.
7.1.m The management plan describes how species selection and harvest rate calculations were developed to meet the requirements of Criterion 5.6.	C	The MN DNR website includes detailed information about sustainable timber harvest analysis, decisions, and planning. This includes how species selection and harvest rate calculations were developed. This information is available at (accessed 1 November 2021): MN DNR sustainable timber harvest analysis, decisions, and planning
7.1.n The management plan includes a description of monitoring procedures necessary to address the requirements of Criterion 8.2.	C	SFRMP plans include monitoring protocols. Additionally, MS 89A.07 requires the DNR and MFRC to complete forest resource monitoring, practices and compliance monitoring, and effectiveness monitoring. Procedures are available online to staff and the public and referenced in management plans (for example, MRFC sit-level monitoring). The MN DNR also annually conducts an annual management review of the implementation of the agency's third-party forest certifications. An internal memo (dated 20 September 2021) describing the outcomes of the review for 2021 was shared with the audit team.
7.1.o The management plan includes maps describing the resource base, the characteristics of general management zones, special management areas, and protected areas at a level of detail to achieve management objectives and protect sensitive sites.	C	The MN DNR has a robust GIS system that covers all mapping requirements. Most of the data is available to the public through the Forest Inventory Viewer, a collection of web applications that provide interactive map-based access to a variety of DNR Forestry geographic datasets. These include forest inventory data for state-administered lands, SFRMPs, and proposed harvest sites for DNR's annual timber harvest plans. In addition, the SFRMP and annual timber harvest plan map interfaces include a method to submit public comments regarding

		proposed management actions for specific stands via online forms.
7.1.p The management plan describes and justifies the types and sizes of harvesting machinery and techniques employed on the FMU to minimize or limit impacts to the resource.	C	MFRC's Forest Management Guidelines recommend the use of equipment that has low impact, such as low ground pressure machinery. The guidelines also discuss the merits of tree-length and cut-to-length harvesting systems relative to site objectives.
7.1.q Plans for harvesting and other significant site-disturbing management activities required to carry out the management plan are prepared prior to implementation. Plans clearly describe the activity, the relationship to objectives, outcomes, any necessary environmental safeguards, health and safety measures, and include maps of adequate detail.	C	SFRMP timber sale packets meet this requirement (e.g., timber harvest permits, contracts, etc.).
7.1.r The management plan describes the stakeholder consultation process.	C	Statewide forest management plans and the SFRMP process describes public involvement process. Specific details of the process can be found on the DNR website (accessed 1 November 2021): MN DNR Forest resource management planning
7.2 The management plan shall be periodically revised to incorporate the results of monitoring or new scientific and technical information, as well as to respond to changing environmental, social and economic circumstances.	C	-
7.2.a The management plan is kept up to date. It is reviewed on an ongoing basis and is updated whenever necessary to incorporate the results of monitoring or new scientific and technical information, as well as to respond to changing environmental, social and economic circumstances. At a minimum, a full revision occurs every 10 years.	C	The MN DNR develops forest resource plans on a 10-year cycle. Annual stand exam lists are be pulled from the 10-year stand exam list each year and made available for public review and comment. Several components of the management plan are updated annually, as confirmed via review of SFRMPs, timber sale permits, and other documents made available during the audit.
7.3 Forest workers shall receive adequate training and supervision	C	-

to ensure proper implementation of the management plans.		
7.3.a Workers are qualified to properly implement the management plan; All forest workers are provided with sufficient guidance and supervision to adequately implement their respective components of the plan.	C	The MN DNR staff interviewed verified that training is a requirement to maintain professional credentials and, in some cases, to remain employed with the state. For example, training on updated harassment policies is required to continue working with the organization. FME field staff conduct regular inspections of active harvest sites to ensure that loggers and properly implementing the management plan.
7.4 While respecting the confidentiality of information, forest managers shall make publicly available a summary of the primary elements of the management plan, including those listed in Criterion 7.1.	-	-
7.4.a While respecting landowner confidentiality, the management plan or a management plan summary that outlines the elements of the plan described in Criterion 7.1 is available to the public either at no charge or a nominal fee.	C	The MN DNR website is the central public repository for the management plan. It functions as the required public summary of the management plan and, as such, demonstrates conformance with this indicator.
7.4.b Managers of public forests make draft management plans, revisions and supporting documentation easily accessible for public review and comment prior to their implementation. Managers address public comments and modify the plans to ensure compliance with this Standard.	C	All draft plans open for public comment, including those pertaining to the Division of Forestry, are available on the MN DNR website here (accessed 1 November 2021): Plans open for public comment Responses to comments and any modifications made are made available to the public as part of the management planning process.

Principle #8: Monitoring shall be conducted -- appropriate to the scale and intensity of forest management -- to assess the condition of the forest, yields of forest products, chain of custody, management activities and their social and environmental impacts.

Applicability Note: On small and medium-sized forests (see Glossary), an informal, qualitative assessment may be appropriate. Formal, quantitative monitoring is required on large forests and/or intensively managed forests.

8.1 The frequency and intensity of monitoring should be determined by the scale and intensity of forest	C	

management operations, as well as, the relative complexity and fragility of the affected environment. Monitoring procedures should be consistent and replicable over time to allow comparison of results and assessment of change.		
8.1.a Consistent with the scale and intensity of management, the forest owner or manager develops and consistently implements a regular, comprehensive, and replicable written monitoring protocol.	C	Per review of monitoring evidence cited in C8.2, FME demonstrates conformance to this indicator. Procedures are often available online to staff and the public (e.g., regeneration), and often referenced in management plans (e.g., Pest Management).
8.2. Forest management should include the research and data collection needed to monitor, at a minimum, the following indicators: a) yield of all forest products harvested, b) growth rates, regeneration, and condition of the forest, c) composition and observed changes in the flora and fauna, d) environmental and social impacts of harvesting and other operations, and e) cost, productivity, and efficiency of forest management.	C	

8.2.a.1 For all commercially harvested products, an inventory system is maintained. The inventory system includes at a minimum: a) species, b) volumes, c) stocking, d) regeneration, and e) stand and forest composition and structure; and f) timber quality.	C	FY19 forest monitoring activities include the following:
		• Cooperative Stand Assessment (CSA): 120,314 acres re-inventoried (48,835 Contracted through Resource Assessment and 71,479 updated by Area staff).
		• FIA: 1,337 'regular' plots measured and 101 Urban FIA plots.
		• Regeneration: 6,768 acres aerial photographed and interpreted.
		• Forest Health: 13 million acres assessed and mapped aerially.
		• LiDAR Based Forest Inventory project:
		  ○ 166 - 1/10 acre fixed radius plots inventoried in Lake County.
		  ○ 38 of the original plots in Cass County were photographed using an Unmanned Aerial System (UAS).
		  ○ Spatial inventory models and wall-to-wall maps of the following attributes were created

		by integrating field sample inventory (plot data is from FY17, FY18, and FY19) with numerous LiDAR-derived grid metrics at 20-m resolution: aboveground biomass, standing volume, basal area, basal area weighted height, quadratic mean diameter, trees per acre, and site index. ○ Broad forest cover type classification was produced across both acquisition areas using several sources of remotely sensed and field data. ○ Individual tree and stand polygons were mapped across the entire acquisition areas using LiDAR-derived metrics. 51,078 acres were surveyed for invasive plant species in FY19
8.2.a.2 Significant, unanticipated removal or loss or increased vulnerability of forest resources is monitored and recorded. Recorded information shall include date and location of occurrence, description of disturbance, extent and severity of loss, and may be both quantitative and qualitative.	C	Blowdown or blown-over timber is tracked during annual stand exams or through regular patrols per interviews with staff. Fire damaged stands are also tracked through fire control and suppression activities. All such unanticipated losses detected are recorded, including dates, location, types of disturbance, and extent. Where possible, these areas are offered up for salvage harvests.
8.2.b The forest owner or manager maintains records of harvested timber and NTFPs (volume and product and/or grade). Records must adequately ensure that the requirements under Criterion 5.6 are met.	C	All volumes harvested converted to cord unit of measure for FY21 was 661,671 cords.
8.2.c The forest owner or manager periodically obtains data needed to monitor presence on the FMU of: 1) Rare, threatened and endangered species and/or their ***habitats***; 2) Common and rare plant communities and/or habitat; 3) Location, presence and abundance of invasive species; 4) Condition of protected areas, set-asides and buffer zones; 5) High Conservation Value Forests (see Criterion 9.4).	C	Minnesota Biological Survey staff were involved in the following monitoring efforts: • The LCCMR-funded Ecological Monitoring Network project continued into its second field season in 2018 and its third in 2019. FME is establishing and collecting data from native grasslands, forests, and wetlands throughout the state as part of a long-term status and trends monitoring project. The goal is to determine how vegetation changes in response to stressors such as climate change and invasive species populations. About 50 monitoring sites were established on a mix of ownerships throughout Minnesota over this reporting period, including certified State Forests and Wildlife Management Areas, and data continues to be collected from them.

		More information on this project can be found at: MN DNR Ecological Monitoring Network • Long-term monitoring of the federally listed Western prairie fringed orchid continued this year, including on the Burnham Wildlife Management Area. • Bat acoustic monitoring occurred in Becker, Chisago, Fillmore, St. Louis counties. Nongame Wildlife Program staff were involved in the following monitoring efforts: • Red-shouldered Hawk (SPC) reassessment of historic observations • Northern Goshawk (SPC) revisit known nests to determine whether they are still active and nesting success • Richardson's Ground Squirrel (SPC) population and distribution assessment • USGS Breeding Bird Surveys (2) to assess breeding birds • Monitored wood turtles in significant river stretches in northern MN. Established long-term monitoring sites. Also monitored nesting activity and road mortality. • Monitored breeding activity of Common Terns on WMA. • Monitored breeding activity in high priority Northern Goshawk territories. Surveyed reported stick nests for goshawks when the stick nest had high potential for goshawk use.
8.2.d.1 Monitoring is conducted to ensure that site specific plans and operations are properly implemented, environmental impacts of site disturbing operations are minimized, and that harvest prescriptions and guidelines are effective.	C	Records of close-out records for completed timber harvest permits were reviewed for a sample of timber sale permits visited during the audit.
8.2.d.2 A monitoring program is in place to assess the condition and environmental impacts of the forest-road system.	C	Per interviews with staff and observation of road upgrade and repair sites during the audit, FME regularly monitors the road system and makes timely upgrades.
8.2.d.3 The landowner or manager monitors relevant socio-economic issues (see Indicator 4.4.a), including the social impacts of harvesting, participation in local economic opportunities (see Indicator 4.1.g), the creation	C	• On an annual basis, the Fish and Wildlife Division contracts with the USFWS cooperative unit to conduct statistically valid human dimensions surveys. Recent surveys have sought hunter, angler, and landowner input on panfish, turkey, deer, elk, and ruffed grouse management. In addition, in-house research staff also conduct statistically valid HD mail

and/or maintenance of quality job opportunities (see Indicator 4.1.b), and local purchasing opportunities (see Indicator 4.1.e).		and internet surveys. Results of these surveys are used to inform Division and Departmental decision-making. FME has started work building a webpage on opinion surveys that describes some of its work: MN DNR Wildlife opinion surveys 2021: Continuing work to implement Deer Management Plan , DNR surveyed landowners and hunters to assess preferences for populations, hunting experiences, and impacts of deer populations to inform goal setting work for 41 deer permit areas, then sought public comments on proposed goals. DNR also held a Deer Open House to take public input on concerns or questions regarding deer and deer management
8.2.d.4 Stakeholder responses to management activities are monitored and recorded as necessary.	C	Confirmed via review of communication records between stakeholders and the FME on setting up harvested and planned timber harvests visited during the audit.
8.2.d.5 Where sites of cultural significance exist, the opportunity to jointly monitor sites of cultural significance is offered to tribal representatives (see Principle 3).	C	No such sites were reviewed in the 2021 audit, but staff interviewed were knowledgeable of procedures and policies related to consultation with tribes. FME also conducted a training on cultural sites that tribes participated in.
8.2.e The forest owner or manager monitors the costs and revenues of management in order to assess productivity and efficiency.	C	Plan monitoring for costs and revenues associated with the FME's operations are done on an annual and ongoing basis. Annual School Trust land Cost Certification reports also include information on costs and revenue.
8.3 Documentation shall be provided by the forest manager to enable monitoring and certifying organizations to trace each forest product from its origin, a process known as the "chain of custody."	C	Plan monitoring for various elements are done on an annual and ongoing basis. School Trust land reports also include information on costs and revenue.
8.3.a When forest products are being sold as FSC-certified, the forest owner or manager has a system that prevents mixing of FSC-certified and non-certified forest products prior to the point of sale, with accompanying documentation to enable the tracing of the harvested material from each harvested product from its origin to the point of sale.	C	
8.3.b The forest owner or manager maintains documentation to enable the tracing of the harvested	C	Refer to SCS COC indicators for FMEs.

material from each harvested product from its origin to the point of sale.		
8.4 The results of monitoring shall be incorporated into the implementation and revision of the management plan.	C	
8.4.a The forest owner or manager monitors and documents the degree to which the objectives stated in the management plan are being fulfilled, as well as significant deviations from the plan.	NC	As an example of monitoring long-term objectives and nonconformances, the FME provided a copy of the 2021 Annual Management Review of the DNR implementation of the Sustainable Forestry Initiative and Forest Stewardship Council Forest Management Standards. The department has defined the project definition and project staff to be involved in mid-point monitoring of the implementation of the Sustainable Timber Harvest decision. The monitoring is ongoing and the report will be released in the second or third quarter of 2023. Pre-planning assessments to identify current resource conditions and trends are done in preparation for plan updates. Mid-point monitoring also occurs for these Section level Forest Resource Management Plans (SFRMPs) Review of a 6 year old restoration planting on Henry Bjoring WMA indicated a high degree of mortality in the planted jack pine seedlings, as well as bur oak and crab apple trees. The management objectives for the site are a conversion to a jack pine savannah, so a fully stocked stand to timber levels is not expected. But even allowing for some loss, the tree mortality on the site was significant. Discussions with the wildlife manager indicated that there was not a formal process for monitoring the success of the planting, and whether additional management activities will be needed. It is noteworthy that the funding for these activities is reliant on grants, and a significant investment was made in the site, and more may be needed from uncertain funding sources in order to accomplish the objectives. CAR 2021.2 was issued.
8.4.b Where monitoring indicates that management objectives and guidelines, including those necessary for conformance with this Standard, are not being met or if changing conditions indicate that	C	The FME has a strategic plan that includes a schedule for updates to several components of the FMP. Monitoring reports related to the implementation of SFRMPs are published regularly. Internal audits and management review include assessments of achieving objectives, and

a change in management strategy is necessary, the management plan, operational plans, and/or other plan implementation measures are revised to ensure the objectives and guidelines will be met. If monitoring shows that the management objectives and guidelines themselves are not sufficient to ensure conformance with this Standard, then the objectives and guidelines are modified.		what types of potential actions must be taken to correct any deviations detected.
8.5 While respecting the confidentiality of information, forest managers shall make publicly available a summary of the results of monitoring indicators, including those listed in Criterion 8.2.	C	
8.5.a While protecting landowner confidentiality, either full monitoring results or an up-to-date summary of the most recent monitoring information is maintained, covering the Indicators listed in Criterion 8.2, and is available to the public, free or at a nominal price, upon request.	C	There are several documents that include monitoring results that a publicly available, including: • Growth and Yield of all forest products harvested: Site-Level Forest Management Reports and Sustainable timber harvest analysis • Forest dynamics and changes in composition of flora and fauna: Site-Level Forest Management Reports, Performance and Accountability, Natural Heritage Information System, and SFRMP Monitoring Reports (example: Aspen Parklands) • Environmental Impacts: Site-Level Forest Management Reports, Performance and Accountability, and SFRMP Monitoring Reports (example: Aspen Parklands) • Social Impacts: Site-Level Forest Management Reports, Performance and Accountability Costs, Productivity, and Efficiency: Biennial report to Governor and Legislature, Performance and Accountability, and School Trust Lands Reports

Principle #9: Management activities in high conservation value forests shall maintain or enhance the attributes which define such forests. Decisions regarding high conservation value forests shall always be considered in the context of a precautionary approach.

High Conservation Value Forests are those that possess one or more of the following attributes:

- **Forest areas containing globally, regionally or nationally significant: concentrations of biodiversity values (e.g., endemism, endangered species, refugia); and/or large landscape level forests, contained within, or containing the management unit, where viable populations of most if not all naturally occurring species exist in natural patterns of distribution and abundance**
- **Forest areas that are in or contain rare, threatened or endangered ecosystems**
- **Forest areas that provide basic services of nature in critical situations (e.g., watershed protection, erosion control)**
- **Forest areas fundamental to meeting basic needs of local communities (e.g., subsistence, health) and/or critical to local communities' traditional cultural identity (areas of cultural, ecological, economic or religious significance identified in cooperation with such local communities).**

Examples of forest areas that *may have* high conservation value attributes include, but are not limited to:
Central Hardwoods:

- Old growth – (see Glossary) (a)
- Old forests/mixed age stands that include trees >160 years old (a)
- Municipal watersheds –headwaters, reservoirs (c)
- Rare, Threatened, and Endangered (RTE) ecosystems, as defined by GAP analysis, Natural Heritage Inventory, and/or the World Wildlife Fund's Forest Communities of Highest Conservation Concern, and/or Great Lakes Assessment (b)
- Intact forest blocks in an agriculturally dominated landscape (refugia) (a)
- Intact forests >1000 ac (valuable to interior forest species) (a)
- Protected caves (a, b, or d)
- Savannas (a, b, c, or d)
- Glades (a, b, or d)
- Barrens (a, b, or d)
- Prairie remnants (a, b, or d)

North Woods/Lake States:

- Old growth – (see Glossary) (a)
- Old forests/mixed age stands that include trees >120 years old (a)
- Blocks of contiguous forest, > 500 ac, which host RTEs (b)
- Oak savannas (b)
- Hemlock-dominated forests (b)
- Pine stands of natural origin (b)
- Contiguous blocks, >500 ac, of late successional species, that are managed to create old growth (a)
- Fens, particularly calcareous fens (c)
- Other non-forest communities, e.g., barrens, prairies, distinctive geological land forms, vernal pools (b or c)
- Other sites as defined by GAP analysis, Natural Heritage Inventory, and/or the World Wildlife Fund's Forest Communities of Highest Conservation Concern (b)

Note: In the Lake States-Central Hardwoods region, old growth (see Glossary) is both rare and invariably an HCVF.

In the Lake States-Central Hardwoods region, cutting timber is not permitted in old-growth stands or forests.

Note: Old forests (see Glossary) may or may not be designated HCVFs. They are managed to maintain or recruit: (1) the existing abundance of old trees and (2) the landscape- and stand-level structures of old-growth forests, consistent with the composition and structures produced by natural processes.

Old forests that either have or are developing old-growth attributes, but which have been previously harvested, may be designated HCVFs and may be harvested under special plans that account for the ecological attributes that make it an HCVF.

Forest management maintains a mix of sub-climax and climax old-forest conditions in the landscape.

9.1 Assessment to determine the presence of the attributes consistent with High Conservation Value Forests will be completed, appropriate to scale and intensity of forest management.	C	
9.1.a The forest owner or manager identifies and maps the presence of High Conservation Value Forests (HCVF) within the FMU and, to the extent that data are available, adjacent to their FMU, in a manner consistent with the assessment process, definitions, data sources, and other guidance described in Appendix F. Given the relative rarity of old growth forests in the contiguous United States, these areas are normally designated as HCVF, and all old growth must be managed in conformance with Indicator 6.3.a.3 and requirements for legacy trees in Indicator 6.3.f.	C	A summary of the DNR's HCVF approach is available on their website: MN DNR High conservation value forests The initial identification of the HCVFs were composed primarily of the all Minnesota Biological Survey (MBS) sites of outstanding and high biodiversity significance. The DNR maintains a shapefile of all sites specifically identified as designated or managed HCVF, including the currently identified 82 HCVFs, on 262,000 acres. These layers are used by staff in the Stand Exam process and all stands within these areas are tagged for a joint site visit. The layer is also available for viewing by the general public on our external website, and available upon request. However, only 174,000 of those acres were officially designated, that portion of the total that does not involve school trust lands (letter from Commissioner to staff and stakeholders, 18 May 2015). Note that, at least for now, the HCVF acres on school trust lands will be managed as HCVF unless there are conflicts between objectives of school trust lands and individual management issues on a given HCVF site. A Project Team has been formed that will identify a process for reviewing and revising the HCV network after the MBS Program completes its first statewide survey. This process will include re-evaluating the HCVF shapefiles to identify their accuracy and alignment with stands possessing HCV's. HCV 4's were identified and mapped in 2016 through consultation with MN DNR, MN Department of Health (MDH), and Minnesota Department of Agriculture. HCV

		4's utilize three existing shapefiles managed by DOH; Wellhead Protection Areas, Source Water Assessment Areas, and Drinking Water Supply Management Areas. Management recommendations for areas surrounding wellheads have been developed, including presence of spill kits, avoidance of high risk chemicals on the site. The department has a process for identifying HCV 6's through the contractual work of a state Archeologist who annually evaluates areas scheduled for management. The DNR is currently undergoing a revision of their HCV 1-3 classifications in advance of the new FSC-US forest management standard.
9.1.b In developing the assessment, the forest owner or manager consults with qualified specialists, independent experts, and local community members who may have knowledge of areas that meet the definition of HCVs.	C	Primarily an internal process for HCV's 1-3: Much of the survey work conducted by Minnesota County Biological Survey is contracted to specialists. Multi-disciplinary teams were involved in regional HCVF designations. Many DNR employees are experts with different taxa and landscapes. Preliminary HCV 4's were identified and mapped in 2016 through consultation with MN DNR, MN Department of Health (MDH), and Minnesota Department of Agriculture. HCV 4's utilize three existing shapefiles managed by DOH; Wellhead Protection Areas, Source Water Assessment Areas, and Drinking Water Supply Management Areas. There are no known HCV 5's on the FMU, but through departmental and regional tribal teams and consultations performed with Minnesota's tribes on an annual basis, there is an ongoing dialogue for management and monitoring if any HCV 5's might be identified in the future. Consultation with communities occurs in a number of ways including public review of Section Forest Resource Management Plans (SFRMP) and Annual Stand Exam Lists (ASEL). The department consults with a state contracted archeologist for identifying possible HCV 6's, who annually evaluates areas scheduled for management.
9.1.c A summary of the assessment results and management strategies (see Criterion 9.3) is included in the management plan summary that is made available to the public.	C	The DNR web site includes a fact sheet for HCVFs and the process of designation. An additional feature is that a map and a fact sheet for each HCVF also are available on the web site.

9.2 The consultative portion of the certification process must place emphasis on the identified conservation attributes, and options for the maintenance thereof.	C	
9.2.a The forest owner or manager holds consultations with stakeholders and experts to confirm that proposed HCVF locations and their attributes have been accurately identified, and that appropriate options for the maintenance of their HCV attributes have been adopted.	C	The DNR has Informational Reports for each HCVF site developed by the interdisciplinary teams, including a list of HCVs in each site and initial management strategies. Interviews with staff confirmed that the HCVF process included consultation with other agencies and landowners where HCVs extended across ownerships.
9.2.b On public forests, a transparent and accessible public review of proposed HCV attributes and HCVF areas and management is carried out. Information from stakeholder consultations and other public review is integrated into HCVF descriptions, delineations and management.	C	A public review process has been conducted for the HCVF sites proposed for designation in 2014. HCVF Designations are open for public comment on the MN DNR website, particularly as the department reviews their HCV system in preparation for the upcoming FSC-US standard revision.
9.3 The management plan shall include and implement specific measures that ensure the maintenance and/or enhancement of the applicable conservation attributes consistent with the precautionary approach. These measures shall be specifically included in the publicly available management plan summary.	C	
9.3.a The management plan and relevant operational plans describe the measures necessary to ensure the maintenance and/or enhancement of all high conservation values present in all identified HCVF areas, including the precautions required to avoid risks or impacts to such values (see Principle 7). These measures are implemented.	C	Management guidelines for HCVs have been developed, available for review on the DNR website: MN DNR High conservation value forests The guidelines clearly take a precautionary approach for management, either avoidance of management or active management designed to maintain the designated features. For example, management guidelines for Goblin Fern require buffers around identified occurrences, and reduced impact logging techniques in the surrounding stands. In contrast,

		Jack Pine Woodland (FDc23) management guidelines allow for harvesting and prescribed burning in order to maintain this disturbance dependent community.
9.3.b All management activities in HCVFs must maintain or enhance the high conservation values and the extent of the HCVF.	C	Field visits during the audit confirmed that management activities within HCVF areas followed the protective management prescriptions described in the HCVF plans.
9.3.c If HCVF attributes cross ownership boundaries and where maintenance of the HCV attributes would be improved by coordinated management, then the forest owner or manager attempts to coordinate conservation efforts with adjacent landowners.	C	SFRMP documents lists plans for adjoining properties that are considered. For example, in prior audits the Savannah Hardwoods HCVF is shared with Aitkin County and is still managed in cooperation with the county. In 2014, regional HCVF teams developed methods to rank HCVF sites in each region for suitability for coordinating conservation efforts with adjacent landowners. The department maintains contact information on their website for landowners interested in working with the DNR to maintain HCV's where boundaries are shared.
9.4 Annual monitoring shall be conducted to assess the effectiveness of the measures employed to maintain or enhance the applicable conservation attributes.	C	
9.4.a The forest owner or manager monitors, or participates in a program to annually monitor, the status of the specific HCV attributes, including the effectiveness of the measures employed for their maintenance or enhancement. The monitoring program is designed and implemented consistent with the requirements of Principle 8.	C	DNR submitted the following reports of annual monitoring events in response to this indicator: "Minnesota Biological Survey staff were involved in the following monitoring efforts: • Continued ongoing project of monitoring rare plants and native plant communities in HCVF sites in southeast Minnesota. • Continued ongoing monitoring of the state threatened plant fern-leaf false foxglove (*Aureolaria pedicularia*) in an HCVF site in Whitewater WMA. • Bat acoustic monitoring occurred in Scott and Washington counties.

		• Grassland bird monitoring in western MN counties. • Rare prairie butterfly monitoring in western MN counties. • The MBS Ecological Monitoring Network project continued collecting data from native grasslands, forests, and wetlands throughout the state as part of a long-term status and trends monitoring project. The goal is to determine how vegetation changes in response to stressors such as climate change and invasive species populations. Monitoring sites were established on a mix of ownerships throughout Minnesota over this reporting period, including certified State Forests and Wildlife Management Areas. More information on this project can be found at: MN DNR Ecological Monitoring Network • MBS conducted annual census of rare orchid populations in Kittson, Mower, Norman, Pennington, Polk and Rock Counties in conjunction with TNC, USFWS, and NPS. • Long-term monitoring of the federally listed Western prairie fringed orchid and dwarf trout-lily. • Long-term monitoring the rare tubercled rein orchid, *Platanthera flava*, and its response to management at Quarry Park SNA and other sites in Stearns county. CAR 2019.5 had been issued, identifying a gap in DNR's systematic approach to HCVF monitoring. The DNR responded with developing a monitoring guidelines for several HCVs, which were implemented during the 2021 field season. See CAR 2019.5 response for more details. In 2021, MBS staff formed two teams of MNDNR botanists and EWR regional ecologists to identify and test protocols for monitoring one rare plant HCV (ram's head lady's-slipper orchid), and one native plant community HCV (central dry jack pine woodland, FDc23 NPC,). Before and during the 2021 field season, the two teams designed, field-tested, and refined draft study plans for each HCV. In 2021, an interdisciplinary team of staff and managers from the divisions of FOR, PAT, FAW, and EWR implemented a pilot project to develop an old growth

		forest monitoring program. The purpose of the old growth monitoring program is to monitor the status (amount and condition) of DNR's statewide old growth forest network and to provide this information to land managers and decision makers in a timely manner to support management, policy and land-use decision-making. They tested three sampling protocols. The Level 1 method used remote sensing data to detect coarse changes in forest canopy across the full statewide network of old growth sites. The Level 2 method applied a newly developed field-based rapid assessment to evaluate old growth forest condition at a total of 61 sites across regions 1-3. The Level 3 method applied DNR's existing, and more detailed, old growth field evaluations at a total of 8 sites across regions 1-3. The FME is in the process of reviewing the results. Before the end of the year, DNR leadership plans to evaluate the effectiveness and impacts of the existing approach and refine the monitoring process for longer-term implementation.
9.4.b When monitoring results indicate increasing risk to a specific HCV attribute, the forest owner/manager re-evaluates the measures taken to maintain or enhance that attribute, and adjusts the management measures in an effort to reverse the trend.	C	Per interviews with key staff (e.g., wildlife and ecology), FME has not observed any additional threats that staff are not already aware of and none have increased significantly.

Principle #10: Plantations shall be planned and managed in accordance with Principles and Criteria 1-9, and Principle 10 and its Criteria. While plantations can provide an array of social and economic benefits, and can contribute to satisfying the world's needs for forest products, they should complement the management of, reduce pressures on, and promote the restoration and conservation of natural forests.

As confirmed via field observation and review of the FMP and site-specific plans, the FME practices natural/semi-natural forest management.

C= Conformance with Criterion or Indicator
C/NC= Overall Conformance with Criterion, but there are Indicator nonconformances
NC= Nonconformance with Criterion or Indicator
NA= Not Applicable

Appendix 7 – Chain of Custody Indicators for FMEs Conformance Table

SCS FSC Chain of Custody Indicators for Forest Management Enterprises, V8-0

1. Quality Management

1.1 The FME shall appoint a management representative as having overall responsibility and authority for the organization's compliance with all applicable requirements of this standard.	☒ C ☐ NC
Evidence 1.1: As confirmed via staff interviews, the Timber Program Supervisor has overall responsibility. Others involved are the Scaling Coordinator and Forest Certification Program Consultant.	
1.2 A system shall be implemented to track and trace all products that are sold with an FSC Claim from the *forest of origin* to the *forest gate(s)*. When legally required, and for group and multiple FMU certificates, this system shall also be documented. *The forest of origin should be the smallest reportable manageable unit, such as a tax parcel. It shall never be larger than a Forest Management Unit (FMU).* *The forest gate is defined as the point where the change in ownership of the certified-forest product occurs.*	☒ C ☐ NC ☐ NA, FME does not sell any products with an FSC claim/ la OMF no vende productos con una declaración FSC
Evidence 1.2: As confirmed via staff interviews, timber sale administrators enter ticket numbers from each load harvested into the Timber Sale Module (TSM). The appraisal, notice of sale, and other permit-specific information is housed in the TSM. Load tickets are issued to the logger at the pre-sale meeting. A lockbox is installed at the landing, which is where the lockbox stub from each load ticket are placed. Each ticket includes a book, destination, and a lockbox stub; the destination sub it provided to the purchaser (i.e., mill). The lockbox stub includes the permit number, species, volume, and the destination. The book stub stays in the ticket book, which is provided back to the sale administrator along with any leftover tickets at the conclusion of the permit. Mills provide the MN DNR with scale reports, generally on a daily basis. Batches of scale reports are uploaded to TSM for the permit. Lockbox stubs, consumer stubs (i.e., destination stubs for mills that have a Consumer Scale Agreement with the MN DNR), and scale reports are reconciled.	
1.3 The FME shall maintain complete records of all FSC-related COC activities, including sales and training, for at least 5 years.	☒ C ☐ NC
Evidence 1.3: Confirmed via review of procedures and sampled documents, as well as interviews with staff.	
1.4 The FME shall define its *forest gate(s)* (check all that apply):	☒ C ☐ NC
☐ **Stump** *Stumpage sale or sales of standing timber; transfer of ownership of certified-forest product occurs upon harvest.*	
☐ **On-site concentration yard** *Transfer of ownership of certified-product occurs at concentration yard under control of FME.*	
☒ **Off-site Mill/ Log Yard/ Port** *Transfer of ownership occurs when certified-product is unloaded or paid for at purchaser's facility or a facility under the purchaser's control.*	

☐ **Auction house/ Brokerage** *Transfer of ownership occurs at a government-run or private auction house/ brokerage.*	
☒ **Lump-sum sale/ Per Unit/ Pre-Paid Agreement** *A timber sale in which the buyer and seller agree on a total price for marked standing trees or for trees within a defined area before the wood is removed — the timber is usually paid for before harvesting begins. Similar to a per-unit sale.*	
☐ **Log landing** *Transfer of ownership of certified-product occurs at landing/yarding areas.*	
☐ **Other** *(Please describe)*:	
1.5 The FME shall have sufficient control over its *forest gate(s)* to ensure that there is no risk of mixing of FSC-certified forest products covered by the scope of the FM/COC certificate with forest products from outside of the scope prior to the transfer of ownership.	☒ C ☐ NC ☐ NA, FME does not sell any products with an FSC claim/ la OMF no vende productos con una declaración FSC
Evidence 1.4/1.5: Timber is sold as Consumer Scaled (i.e., off-site) and Sold on Appraised Volume (i.e., lump-sum). In both cases, the forest gate occurs only after three conditions have been met: (1) all conditions of the permit have been met; (2) payment has been received by DNR; and (3) permit is closed.	
1.6 The FME and its contractors shall not process FSC-certified material prior to transfer of ownership at the *forest gate(s)* without conforming to applicable chain of custody requirements. *NOTE: This does not apply to log cutting or de-barking units, small portable sawmills, on-site processing of chips/biomass or primary processing of Non-Timber Forest Products (NTFPs) under the FME's control (e.g., latex, rattan, maple syrup, etc.) originating from the FMU under evaluation.*	☒ C ☐ NC ☐ NA
Evidence 1.6: Occasionally, permit holders will produce clean chips for sale as part of an operation. For both biomass and when merchandising a blend of species, the stand is reappraised since it would involve combining multiple species in each load. In all cases, the same COC procedures as for logs are followed.	
1.7 The FME has supported transaction verification conducted by SCS and Assurance Services International (ASI) by providing samples of FSC transaction data as requested by SCS. *NOTE: Pricing information is not within the scope of transaction verification data disclosure.*	☐ C ☐ NC ☒ NA, no verification requested/ no se ha pedido la verificación
1.8 The FME shall support fiber testing by surrendering samples and specimens of materials and information about species composition and the location where the sample originated for verification, as requested by its certification body, ASI or FSC.	☐ C ☐ NC ☒ NA, no verification requested/ no se ha pedido la verificación
Evidence 1.7/1.8: The MN DNR has not been requested to support transaction verification.	

2. Product Control, Sales and Delivery

2.1. Products from the certified forest area shall be identifiable as certified at the *forest gate(s)*.	☒ C ☐ NC ☐ NA, FME does not sell any products with an FSC claim/ la OMF no vende productos con una declaración FSC
Evidence 2.1: All loads leave the FMU with load tickets, providing an audit trail for all material leaving the FMUs. This ensures that such material is documented as being 100% FSC certified. Load tickets include a website link at which the current FSC code and claim are posted. Auditor reviewed a sample of completed load tickets. Additionally, the permit number is painted on each load.	
2.2 Information about all products sold shall be compiled and documented for all FMUs in the scope of certification, including: 1) Common and scientific species name; 2) Product name or description; 3) Volume (or quantity) of product; 4) Information to trace the material to the source of origin harvest block; 5) Harvest date; 6) If basic processing activities take place in the forest, the date and volume/quantity produced; and 7) Whether or not the material was sold with an FSC Claim.	☒ C ☐ NC
Evidence 2.2: Items 1) through 7) are documented in the TSM database used to track volumes, species, and other harvest-related information.	
2.3. The FME shall ensure that all sales documents issued for outputs sold with FSC claims include the following information: a) name and contact details of the FME; b) information to identify the customer, such as their name and address; c) date when the document was issued; d) product name or description, including common and scientific species name(s); e) quantity of products sold; f) the FME's FSC Forest Management (FM/COC) or FSC Controlled Wood (CW/FM) code; g) clear indication of the FSC claim for each product item or the total products as follows: i. the claim "FSC 100%" for products from FSC 100% product groups; or ii. the claim "FSC Controlled Wood" for products from FSC Controlled Wood product groups.	☒ C ☐ NC ☐ NA, FME does not sell any products with an FSC claim/ la OMF no vende productos con una declaración FSC

2.4 If the sales documentation issued by the FME is not included with the shipment of the product and this information is relevant for the customer to identify the product as being FSC certified, the related delivery documentation has included the same information as required in indicator 2.3 and a reference linking it to the sales documentation. **Note: 2.3 and 2.4 are based on FSC-STD-40-004 V3-0 Clauses 5.1 and 5.3**	☐ C ☐ NC ☒ NA, delivery documentation not required or FME is not responsible for issuing delivery documentation/ no se requieren los documentos de entrega o la OMF no es responsable de emitir los documentos de entrega ☐ NA, FME does not sell any products with an FSC claim/ la OMF no vende productos con una declaración FSC
Evidence 2.3/2.4: Between the permit and load tickets, all required information is provided. Load tickets correspond to permits, providing an auditable stump-to-gate paper trail.	
2.5 If the FME is unable to include the FSC claim and/or certificate code in sales or delivery documents, the required information has been provided to the customer through supplementary documentation (e.g. supplementary letters). In this case, the FME has obtained permission from SCS to implement supplementary documentation in accordance with the following criteria: a. there shall exist clear information linking the supplementary documentation to the sales or delivery documents; b. there is no risk that the customer will misinterpret which products are or are not FSC certified in the supplementary documentation; and c. where the sales documents contain multiple products with different FSC claims, each product shall be cross-referenced to the associated FSC claim provided in the supplementary documentation.	☐ C ☐ NC ☒ NA, all information included per 2.3 and/or 2.4/ toda la información está incluida según 2.3 y/o 2.4
Evidence 2.5: As described under the evidence for 2.3/2.4, between the permit and load tickets, all required information is provided. Load tickets correspond to permits, providing an auditable stump-to-gate paper trail.	
2.6 The FME may identify products exclusively made of input materials from small or community producers by adding the following claim to sales documents: “From small or community forest producers.” This claim can be passed on along the supply chain by certificate holders. *A forest management unit (FMU) or group of FMUs that meet(s) the small and low-intensity managed forest eligibility criteria (FSC-STD-1-003a) and addenda. A community FMU must comply with the tenure and management criteria defined in FSC-STD-40-004.*	☐ C ☐ NC ☒ NA, not a small or community producer; or does not wish to pass along this claim/ no es un productor pequeño o comunitario; o no desea transmitir esta declaración.
Evidence 2.6:	

3. Labeling and Promotion

☐ NA – FME does not use/ intend to use trademarks and no trademark uses were detected during the audit.	
☐ NA – **CW/FM certificates are not allowed to use FSC trademarks and no trademark uses were detected during the audit** (*Note: it is a Major nonconformity to 3.1 if CW/FM certificates are found to be using trademarks).*	
3.1 The FME shall adhere to relevant trademark use requirements of FSC-STD-50-001 described in the *SCS Trademark Annex for FMEs*.	☒ C ☐ NC
Evidence 3.1: Refer to evidence and findings cited in applicable trademark checklist(s) cited below. ☐ *FSC trademark use was detected for a CW/FM certificate as described in Major CAR for 3.1, FSC-STD-30-010, Annex 3, 1.2, and FSC-STD-50-001, 2.1e and 11.2*:	

4. Outsourcing

☐ NA – FME does not outsource any COC-related activities, as confirmed via interviews, sales documentation, and field observation.	
☒ NA – FME outsources low-risk activities such as transport and harvesting, as confirmed via interviews, sales documentation, and field observation.	
4.1 The FME shall provide the names and contact details of all outsourced service providers.	☐ C ☐ NC
4.2 The FME shall have a control system for the outsourced process and agreement which ensures that: a) The material used for the production of FSC-certified material is traceable and not mixed with any other material prior to the point of transfer of legal ownership; b) The outsourcer keeps records of FSC-certified material covered under the outsourcing agreement; c) The FME issues the final invoice for the processed or produced FSC-certified material following outsourcing; d) The outsourcer only uses FSC trademarks on products covered by the scope of the outsourcing agreement and not for promotional use; e) The outsourcer does not further outsource the material; and f) The outsourcer accepts the right of the certificate body to audit them.	☐ C ☐ NC
Evidence 4.1/4.2: Per above, this is NA. The MN DNR outsources low-risk activities such as transport and harvesting, as confirmed via interviews, sales documentation, and field observation.	

5. Training and/or Communication Strategies/

5.1 All relevant FME staff and outsourcers shall be trained in the FME's COC control system commensurate with the scale and intensity of operations and shall demonstrate competence in implementing the FME's COC control system.	☒ C ☐ NC

5.2 The FME shall maintain up-to-date records of its COC training and/or communications program, such as a list of trained employees, completed COC trainings or communications, the intended frequency of COC training (e.g., training plan), and related program materials (e.g., presentations, memos, contracts, employee handbooks, etc.).	☒ C ☐ NC
Evidence 5.1/5.2: Procedures for the COC system are described during the pre-sale meeting with permit holder, and ongoing administration of the permit through in-person visits helps to ensure conformance. In addition, the MN DNR has an appraiser training course ("scaling school") for new foresters. A review of a sample of training records verified that the MN DRN maintains up-to-date records of its COC training.	

Appendix 8 – Trademark Standard Conformance Table

1. General Requirements for Use of the FSC Trademarks

(FSC "checkmark-and-tree" logo, initials "FSC," and/or name "Forest Stewardship Council")

Trademark Application (on-product/promotional)	Case Approval #, or Email (include approver name & date), or other appropriate documentation	Are all elements correct? (e.g., trademark symbol, color scheme, size, etc.) If not, describe in Nonconformities below.
	Website review of trademarks conducted as part of this audit.	Y ☒ N ☐
	Timber permits	Y ☒ N ☐

☒ All known uses reviewed.

☐ Sample reviewed. Rationale that sample choice is sufficient to confirm requirements are met:

☐ Trademark uses detected include those grandfathered in under prior FSC trademark rules (e.g., FSC-TMK-50-201). Place the initials "GF" by the specific Trademark Applications above. *Note: This only applies to printed items or physical promotional materials (e.g., hats, load tickets) in stock. New printings, items, and websites must be updated per FSC-STD-50-001 requirements. If the organization only has GF uses and no new uses, the rest of this checklist is NA.*

1.2 Trademark License Agreement and valid certificate In order to use these FSC trademarks, the FME shall have a valid FSC trademark license agreement and hold a valid certificate. *Note: Consultations for certification Organizations applying for forest management certification or conducting activities related to the implementation of controlled wood requirements, may refer to FSC by name and initials for stakeholder consultation.*	Maintained on file by SCS Main Office
Evidence 1.2: Maintained on file by SCS Main Office.	

1.6 Product Group List The products intended to be labeled or promoted as FSC certified have been included in the organization's certified product group list.	☒ C ☐ NC ☐ C w/ OBS/ c/ OBS
Evidence 1.6: ☒ Refer to Product Groups List in Public Summary Report; ☐ The following nonconformance(s) were detected in Product Groups: ☐ Refer to OBS related to Product Groups:	
1.3 Trademark License Code The FSC trademark license code assigned by FSC to the organization accompanies any use of the FSC trademarks. It is sufficient to show the code once per product or promotional material.	☒ C ☐ NC ☐ C w/ OBS/ c/ OBS
1.4 Trademark Symbol The FSC logo and the 'Forests For All Forever' marks shall include the trademark symbol ® in the upper right corner when used on products or materials to be distributed in a country where the relevant trademark is registered. For use in a country where the trademark is not yet registered, use of the symbol ™ is recommended. The Trademark Registration List document is available in the FSC trade-mark portal and marketing toolkit. The symbol ® shall also be added to 'FSC' and 'Forest Steward-ship Council' at the first or most prominent use in any text; one use per material is sufficient (e.g. website or brochure). *NOTE: The use of the trademark symbol is not required for FSC claims in sales and delivery documents, or for the disclaimer statement specified in requirement 6.2.*	☒ C ☐ NC ☐ C w/ OBS/ c/ OBS ☐ NA, one or more of noted exceptions applies/
2.1 Restrictions on using FSC trademarks The organization **has not used** the FSC trademarks in the following ways: a) in a way that could cause confusion, misinterpretation, or loss of credibility to the FSC certification scheme; b) in a way that implies that FSC endorses, participates in, or is responsible for activities performed by the organization, outside the scope of certification; c) to promote product quality aspects not covered by FSC certification; d) in product brand or company names, such as 'FSC Golden Timber' or website domain names; e) in connection with FSC controlled wood or controlled material – they shall not be used for labelling products or in any promotion of sales or sourcing of controlled material or FSC controlled wood; the initials FSC shall only be used to pass on FSC controlled wood claims in sales and de-livery documentation, in conformity with FSC chain of custody requirements.	☒ C ☐ NC ☐ C w/ OBS/ c/ OBS
2.2 Translations The name 'Forest Stewardship Council' has not been replaced with a translation. A translation may be included in brackets after the name, for example: Forest Stewardship Council® (translation)	☐ C ☐ NC ☐ C w/ OBS/ c/ OBS ☒ NA, no translations
Evidence 1.3, 1.4, 2.1, and 2.2:	

☒ Refer to Trademark uses reviewed above; ☐ The following nonconformance(s) were detected; or ☐ Refer to OBS:	
Sections 8 and 9 Graphic Rules The organization has only used FSC logos that conform to the standard requirements governing: • color and font (8.1-8.3); • format and size (8.4-8.9); • label placement (8.10); and • 'Forests For All Forever' marks (9.1-9.7).	☒ C ☐ NC ☐ C w/ OBS/ c/ OBS
1.5 Trademark Use Approval The organization has submitted all intended uses of the FSC trademarks to SCS for approval. OR The organization has **an approved trademark use management system** in place. (If the organization has a trademark use management system, complete Annex A.)	☒ C ☐ NC ☐ C w/ OBS/ c/ OBS
4.6 FSC trademarks may be used to identify FSC-certified materials in the chain of custody before the products are finished. It is not necessary to submit such segregation marks for approval. All segregation marks shall be removed before the products go to the final point of sale or are delivered to uncertified organizations.	☐ C ☐ NC ☐ C w/ OBS/ c/ OBS ☒ NA, trademarks no used for segregation marks/
Evidence Graphic Rules, 1.5, and 4.6: ☒ Refer to Trademark uses reviewed above; ☐ The following nonconformance(s) were detected; or ☐ Refer to OBS:	

2. On-Product Use of FSC Trademarks

☒ NA, no use of on-product trademarks (*on-product checklist may be deleted*)

3. Promotional Use of FSC Trademarks

☐ NA, no use of promotional trademarks (*promotional checklist may be deleted*)

6.1 Catalogues, Brochures, and Websites When the FSC trademarks have been used in catalogues, brochures, or websites, the following requirements apply: • It is sufficient to present the promotional elements only once in catalogues, brochures, websites, etc. • If both FSC-certified and uncertified products are listed then a text such as "Look for our FSC®-certified products" shall be used next to the promotional elements and the FSC-certified products shall be clearly identified. • If some or all of the products are available as FSC certified on request only, this is be clearly stated.	☒ C ☐ NC ☐ C w/ OBS/ c/ OBS ☐ NA, not using trademarks in catalogues/ brochures/websites
6.2 Sales and Delivery Documents	☐ C

When the FSC trademarks are included on sales or delivery document templates that may be used for both FSC and non-FSC products, the following or a similar statement is included: "Only the products that are identified as such on this document are FSC certified". *NOTE: Use of the FSC claim and certificate code on the invoices does not qualify as FSC trademark use.*	☐ NC ☐ C w/ OBS/ c/ OBS ☒ NA, not using trademarks on templates for FSC & non-FSC products
6.3 Promotional Items All promotional items (e.g., mugs, pens, T-shirts, caps, banners, vehicles, etc.) have displayed, at minimum, the FSC logo and FSC trademark license code.	☐ C ☐ NC ☐ C w/ OBS/ c/ OBS ☒ NA, not labeling promotional items
6.5 Trade Fairs When the FSC trademarks are used for promotion at trade fairs, the organization has: a) clearly marked which products are FSC certified, or b) add a visible disclaimer stating "Ask for our FSC®-certified products" or similar if no FSC-certified products are displayed. *NOTE: Use of text to describe the FSC certification of the organization does not require a disclaimer.*	☐ C ☐ NC ☐ C w/ OBS/ c/ OBS ☒ NA, not using trademarks at trade fairs
Section 6.6 and 6.7 Investment/Financial Claims 6.6 When investment companies or others are making financial claims based on the organization's FSC certified operations, the organization has taken full responsibility for the use of the FSC trademarks. 6.7 Any such claims have been accompanied by the disclaimer, "FSC is not responsible for and does not endorse any financial claims on returns on investments."	☐ C ☐ NC ☐ C w/ OBS/ c/ OBS ☒ NA, not making financial claims about FSC status
7.1 and 7.2 Other Forestry Certification Scheme Logos The FSC trademarks have not been used together with the marks of other forest certification schemes in a way which implies equivalence, or in a way which is disadvantageous to the FSC trademarks in terms of size or placement.	☒ C ☐ NC ☐ C w/ OBS/ c/ OBS ☐ NA, not using other scheme logos
7.3 Business Cards The FSC trademarks have not used on business cards to promote the organization's certification. The FSC logo or 'Forests For All Forever' marks are not used on business cards for promotion. A text reference to the organization's FSC certification, with license code, is allowed, for example "We are FSC® certified (FSC® C######)" or "We sell FSC®-certified products (FSC® C######)".	☒ C ☐ NC ☐ C w/ OBS/ c/ OBS ☐ NA, approval granted prior to July 1, 2011
7.4 Promotion with CB Logo FSC certified products have not been promoted using only the SCS Kingfisher and/or SCS Global Services logo.	☒ C ☐ NC ☐ C w/ OBS/ c/ OBS
Evidence 6.1-6.3, 6.5-6.7, 7.1-7.4: ☒ Refer to Trademark uses reviewed above; ☐ The following nonconformance(s) were detected; or ☐ Refer to OBS:	

Annex A: Trademark use management system

☒ NA, not using a trademark management system (*Annex A checklist may be deleted*)

Annex B, Additional trademark rules for group FM certificate holders

☒ NA, not a group FM certificate or group does not use FSC trademarks (*Annex B checklist may be deleted*)

Appendix 9 – Peer Review and SCS Evaluation Team Response to Peer Review

☒ A peer review was not conducted as part of this evaluation.

Appendix 10 – SLIMF Eligibility Criteria

An FMU qualifies as a 'SLIMF' if it is either a 'small' FMU OR managed as a 'low intensity' FMU. Per INT-STD-01-003_01, the area of a small forest is defined in relation to productive forest area. Permanent protected areas and areas with other uses within the FMU that are clearly indicated in the FMP and on the ground are not considered when calculating the size of the FMU to be classified as a SLIMF. Any SLIMF FMU under the scope of the FME under evaluation must meet at least one of the following criteria:

<table>
<tr><td colspan="2">☒ N/A – none of the FMU(s) under evaluation qualify as a SLIMF according to the criteria below.</td></tr>
<tr><td>☐ ‘Small’ FMU(s)</td><td>According to the SLIMF Eligibility Criteria addendum of FSC-STD-01-004a, the country/countries in which this certificate holder is located has a small SLIMF threshold of (check only one box):
☐ 100 ha (247 acres) or less
☐ Between 100 ha (247 acres) and 1,000 ha (2,471 acres)
☐ 1,000 ha (2,471 acres) or less</td></tr>
<tr><td rowspan="2">☐ ‘Low intensity’ FMU(s) –The scope of the certificate includes FMU(s) in which the rate of harvest is less than 20% of the mean annual increment (MAI) AND these FMUs meet one of the following additional criteria:</td><td>☐ The annual harvest from the total production forest area for any one FMU is less than 5000 cubic meters (2.1 million board feet).</td></tr>
<tr><td>☐ The average annual harvest from the total production forest is less than 5000 m3 / year (2.1 million board feet / year) during the period of validity of the certificate as verified by harvest reports and surveillance audits.</td></tr>
</table>