Newberry Forest Management Unit
Compartment Review Presentation
Compartment 002 Entry Year: 2012
Compartment Acreage: 2110 County: Luce

Revision Date: 9/22/10

Stand Examiner: Jason A. Tokar

Legal Description: T49N R12W Sec. 5-9, 16-17

Identified Planning Goals ('Management Area' or 'RMU'): Compartment 002 is located within the Deer Park Management Area. For further description of this management area, go to the following web site: http://www.midnr.com/publications/pdfs/forestslandwater/Ecosystem/EUP/final-MAsummaries/09_Deer_Park_MA_summary.pdf

Management Goals: Maintain or enhance the forest health, productivity, and diversity of the area through proper management. Enhance age class diversity in the forest cover types through continued timber harvest treatments.

Soil and Topography: The compartment consists of a mixture of lowland and upland soil types. The mixture consists of Carbondale, Lupton and Tawas Mucks, Dawson, Greenwood& Loxley peats, Histosols & Aquents, Kinross-AuGres, Croswell-AuGres, Paquin-Finch, and Hiawatha sand. Cover types supported on the lowland soils include cedar, lowland hardwoods, and treed bog. Cover types associated with the upland soils are aspen, northern hardwoods, red pine, white pine, and jack pine. The topography is predominantly level ground throughout the compartment. There is a steep escarpment which runs the entire length of the southern boundary of the compartment which gives way to generally flat, low ground.

Ownership Patterns, Development, and Land Use in and Around the Compartment: This compartment is made up of solid state ownership with no private inholdings. However, private land does adjoin the compartment along its southern boundary with state land surrounding the compartment on the remaining three sides. The compartment includes the western reaches of the Blind Sucker Flooding which is designated as a State Wildlife Flooding. Land Use in and around the compartment is generally low with recreational activities being the main use of the area. These activities include fishing, waterfowl hunting, deer hunting, trapping, canoeing and kayaking, snowmobiling, ORV riding and berry picking.

Unique, Natural Features: MNFI lists numerous rare lakeshore associates to the north of the compartment. Within the compartment, MNFI lists the potential for sweet coltsfoot, Wiegand's sedge, northern prostrate clubmoss, fir clubmoss, English sundew, meadow beauty, round-leaved orchis, black crowberry, yellow pitcher-plant, and panicled screwstem in bogs and open wetlands. Potential for red-shouldered hawk, goshawk, merlin, great blue heron rookery, eagle, and osprey. Potential for moose and wolf. Potential for incurvate emerald, frigga fritillary, freija fritillary, and ebony boghaunter in boggy areas.

Archeological, Historical, and Cultural Features: None Known.

Special Management Designations or Considerations: The Blind Sucker Flooding is a designated Wildlife Flooding. Normal BMP guidelines will be followed as well as any special considerations that may be defined in the Master Plan for the Operation and Maintenance for the Blind Sucker Wildlife Flooding.

Watershed and Fisheries Considerations: Fisheries Values
Good-to-Excellent. The Sucker River flows just to the east of the main portion of this compartment. The Sucker River is a Type 4 trout stream, open all year, and supports a seasonal steelhead run in addition to the resident brook trout. Access to it is relatively easy in this area. In addition to the Sucker River, this compartment contains the Blind Sucker Flooding. This impoundment is not actively managed, but continues to produce lots of perch, bunches of small northern pike, and the occasional trophy pike as well. The Dead Sucker River is not a classified trout stream, being too warm to support trout.

Wildlife Habitat Considerations: Compartment 2 lies in far northern Luce county and is in the Grand Marais Sandy End Moraine and Outwash ecological sub-subsection. The western portion of the compartment is dominated by upland and lowland aspen and northern hardwoods while the eastern two thirds are comprised more of conifers and treed bogs north of the blind sucker flooding.

Wildlife objectives will be achieved by retaining hard mast producing species in harvested pine stands and by leaving a component of non-pine species to provide food sources, nest and den trees, and improve stand diversity. Conifer components of aspen stands are commonly retained during harvest to increase stand diversity, provide nesting, denning and forage sites and cover. Large diameter aspen will occasionally be retained to provide food sources and later snags and den trees for wildlife and large white pine will be left as future eagle nest trees. Wildlife species potentially using this compartment include white-tailed deer, black bear, fisher, marten, snowshoe hare, ruffed grouse, gray wolves, and coyote.

Mineral Resource and Development Concerns and/or Restrictions:
Sections 5 - 9, 16 & 17, T49N-R12W, Luce County
Surface sediments consist of lacustrine (lake) sand and gravel and peat and muck deposits. There is insufficient data to determine the glacial drift thickness. The Cambrian Munising Formation and Precambrian Jacobsville Sandstone subcrop below the glacial drift. The Jacobsville has been used as a building stone in the past. The nearest gravel pit is located four miles to the southwest and potential appears to be limited. There is no economic oil and gas production in the UP.

Vehicle Access: Access to the compartment is good. County Road 407/H37 runs along the northern border of the compartment while County Road 416 follows the southern boundary of the compartment. A network of non maintained state forest roads transects the compartment providing additional, ample access to most areas. The “main” forest road which provides access into the Blind Sucker “Hole”, as it is affectionately referred to by locals, runs down the steep escarpment and can be difficult to climb for logging equipment at times.

Survey Needs: No survey needs at this time.

Recreational Facilities and Opportunities: Recreational facilities within the compartment would include the Grand Marais Snowmobile Trail as well as the Blind Sucker Wildlife Flooding. The snowmobile trail follows County Road 416 and experiences heavy snowmobile traffic. The Blind Sucker Wildlife Flooding provides a multitude of recreational opportunities including fishing, waterfowl hunting, trapping, canoeing and kayaking, and general wildlife and bird watching. Other recreational opportunities within the area include deer, bear and grouse hunting, ORV riding and berry picking.

Fire Protection: Wildfire response for this compartment is covered by the Seney Field Office. It is adjacent to the Two Hearted Zone Dispatch area. The large fire potential is moderate in the upland Pine types because of fragmented Pine types, limited access by heavy equipment and long response time. The risk of damage to neighboring facilities and private land would be low because of the fragmented fuel types.

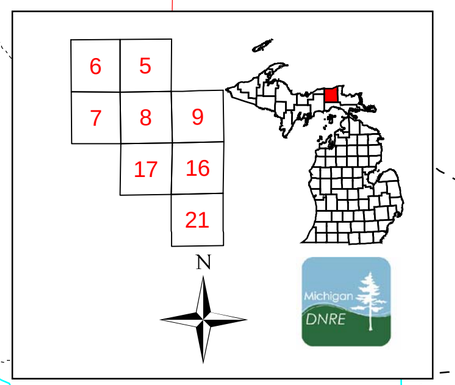
Additional Compartment Information:

- **The following reports from the Inventory are attached:**
  - **Total Acres by Cover Type and Age Class**
  - **Proposed Treatment Summary**
  - **Proposed Treatments – No Limiting Factors**
  - **Proposed Treatments – With Limiting Factors**
  - **Stand Details (Forested and Nonforested)**
  - **Dedicated and Proposed Special Conservation Areas**

- **The following information is displayed, where pertinent, on the attached compartment maps:**
  - **Base feature information, stand boundaries, cover types, and numbers**
  - **Proposed treatments**
  - **Details on the road access system**

Cover Type & Treatment Map

Compartment 002
T49N, R12W, Sec. 5-9, 16, 17, 21
County: Luce
Unit: Newberry
YOE: 2012
Acres: 2,110 GIS Calculated
Stand Examiner: Jason Tokar
Map Revised: 11/1/2010
Map Phase: Pre-Review



Legend

- Miris Corners
- Remonumented Section Corners
- RLS Corners
- Stump Berms
- Berms
- Gates
- Paved Roads
- Gravel Roads
- Poor Dirt Roads
- Closed Roads
- Non-recreational Trail
- Trails
- Snowmobile Trails
- Ski Trails
- Bike Trails
- Hiking Trails
- Water Features

- 100 - Final Harvest
- 346 - Shelterwood-seed, Natural Regeneration
- 347 - Shelterwood-seed, Natural Regeneration, Prescribed burning
- 400 - Thinning, No cultural need, No Cultural Method
- A - Aspen
- B - Paper Birch
- C - Northern White Cedar
- D - Treed Bog
- E - Swamp Hardwoods
- G - Grass
- H - Hemlock
- J - Jack Pine
- L - Lowland Brush
- M - Northern Hardwoods
- P - Balsam Poplar, Swamp Aspen, Swamp White Birch
- R - Red Pine
- S - Black Spruce Swamp
- V - Bog or Muskeg
- W - White Pine
- Z - Water

1 0.5 0 1 Miles

Stand Boundary Map

Compartment 002
T49N, R12W, Sec. 5-9, 16, 17, 21
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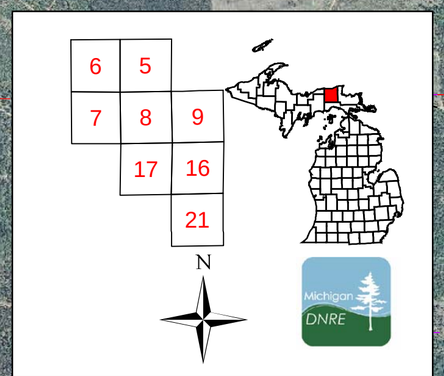

Legend
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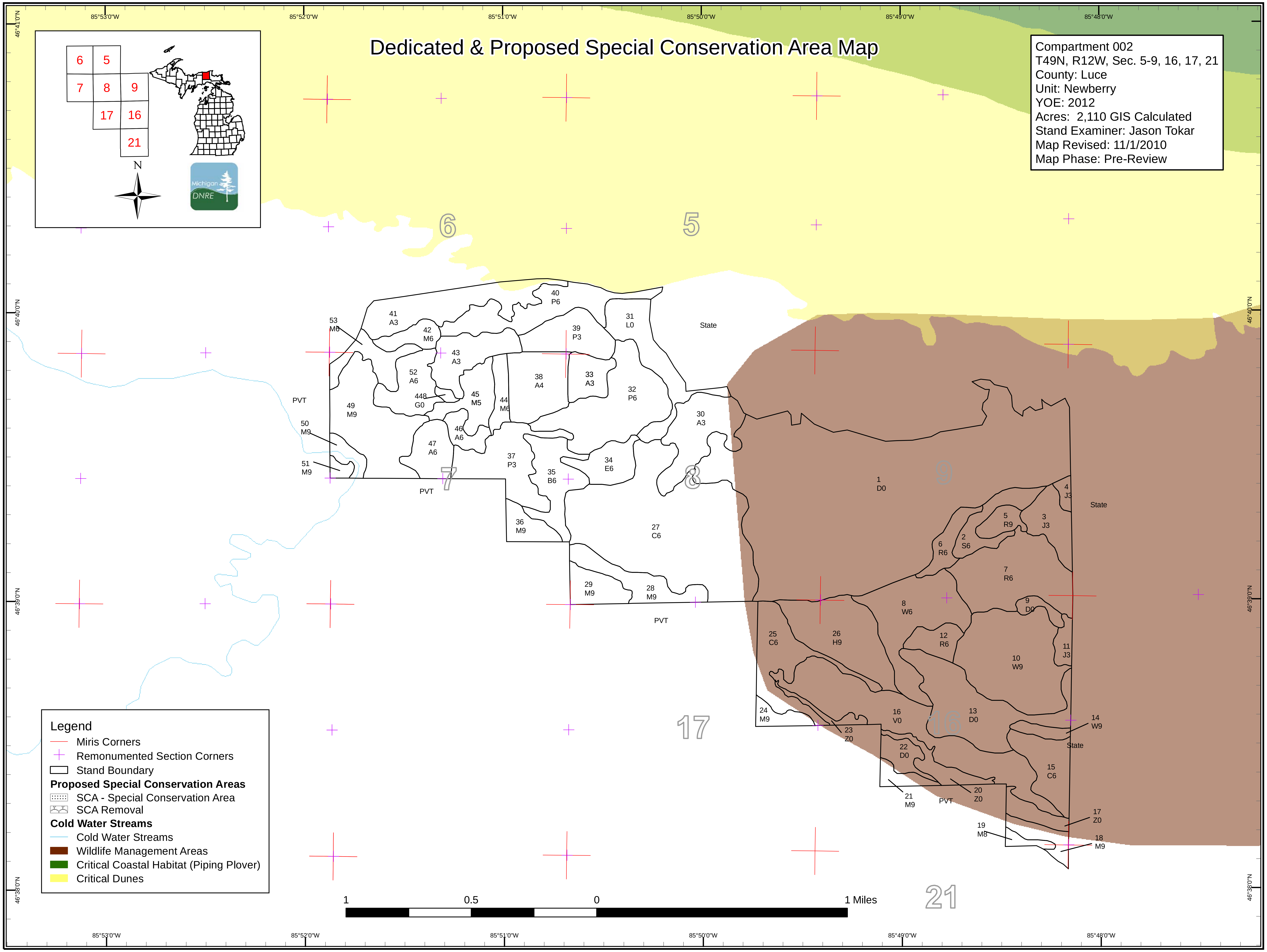
- Ski Trails
- Bike Trails
- Hiking Trails
- Water Features
- Stand Boundary

1 0.5 0 1 Miles


Dedicated & Proposed Special Conservation Area Map
Compartment 002
T49N, R12W, Sec. 5-9, 16, 17, 21
County: Luce
Unit: Newberry
YOE: 2012
Acres: 2,110 GIS Calculated
Stand Examiner: Jason Tokar
Map Revised: 11/1/2010
Map Phase: Pre-Review
6
5
7
8
9
17
16
21
N
Michigan
DNRE
Legend
Miris Corners
Remonumented Section Corners
Stand Boundary
Proposed Special Conservation Areas
SCA - Special Conservation Area
SCA Removal
Cold Water Streams
Cold Water Streams
Wildlife Management Areas
Critical Coastal Habitat (Piping Plover)
Critical Dunes
1
0.5
0
1 Miles
85°53'0"W
85°52'0"W
85°51'0"W
85°50'0"W
85°49'0"W
85°48'0"W
46°41'0"N
46°40'0"N
46°39'0"N
46°38'0"N
State
PVT

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Michigan Department of Natural Resources - Operations Inventory System
Individual Compartment Report

LAKE SUPERIOR STATE FOREST | NEWBERRY FOREST MGT UNIT | LUCE COUNTY | COMPARTMENT: **2**

Table 3

(acres shown in boxes)

STAND AGE CLASS

COVER TYPE	Not Coded	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150-159	All Aged	Total
Aspen		103	45	40	28	33													249
Black Spruce									21										21
Bog or Marsh	96																		96
Cedar											75		187						262
Grass	2																		2
Hemlock											61								61
Jack Pine			4	32															36
Lowlnd Brush	41																		41
Lowlnd Poplr		47	31					72		48									198
Paper Birch										35									35
Red Pine							86	14	11										111
Swamp Hrdwds																		21	21
Treed Bog	539																		539
Upland Hdwds						24	20											200	244
Water	31																		31
White Pine							65					91		7					163
Total	709	150	80	72	28	57	171	86	32	83	136	91	187	7				221	2110

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Michigan Department of Natural Resources - Operations Inventory System
Individual Compartment Report

LAKE SUPERIOR STATE FOREST | NEWBERRY FOREST MGT UNIT | LUCE COUNTY | COMPARTMENT: **2**

Table 3A

(acres shown in boxes)

MANAGEMENT OBJECTIVE TYPE

COVER TYPE	A	S	V	C	G	H	J	I	L	P	N	Q	X	O	B	R	K	Y	F	E	T	D	U	M	Z	W	Total
A Aspen	249																										249
S Black Spruce		21																									21
V Bog or Marsh			96																								96
C Cedar				262																							262
G Grass					2																						2
H Hemlock						61																					61
J Jack Pine							36																				36
L Lowlnd Brush									41																		41
P Lowlnd Poplr										198																	198
B Paper Birch															35												35
R Red Pine																111											111
E Swamp Hrdwds																				21							21
D Treed Bog																						539					539
M Upland Hdwds																								244			244
Z Water																									31		31
W White Pine																										163	163
Total	249	21	96	262	2	61	36		41	198					35	111				21		539		244	31	163	2110

LAKE SUPERIOR STATE FOREST | NEWBERRY FOREST MGT UNIT | LUCE COUNTY | COMPARTMENT: **2**

Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS

COMPARTMENT SUMMARY

TOTAL VOLUME		CUT VOLUME	
Hardwood	11329 Cds	Hardwood	4414 Cds
Hardwood	1117 Mbf	Softwood	2610 Cds
Softwood	9982 Cds	Softwood	483 Mbf
Softwood	2112 Mbf	Sum CutVol	7990 Cds
Sum TotVol	27769 Cds		

Total Cmpt Acres

2110

Acres Proposed For Cut.....	333
Acres Meeting Silv Criteria.....	293
Acres Not Meeting Silv Criteria.....	1817
Acres Unable to Determine Silv Criteria For.....	

NEWBERRY FOREST MGT UNIT | **Proposed Treatments With NO Limiting Factors** | **Compartment: 2** | **Entry Year: 2012**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
6	**R6**	14	62	59	RED PINE	IMMATURE	SHELTERWOOD-SEED	1	NATURAL REGENERATION	

comnts Fmd **:** Stand was recommended for treatment last entry year but was held for 10 years, until adjacent stands were harvested. Red pine "ridge" bordering the large treed bog. Thick BA in many areas. Weak tops to red pine in areas. Pockets of younger RP, 2-3 inches in diameter and 30 ft tall. Prescribe for a shelterwood harvest to promote red pine regeneration. Reduce stand BA to 60 sq ft average. Follow harvest with scarification. Remove jack pine (mature) and most of spruce, leave some along stand edges. Management objective of red pine. Alternate mangement objective (acceptable species mix) of red pine with white pine and spruce.

Wld **:** stay away from bog edge

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
7	**R6**	72	55	56	RED PINE	IMMATURE	THINNING	1		

comnts Fmd **:** Pole size red pine stand with good jack pine component, Wp component, some oak and aspen. Lots of BA and diameter diversity throughout stand. Overall, it's a younger red pine stand, ready to be thinned. 2 acres of 60-70 year old jack pine just north of bog. Pockets of thick W3/W4 understory - hard to thin these areas. Prescribe thinning treatment, remove JP and aspen. Thin red pine and white pine. Residual BA to average 110-120. Stay out of areas of advanced (3-4 inch diam) regeneration. Don't cut oak. Stand is 40 - 70 years old. MO of red pine and/or pine mix.

Wld **:** leave oak

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
10	**W9**	91	107	52	WHITE PINE	MATURE	SHELTERWOOD-SEED	1	NATURAL REGENERATION	

comnts Fmd **:** Sale #38-92. Large diameter white pine with a good red pine component. Occasional spruce and small diameter maple. Lots of balsam and maple in the understory. Pockets of good white pine regeneration where canopy is open. Balsam is taking over the understory. Some white pine with dead tops/mortality. Dan Farnsworth comments from 2001 - "Manage on extended rotation for big tree management. A COOL prescribe burn needed. Some scattered white pine regen present but regen mostly made up of balsam fir. Use fire to reduce fir repro and prepare seed bed. Could also be scarified. Need some area of bare soil to reproduced red pine and keep red pine as part of stand." Prescribe stand for shelterwood treatment. Reduce basal area to 50-60 sq ft. With harvest, cut all balsam 2 inches in diameter. Follow harvest with RX burn to reduce competition and prepare seedbed. If possible follow RX burn with scarification to further promote white pine and red pine regeneration. IF RX burn is not conducted within 6-12 months of harvest, scarify the site.

Per pre-review - leave some red maple and paper birch in the portions of the stand to be scarified. Leave all oak and hemlock.

Management objective of white pine with a component of red pine. Alternate management objective (acceptable species mix) of red pine, white pine, maple, hemlock, birch.

Wld **:** leave any hemlock nad oak if present. Leave some maple and spruce for species diversity in the stand

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
12	**R6**	14	49	65	RED PINE	IMMATURE	THINNING	1		

comnts Fmd **:** Nice young red pine with good jack pine and white pine component. Prescribe stand for thinning. Remove jack pine and thin red pine and white pine. Residual BA of 100-110. Summer harvest. Management objective of red pine.

Wld **:** leave some large white pine for nest trees and leave some non-pine in the stand

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
32	**P6**	72	66	61	BALSAM POPLAR & SWAMP ASPEN and SWAMP WHITE BIRCH	MATURE	FINAL HARVEST	1		

comnts Fmd **:** Stand ranges from a P6 to a wet A6. Pockets of low quality M5. "hummocky ground". Component of spruce, white birch and balsam. Aspen is mature. Mortality in some white birch. Fair number of aspen seedlings growing in areas with openings in the canopy. Prescribe stand for treatment, clearcut with reserves. Retention to be in a few retention pockets and not individual trees, soil conditions would likely result in blowdown.

Per pre-review - Retention pockets to include mature aspen and conifers. Can leave 10 BA of residual single tree hemlock. If a pocket of hemlock is found within sale area in southern protion of the stand, use this as a retention pocket.

Management objective of lowland aspen/birch. Alternate management objective (acceptable species mix) of lowland aspen/birch, spruce, balsam, and maple.

Wld **:** leave scattered hemlock in the stand and hemlock pockets on the south end of the stand. Leave some matre aspen for grouse and some mature maple and fir

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
40	**P6**	48	78	65	BALSAM POPLAR & SWAMP ASPEN and SWAMP WHITE BIRCH	MATURE	FINAL HARVEST	2		

comnts Fmd **:** Stand varies from a P6 to an E6. Majority of the stand is a mature P6. Eastern end bordering the county road is an E5/E6 with high component of elm. Lowland aspen stand with pockets of lowland hardwoods. Mature aspen is dying out and blowing down. Some mortality in the balsam and spruce, overmature. Prescribe stand for treatment. Clearcut with reserves. Retain all elm. Sale boundary will likely vary considerably from stand boundary due to variability in the stand. Specific retention pockets will not be needed. Management objective of lowland aspen/birch. Alternate management objective (acceptable species mix) of lowland aspen/birch, spruce, balsam, maple and elm.

Per pre-review - Incorporate some mature aspen into sale red line. Retention pockets to include some mature aspen., conifer, and cherry.

Wld **:** leasve mature aspen and mixed conifer in retention pockets and red line trees. Make sure retention pockets include large conifer including spruce, aspen, and cherry if present.

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
47	**A6**	22	43	70	ASPEN (UPLAND)	MATURE	FINAL HARVEST	1		

comnts Fmd **:** Healthy aspen, approximately 50 years old. Tall, straight boles. Good hardwood component. M3 understory is advanced 2-4 inches in diameter and 35 ft tall. Scattered spruce and balsam. Stand was cut previously as sale #12-1967 Prescribe stand for treatment, clearcut with reserves. Leave a couple retention pockets, not individual trees for retention. Stand will have a fair amount of hardwood saplings retained after harvest, advanced understory, even with a 2 inch spec on hardwoods. Management objective of aspen. Alternate management objective (acceptable species mix) of aspen, maple, with a component of spruce and balsam.

Wld **:** leave mature aspena dn mixed conifer in retention pockets and red line trees. Make sure retention pockets include some cherry, spruce and large aspen

Total Acres..... **333**

Proposed Treatments With Limiting Factors

Compartment: **Entry Year:**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status

TREATMENT LIMITING FACTORS:

Total Acres..... **#Error**

* See "Compartment Packets Glossary of Terms" document link on web site for further descriptions and code definitions.

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
1	D 0	D 0	451		0	0		treed bog	nonstocked	N		not scheduled	0	
comnts	Fmd : southeastern portion of the stand has young jack pine on bog type ground. Possible future stand of merchantable jack pine.													
2	S 6	S 3	21	74	7	120	35	black spruce-swamp	immature	N		10-19 years	0	
comnts	Fmd : Black spruce with component of red pine and jack pine. Spruce is healthy and small diameter. Hold for 10 years for diversity.													
3	J 3	J 3	24	22	3	10	50	jack pine	immature	N		30-39 years	0	
comnts	Fmd : Good jack pine reproduction, 15-25 ft tall. Thick. Some red pine residual left from harvest. Part of the Vicious Dog Sale #36-84-01.													
4	J 3	J 3	4	17	0	0	50	jack pine	immature	N		40-49 years	0	
comnts	Fmd : Stand was harvested in 1993 as sale #26-93-1. FTP C-42-402. Good J3 regeneration, 8-10 ft tall avg.													
5	R 9	F 2	11	74	12	130	61	red pine	immature	N		10-19 years	0	
comnts	Fmd : Stand thinnned as Dead Sucker Red Pine (029-02-01). Completed 08/26/04. FTP42-579: small east tip of stand, which was JP, was never scarified, but regen check in May, 2008 shows good mix of JP (6" ht), S, R and W filling in. No further cultural work needed. As of June 2010, no red pine regeneration. Possibly harvest again, this time via shelterwood harvest to promote red pine regeneration. Thin to 110-120 square feet of basal area. May have wind throw problems so thin easy. Include mercantable areas of spruce to north and west. Cut all species except red and white pine. Mark red and white pine to 110-120 square feet. ***Stand thinnned as Dead Sucker Red Pine (029-02-01). Completed 08/26/04. FTP42-579: small east tip of stand, which was JP, was never scarified, but regen check in May, 2008 shows good mix of JP (6" ht), S, R and W filling in. No further cultural work needed.													
6	R 6	F 2	14	62	11	140	59	red pine	immature	N	shelterwood-seed	within 0-9 years	1	natural regeneration
comnts	Fmd : Stand was recommended for treatment last entry year but was held for 10 years, until adjacent stands were harvested. Red pine "ridge" bordering the large treed bog. Thick BA in many areas. Weak tops to red pine in areas. Pockets of younger RP, 2-3 inches in diameter and 30 ft tall. Prescribe for a shelterwood harvest to promote red pine regeneration. Reduce stand BA to 60 sq ft average. Follow harvest with scarification. Remove jack pine (mature) and most of spruce, leave some along stand edges. Management objective of red pine. Alternate mangement objective (acceptable species mix) of red pine with white pine and spruce.													
	Wld : stay away from bog edge													
7	R 6	F 2	72	55	10	150	56	red pine	immature	N	thinning	within 0-9 years	1	
comnts	Fmd : Pole size red pine stand with good jack pine component, Wp component, some oak and aspen. Lots of BA and diameter diversity throughout stand. Overall, it's a younger red pine stand, ready to be thinned. 2 acres of 60-70 year old jack pine just north of bog. Pockets of thick W3/W4 understory - hard to thin these areas. Prescribe thinning treatment, remove JP and aspen. Thin red pine and white pine. Residual BA to average 110-120. Stay out of areas of advanced (3-4 inch diam) regeneration. Don't cut oak. Stand is 40 - 70 years old. MO of red pine and/or pine mix.													
	Wld : leave oak													
8	W 6	W 2	65	50	8	80	60	white pine	immature	N		20-29 years	0	
comnts	Fmd : Stand is regenerating. Young white pine stand. 40-50 years old. 9-10 inch diameter. Open grown around openings. Low quality red maple and aspen mixed in.													
9	D 0	D 0	6		0	0	20	treed bog	nonstocked	N		not scheduled	0	

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Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
10	W 9	F 2	91	107	14	130	52	white pine	mature	Y	shelterwood-seed	within 0-9 years	1	natural regeneration

comnts Fmd **:** Sale #38-92. Large diameter white pine with a good red pine component. Occasional spruce and small diameter maple. Lots of balsam and maple in the understory. Pockets of good white pine regeneration where canopy is open. Balsam is taking over the understory. Some white pine with dead tops/mortality. Dan Farnsworth comments from 2001 - "Manage on extended rotation for big tree management. A COOL prescribe burn needed. Some scattered white pine regen present but regen mostly made up of balsam fir. Use fire to reduce fir repro and prepare seed bed. Could also be scarified. Need some area of bare soil to reproduced red pine and keep red pine as part of stand." Prescribe stand for shelterwood treatment. Reduce basal area to 50-60 sq ft. With harvest, cut all balsam 2 inches in diameter. Follow harvest with RX burn to reduce competition and prepare seedbed. If possible follow RX burn with scarification to further promote white pine and red pine regeneration. IF RX burn is not conducted within 6-12 months of harvest, scarify the site.

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11	J 3	J 3	8	22	3	10	50	jack pine	immature	N		30-39 years	0	

comnts Fmd **:** Good jack pine reproduction, 15-25 ft tall. Thick. Some red pine residual left from harvest. Part of the Vicious Dog Sale #36-84-01.

12	R 6	W 1	14	49	11	180	65	red pine	immature	Y	thinning	within 0-9 years	1	

comnts Fmd **:** Nice young red pine with good jack pine and white pine component. Prescribe stand for thinning. Remove jack pine and thin red pine and white pine. Residual BA of 100-110. Summer harvest. Management objective of red pine.

Wld **:** leave some large white pine for nest trees and leave some non-pine in the stand

13	D 0	D 0	70		0	0	20	treed bog	nonstocked	N		not scheduled	0	

14	W 9	W 3	7	125	18	90	52	white pine	mature	Y		10-19 years	0	

Treatment Limiting Factors:

Road needed (resources not presently available)
Potential or designated old growth

comnts Fmd **:** across a wet swamp. Cutting probably impossible. Trees are healthy.

15	C 6	C 3	30	92	6	80	22	cedar	low quality	N		not scheduled	0	

comnts Fmd **:** Low quality cedar. Flooding water table is controlling factor resulting in slow growth. Older trees predating flooding have died or are dying. Trees seem to be recovering south of road as they establish a higher layer of organic soil. North of road has poor drainage and has stunted growth of stand.

16	V 0	V 0	96			0		bog or muskeg	nonstocked	N		not scheduled	0	

17	Z 0	Z 0	11		0	0		water	nonstocked	N		not scheduled	0	

comnts Fmd **:** Blind Sucker Flooding.

18	M 9	M 3	13		18	130	62	northern hardwood	unevenaged	Y		not scheduled	0	

Treatment Limiting Factors:

Too steep

comnts Fmd **:** Beech Bark Disease. Beech is the predominant species in the stand. Thei stand is on the steep escarpment that leads down to the Blind Sucker Flooding. Too steep to log.

* See "Compartment Packets Glossary of Terms" document link on web site for further descriptions and code definitions.

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
19	M 8	M 3	5		18	60	62	northern hardwood	unevenaged	N		20-29 years	0	
comnts Fmd :	Residual stand following harvest is in bad shape. Heavy Beech Bark Disease. Low quality residual appears to have been left. Beech Bark Disease present. Beech is the predominant species in stand. Stand harvested (selection) as "Sucker River Hardwoods" (002-02-01). Completed 11-01-04. Residual BA of 80.													
20	Z 0	Z 0	14		0	0		water	nonstocked	N		not scheduled	0	
comnts Fmd :	Blind Sucker Flooding.													
21	M 9	M 3	8		12	80	58	northern hardwood	unevenaged	N		not scheduled	0	
comnts Fmd :	Yellow birch is dying. North part of stand butts up against the flooding and the south part of stand is on the steep escarpment leaving a very narrow strip of loggable land. Erosion hazard if logged. Beech Bark Disease is present.													
22	D 0	D 0	12		0	0		treed bog	nonstocked	N		not scheduled	0	
23	Z 0	Z 0	6		0	0		water	nonstocked	N		not scheduled	0	
comnts Fmd :	Blind Sucker Flooding.													
24	M 9	M 3	10		16	70	62	northern hardwood	unevenaged	N		10-19 years	0	
comnts Fmd :	excellent site. Small stand surrounded by shelter bay. Good site and good road access. Beech Bark Disease. Good hard maple regeneration. Stand harvested (Selection) as "Sucker River Hardwoods" (002-02-01). Completed 11-01-04. Residual BA of 70.													
25	C 6	C 3	45	92	6	80	28	cedar	low quality	N		not scheduled	0	
comnts Fmd :	Low quality cedar. Flooding water table is controlling factor resulting in slow growth. Older trees predating flooding have died or are dying. Trees seem to be recovering south of road as they establish a higher layer of organic soil. North of road has poor drainage and has stunted growth of stand.													
26	H 9	M 3	61	96	17	170	55	hemlock	mature	N		not scheduled	0	
comnts Fmd :	Stand could be managed (access, silvi ready). However, stand is very scenic, large diameter hemlock stand. Pockets of youngerl There was a recommedation for a timber sale within this sale lst year of entry.													
27	C 6	E 3	187	108	10	160	42	cedar	mature	N		not scheduled	0	
comnts Fmd :	A large cedar stand. Somewhat short and stubby but 16 foot of good log. Mixed quality, very good patches to scattered trees with blowdown. No thermal cover. Clumpy appearance. Understory is a mix of balsam, red maple, spruce, tag alder and some cedar. No deer problems. If you are looking to cut some good cedar this stand would be the one to look at due to low deer numbers and the local area's capability of reproducing cedar.													
28	M 9	M 3	28		18	110	60	northern hardwood	unevenaged	N		not scheduled	0	
comnts Fmd :	Steep escarpment, too steep to operate on. Large diameter hardwoods, hard maple, red maple, yellow birch and beech.													
29	M 9	M 3	18		18	80	60	northern hardwood	unevenaged	N		10-19 years	0	
comnts Fmd :	***Stand harvested (thinning) as "Sucker River Hardwoods" (002-02-01). Completed 11-01-04. Residual BA of 80. The level ground above escarpment, was cut in the 70s, needed to release the regeneration created by that cut. Good hard maple regeneration. Residual BA ranges from 70-90 sq ft. Check in 10 years.													
30	A 3	P 3	45	15	0	0	50	aspen (upland)	immature	N		30-39 years	0	
comnts Fmd :	TIMBER SALE #32-92-1. Northern 3/4 of stand is A3/F2, 15 ft tall and thick. The southern 1/4 of the stand bordering the adjacent cedar stand is more of P2/S2, averaging 6-10 ft tall, spruce, white birch and some aspen.													

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Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
31	L 0	L 0	41		0	0		lowland brush	nonstocked	N		not scheduled	0	

comnts Fmd :

32	P 6	M 2	72	66	10	150	61	balsam poplar & swamp aspen and swamp white birch	mature	Y	final harvest	within 0-9 years	1	

comnts Fmd : Stand ranges from a P6 to a wet A6. Pockets of low quality M5. "hummocky ground". Component of spruce, white birch and balsam. Aspen is mature. Mortality in some white birch. Fair number of aspen seedlings growing in areas with openings in the canopy. Prescribe stand for treatment, clearcut with reserves. Retention to be in a few retention pockets and not individual trees, soil conditions would likely result in blowdown.

Per pre-review - Retention pockets to include mature aspen and conifers. Can leave 10 BA of residual single tree hemlock. If a pocket of hemlock is found within sale area in southern protion of the stand, use this as a retention pocket.

Management objective of lowland aspen/birch. Alternate management objective (acceptable species mix) of lowland aspen/birch, spruce, balsam, and maple.

Wld : leave scattered hemlock in the stand and hemlock pockets on the south end of the stand. Leave some matre aspen for grouse and some mature maple and fir

33	A 3	M 2	18	5	0	0	65	aspen (upland)	immature	N		50-59 years	0	

comnts Fmd : ***Stand harvested as "Sucker River Mix" (032-02-01). Completed 11/15/05. Stand is regenerating well to aspen. Spots where regen is not as thick, mixed with maple saplings. Regeneration is a mix of aspen, red maple, and cherry. Raspberry brush present. Old Notes prior to harvest *******A large # of 2 to 4 inch maple saplings that need to be cut along with the marked trees. Give timber sale credit for cutting these whips. Look to plant some white pine in understory after harvest. Most of stand area is and will be red maple if it doesn't convert to aspen. 10% of trees are grade #1, 30% are grade #2, and the 60% are grade #3.

34	E 6	E 3	21		10	80	55	swamp hardwoods	unevenaged	N		50-59 years	0	

comnts Fmd : Wet, lowland hardwoods stand with pockets of large diameter hemlock and red maple. Some large cedar throughout also. Old notes...******clearcutting this stand leaving a yellow birch seed source would regenerate a lot of yellow birch. A lot of blowdowns. Stand looks wet even on top of 4 feet of snow.

35	B 6	E 3	35	79	9	100	55	paper birch	low quality	Y		20-29 years	0	

Treatment Limiting Factors:

Delayed treatment for age/size class diversity

comnts Fmd : Lowland white birch stand. Mainly white birch and red maple. Component of black ash, balsam, and black spruce. Dieback and mortality in white birch. Higher areas with mature aspen and birch. Left over from sale #15-84-1.

36	M 9	M 3	14		14	110	60	northern hardwood	unevenaged	N		20-29 years	0	

Treatment Limiting Factors:

Too steep

comnts Fmd : Stand lies mainly on escarpment. Majority of the stand is on the slope, may be too steep to harvest. Access is questionable through private land as well. Many yellow birch dying. Adjacent private land has been harvested.

37	P 3	P 2	47	5	0	0	60	balsam poplar & swamp aspen and swamp white birch	in process of regeneration	N		50-59 years	0	

comnts Fmd : Stand harvested as "Sucker River Mix" (032-02-01). Completed 11/15/05. This was originally 3 stands (58, 59, 60 in 2002yoe). Combined as one stand after timber harvest. Regenerating to a P3/E3. Lots of aspen and maple regeneration. Areas with white birch and black ash regen. Very wet, access road into old sale is under water. Regeneration averages 10 ft tall. Clumps of red maple.

38	A 4	A 3	40	26	4	30	67	aspen (upland)	immature	N		30-39 years	0	

comnts Fmd : Stand is transitioning from an A3 to an A6. Lots of 2-4 inch aspen, some merchantable (5-7 inch dbh) aspen and maple. Thick stand. Cut as sale #15-84-1. TSI in late 1980's.

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Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
39	P 3	P 3	31	16	0	0	75	balsam poplar & swamp aspen and swamp white birch	immature	N		30-39 years	0	

comnts Fmd : Stand cut as sale #17-92-1. Completed in 1994. Very good site! Young stand, yet starting to transition to merchantable size classes. Wetter ground, heavy soils. Some elm left as residual from previous harvest.

40	P 6	E 3	48	78	11	80	65	balsam poplar & swamp aspen and swamp white birch	mature	Y	final harvest	within 0-9 years	2	

comnts Fmd : Stand varies from a P6 to an E6. Majority of the stand is a mature P6. Eastern end bordering the county road is an E5/E6 with high component of elm. Lowland aspen stand with pockets of lowland hardwoods. Mature aspen is dying out and blowing down. Some mortality in the balsam and spruce, overmature. Prescribe stand for treatment. Clearcut with reserves. Retain all elm. Sale boundary will likely vary considerably from stand boundary due to variability in the stand. Specific retention pockets will not be needed. Management objective of lowland aspen/birch. Alternate management objective (acceptable species mix) of lowland aspen/birch, spruce, balsam, maple and elm.

Per pre-review - Incorporate some mature aspen into sale red line. Retention pockets to include some mature aspen., conifer, and cherry.

Wld : leasve mature aspen and mixed conifer in retention pockets and red line trees. Make sure retention pockets include large conifer including spruce, aspen, and cherry if present.

41	A 3	A 3	53	5	0	40	77	aspen (upland)	immature	N		40-49 years	0	

comnts Fmd : Stand harvested as "Grand Marais Road Aspen" (030-02-01). Completed 10/18/05. Scheduled for selection harvest due to the red pine, white pine, and oak residuals. Leave red and white pine, oak and white spruce 10 inch or greater dbh. Stand is regenerating nicely to aspen, 10-15 ft tall. Mainly aspen with some red maple, oak, and occasional balsam and spruce regen. Most of red and white pine residual is in western portion of the stand.

42	M 6	M 3	13		11	70	65	northern hardwood	unevenaged	N		10-19 years	0	

comnts Fmd : Stand harvested as "Grand Marais Road Aspen" (030-02-01). Completed 10/18/05. Selection cut.

43	A 3	M 2	32	5	0	0	75	aspen (upland)	immature	N		40-49 years	0	

comnts Fmd : Stand harvested as "Grand Marais Road Aspen" (030-02-01). Completed 10/18/05. Final harvested. Any oak, red pine, white pine were left as residual. Good aspen regeneration 15 ft tall. Maple understory. Thick stand of regeneration.

44	M 6	M 3	12		10	80	62	northern hardwood	unevenaged	N		10-19 years	0	

comnts Fmd : Stand harvested by selection cut as "Sucker River Mix" (032-02-01). Completed 11/15/05. Stand is mainly hard maple with white birch and red maple. Lots of maple regen coming in 2-6 ft tall. South part of stand has higher component of white birch. Fair amount is dead. Aspen regen is thick in areas where aspen was removed with harvest. Occasional yellow birch.

45	M 5	M 3	24	41	9	60	65	northern hardwood	immature	N		30-39 years	0	

comnts Fmd : Stand acreage has decreased since last entry year. Separated out aspen areas for future aspen management. Young maple stand with components of aspen, balsam, white birch, etc. Possible management (thinning) in 20-30 years. A lot of white birch repro. This was not a clearcut. Many maple stems. Aspen is 25-31 years old for younger trees, it is in clones. Much of this stand will convert to quality hard maple when stand is cut again. Let grow another 2 decades.

46	A 6	M 3	11	41	8	80	65	aspen (upland)	immature	N		20-29 years	0	

comnts Fmd : Stand was separated out from original stand (adjacent stand 45). Separated out aspen areas for future aspen management. Young aspen stand with a maple component along with balsam, white birch, etc. Possible management in 10 years. Aspen is 35-41 years old.

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Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
47	A 6	M 3	22	43	10	120	70	aspen (upland)	mature	N	final harvest	within 0-9 years	1	

comnts Fmd **:** Healthy aspen, approximately 50 years old. Tall, straight boles. Good hardwood component. M3 understory is advanced 2-4 inches in diameter and 35 ft tall. Scattered spruce and balsam. Stand was cut previously as sale #12-1967 Prescribe stand for treatment, clearcut with reserves. Leave a couple retention pockets, not individual trees for retention. Stand will have a fair amount of hardwood saplings retained after harvest, advanced understory, even with a 2 inch spec on hardwoods. Management objective of aspen. Alternate management objective (acceptable species mix) of aspen, maple, with a component of spruce and balsam.

Wld **:** leave mature aspena dn mixed conifer in retention pockets and red line trees. Make sure retention pockets include some cherry, spruce and large aspen

49	M 9	M 3	66		14	90	70	northern hardwood	unevenaged	N		10-19 years	0	

comnts Fmd **:** Stand harvested (selection) as "Sucker River Hardwoods" (002-02-01). Completed 11-01-04. Residual BA of 70. Very high quality site. Excellent quality stand. Very tall heights. Regeneration from the harvest is starting to take hold, 6-15 ft tall.

50	M 9	M 3	9		16	130	70	northern hardwood	unevenaged	Y		10-19 years	0	

Treatment Limiting Factors:
Water quality/bmps

comnts Fmd **:** Water influence zone Sucker River, 150 feet west side, between road and river east side.

51	M 9	M 3	4		14	120	70	northern hardwood	unevenaged	Y		10-19 years	0	

Treatment Limiting Factors:
Water quality/bmps
Blocked by other physical obstacle

comnts Fmd **:** Very high quality site. Harvest some big trees to create regen gaps. Excellent quality stand. However you have to cross the sucker river to get to it.

Wld **:**

52	A 6	M 3	28	28	8	80	75	aspen (upland)	immature	N		20-29 years	0	

comnts Fmd **:** Quality stand of young, immature aspen. TSI done middle to late 80s. Pockets of slightly older aspen. Good quality maple mixed in. Pockets of A4/A5.

53	M 6	M 3	20	49	9	80	65	northern hardwood	immature	N		20-29 years	0	

comnts Fmd **:** A regenerating stand. A combination of aspen clones and small maple poles and saplings. This is a quality hard maple site. It will take 20 years to develop. The maple saps and small poles are quality trees.

448	G 0	G 0	2			0		grass	nonstocked	N		10-19 years	0	

comnts Fmd **:** old grass opening, seems stable

Total Acres..... 2110