Sault Forest Management Unit
Compartment Review Presentation
Compartment #106 Entry Year: 2013
Compartment Acreage: 1,900 County: Mackinac

Revision Date: August 12, 2011

Stand Examiner: **Karen Rodock**

Legal Description: T43N R6W, SECTIONS: 13, 14, 15 Moran Township

RMU: Carp River Pine

Management Goals: The compartment is located south of Trout Lake approximately four and one half miles. This compartment is composed of a variety of lowland and upland types and species. The eastern half of the compartment is mostly upland types of red pine, aspen, upland brush and grassy openings. The western half of the compartment is mostly lowland types of black spruce, cedar, tamarack, balsam fir, lowland brush and bogs with a few ridges of aspen and birch. Most of the red pine stands were treated within the last 10 years. Several red pine stands were treated on the Red Pine Project phase I. The stands have been harvested and site preparation is being done this fall and next spring to complete the regeneration of the stands to red pine. Proposed management within the compartment for this treatment period will be limited. The Carp River and Ozark Creek flow through Section 13. The Carp River is designated as a wild and scenic in the stretch downstream on the Hiawatha National Forest. Stands along the river are to be managed to promote a larger component of conifer species to discourage beaver activities. Buffer management zones will be maintained along both the Carp River and Ozark Creek following the Best Management Practices guidelines and Fisheries recommendations. The upland brush stands in Section 14 will be managed with the adjacent aspen stand to create openings with less woody vegetation. The compartment area is heavily used by recreationists.

Soil and Topography: The terrain is level to rolling with steep banks to the river and creek drainages. The compartment is higher ground on the east side and grades to lower ground on the west side. The higher ground soils are mostly Wallace Sand with Paquin Sand, and Paquin-Finch complex on the ridges in the lowland areas. The transition areas have Spot-Finch Complex. The lowland areas mostly have the Markey-Spot-Finch Complex with some higher transition areas to the Paquin Sand and Wallace Sand. The other lowland soil types are Markey and Carbondale Muck, Finch-Dawson-Pullup Complex and the Dinkey Muck in the Carp River and Ozark Creek drainages.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The north, west and south sections surrounding the compartment are in state ownership. The sections to the east and southeast are in federal ownership on the Hiawatha National Forest. A private 40 abuts the northeast side of Section 13 with the rest of Section 7 being in federal ownership.

Unique, Natural Features: Potential for raptors and Great Blue Herons to nest in the compartment exists and care will be taken to check stands for nests. Stands to the north in compartment 107 were identified as Hardwood Conifer Swamp community. The Hardwood Conifer Swamp community type continues into stands 2 and 3. There is a potential for some rare plant and animal species to inhabit the compartment.

Archeological, Historical, and Cultural Features: No obvious features were found when doing inventory.

Special Management Designations or Considerations: The Carp River has undergone stream bank erosion projects to reduce the amount of siltation into the river from the sandbanks. Potential for raptors to nest in the compartment exists and care will be taken to check stands for nests with buffers placed when necessary.

Watershed and Fisheries Considerations: This compartment contains Carp River and Ozark Creek, which are both cold transitional streams. A 300-foot no-clearcut buffer should be maintained adjacent to Ozark Creek and Carp River. A 50-foot no-cut buffer should be maintained adjacent to the Carp River (okay to selection cut to within 50' of river).

Wildlife Habitat Considerations: This compartment is located within the St. Ignace subsection of the Niagaran Escarpment and Lake Plain about 4 ½ miles south of Trout Lake. It contains a number of cover types ranging from lowland hardwood and conifers to red pine, aspen, and a larger forest opening containing some cherry, red maple and other species. Red pine plantations cover much of the eastern half on sandy soils. The Carp River is also located on the east side. The central part contains aspen of varying age classes mixed with white birch, spruce, white pine, and other species. Further west, lowland conifer stands are dominated by black spruce, tamarack, and cedar. Wildlife use of the compartment includes species such as white-tailed deer, wolf, ruffed grouse, bobcat, fisher, marten, black bear, snowshoe hare, and a variety of birds.

Wildlife objectives in the compartment include maintaining a diversity of age classes in early successional deciduous forest as well as conifer-dominated stands, maintaining the riverine and riparian habitats, and protecting the integrity of other wetland habitats. Aspen and mixed aspen stands will be managed to provide multiple age classes in close proximity that will benefit deer and grouse. Varying age classes in lowland conifer stands will enhance habitat for snowshoe hare, bobcat, fisher, and marten.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of lacustrine (lake) sand and gravel and peat and muck. There is insufficient data to determine the glacial drift thickness. The Silurian Engadine Group subcrops below the glacial drift. The Engadine is quarried for stone/limestone elsewhere in the UP. A quarry is located two miles to the northeast. Gravel pits are not located in this area and potential appears to be limited. There is no economic oil and gas production in the UP.

Vehicle Access: The compartment has good vehicle access with the JT Camp Road deteriorating to undriveable most of the year in the west portion of Section 14. The Carp River Truck Trail provides good access. The access into Section 13 is the Huckleberry Lake Road from the north and the Ozark Creek Road to the east. The bridge over Ozark Creek is an 8 ton limit bridge, which will not support any traffic larger than a pickup. The Ozark Creek Road to the east on the Federal lands is in very poor shape and undriveable most of the time. Any new timber sale roads will be blocked or planted after management activities occur.

Survey Needs: None

Recreational Facilities and Opportunities: The Carp River Truck Trail is used as a snowmobile trail and part of the ORV trail runs on it. The ORV (MCCCT) trail runs through the stands in the compartment. Clearcut with reserves treatment areas with ORV trails running through the area will at least have the bottom eight feet left of the trees with trail markers on them. The compartment is heavily used for all types of recreational activities including motorized vehicle use, fishing, hunting, trapping and nature viewing

Fire Protection: The eastern half of the compartment has a potential for a moderate to higher intensity fire. The Thunder Alley Fire burned through stand 26 in 1999 from the north. The west portion has lower fire intensity potential. The problem of ground fire does exist in this portion of the compartment.

Additional Compartment Information: None

- **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 106
T43N, R06W, Sec. 13-15
County: Mackinac
Unit: Sault Ste Marie
YOE: 2013
Acres: 1,900 GIS Calculated
Stand Examiner: Karen Rodock
Map Revised: 8/15/2011
Map Phase: Pre-Review

Stand # 23 — Stocking Density
(412)0) - A7
Level 3 Level 4 OI Code
Cover Type Code

15 14 13

N

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Legend

- Miris Corners
- Survey Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- State Highway
- Motorcycle (DNR Sticker)
- Motorcycle (SOS License)
- ORV Trail
- ORV Route
- Snowmobile Trail
- Intermittent Stream/Drain
- Stream

Planned Regeneration
- Natural
- Planted

Treatments
- Clearcut (w/Reserves, Patch/Strip)
- Thinning (Crown, Low, Systematic)
- Selection (Group, Single Tree)
- Planting (tree species)
- Site Preparation
- Pesticide
- Other Treatment - See Comments

Forest Stands
Level 3
- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands
Level 3
- 320 - Upland Shrub
- 330 - Low-Density Trees
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 629 - Mixed non-forested wetland

1 2 4191-MD6 3 6120-C6 4 6121-T5 5 622-L0 6 6122-S1 7 622-L0 8 6129-Q6 9 6122-S6 10 622-V0 11 622-L0 12 623-N0 13 6129-Q5 14 4238-MC2 15 4199-MD3 16 6122-S6 17 6124-Q5 18 4119-M9 19 429-MC6 20 4134-A6 21 622-L0 22 4130-A3 23 622-L0 24 622-L0 25 6122-S6 26 6139-LM4 27 6122-S6 28 622-L0 29 6122-S6 30 4139-A9 31 623-N0 32 33 4211-A2 34 629-L0 35 622-L0 36 37 429-MC5 38 4211-R1 39 4211-R3 40 4130-A3 41 4211-R3 42 4211-R3 43 6112-P5 44 320-U0 45 623-N0 46 4211-R9 47 4211-R2 48 4211-R9 49 623-N0 51 4211-R3 52 4211-R9 53 4211-R9 54 4211-R9 55 4211-R3 56 4229-MC9 57 320-U0 58 4211-R9 59 622-L0 60 4211-R3 61 4222-J1 62 4136-A6 63 4211-R3 64 4222-J5 65 4130-A6 66 4130-A6 67 320-U0 68 4211-R6 69 330-U0 70 4130-A6 71 622-L0 72 4232-F6 73 4112-M9

Jackson Trail to Camp Rd
Brevort ORV Trail
Carp River
Ozark Creek
Ozark Rd
St Ignace to Trout Lake Trl
South Branch Carp River
Dells Mills Rd
Brevort to Rexton ORV Trail
Caffey Truck Trl
Carp River Truck Trail
Town Line Rd
Federal Forest Road 3335

1 0.5 0 1 Miles

85°40'0"W 85°30'0"W 85°20'0"W 85°10'0"W 85°0'0"W 84°59'0"W 84°58'0"W
46°0'0"N 46°7'0"N

Stand Boundary Map

Compartment 106
T43N, R06W, Sec. 13-15
County: Mackinac
Unit: Sault Ste Marie
YOE: 2013
Acres: 1,900 GIS Calculated
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Stand # 23 — Stocking Density
(412)0) - A7
Level 3 / Level 4 / OI Code
Cover Type Code

15 | 14 | 13

N

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Legend

- Miris Corners
- Survey Corners
- Remonumented Section Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Motorcycle (DNR Sticker)
- Motorcycle (SOS License)
- ORV Trail
- ORV Route
- Snowmobile Trail
- Intermittent Stream/Drain
- Stream
- Stand Boundaries

Forest Stands

Level 3

411 - Northern Hardwood
413 - Aspen Types
419 - Mixed Upland Deciduous
421 - Planted Pines
422 - Natural Pines
423 - Other Upland Conifers
429 - Mixed Upland Conifers
611 - Lowland Deciduous Forest
612 - Lowland Coniferous Forest
613 - Lowland Mixed Forest

Non-Forest Stands

Level 3

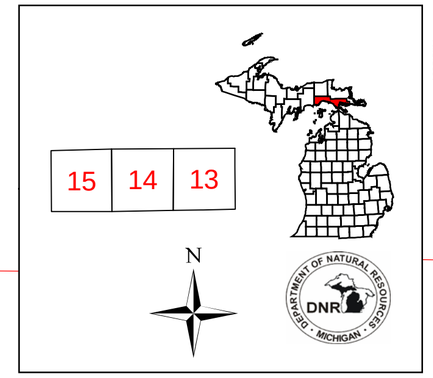
320 - Upland Shrub
330 - Low-Density Trees
622 - Lowland Shrub
623 - Emergent Wetland
629 - Mixed non-forested wetland

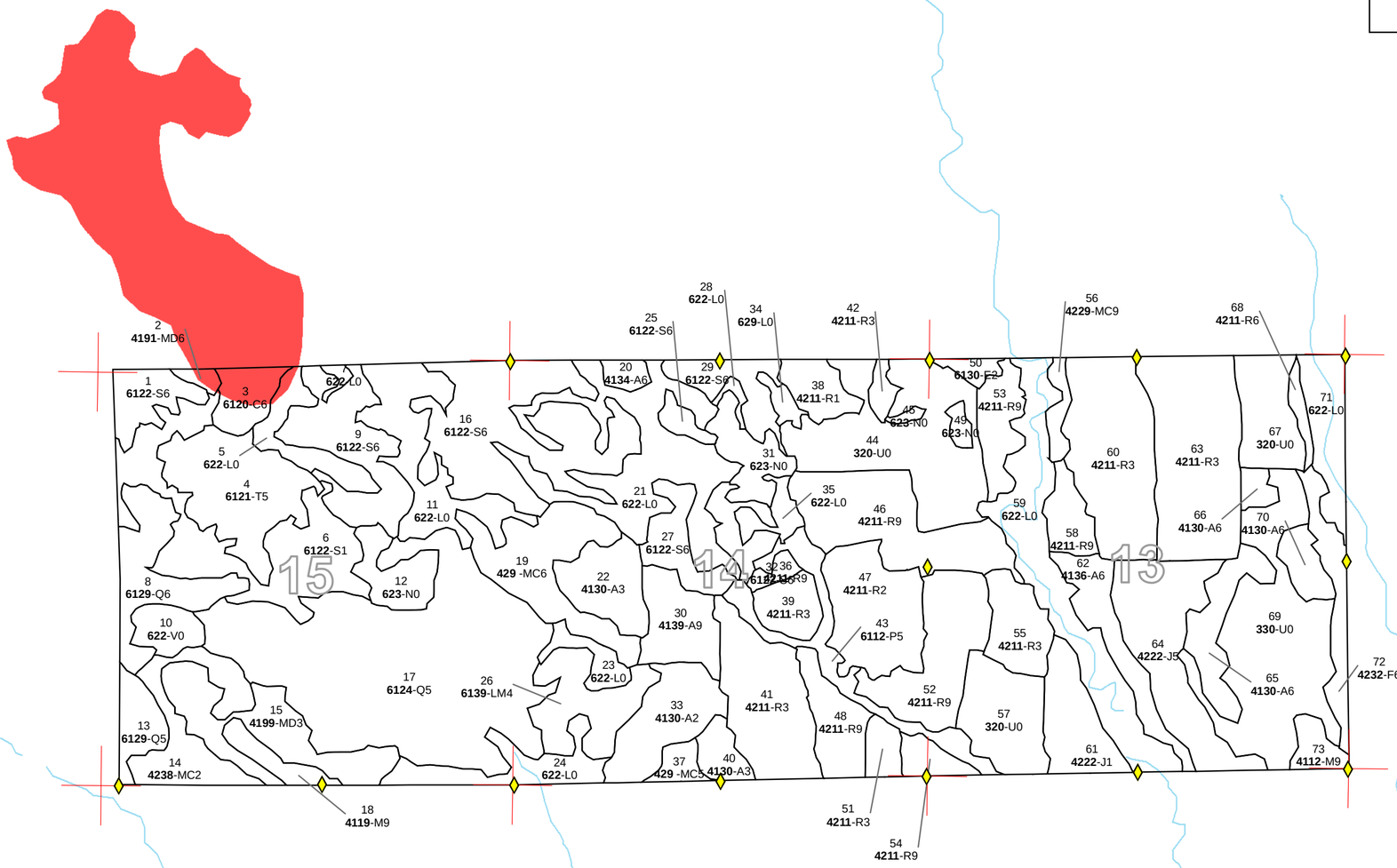
1 0.5 0 1 Miles

Dedicated & Proposed Special Conservation Area Map

Compartment 106
T43N, R06W, Sec. 13-15
County: Mackinac
Unit: Sault Ste Marie
YOE: 2013
Acres: 1,900 GIS Calculated
Stand Examiner: Karen Rodock
Map Revised: 8/15/2011
Map Phase: Pre-Review

Stand # 23 — Stocking Density
(412)0) - A7
Level 3 / Level 4 — OI Code
Cover Type Code





Legend

- Miris Corners
- Survey Corners
- Remonumented Section Corners
- Stand Boundaries

Dedicated Special Conservation Areas

- Ecological Reference Areas
- Cold Water Streams
- Deer Wintering Areas

Forest Stands

Level 3

411 - Northern Hardwood
413 - Aspen Types
419 - Mixed Upland Deciduous
421 - Planted Pines
422 - Natural Pines
423 - Other Upland Conifers
429 - Mixed Upland Conifers
611 - Lowland Deciduous Forest
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Non-Forest Stands

Level 3

320 - Upland Shrub
330 - Low-Density Trees
622 - Lowland Shrub
623 - Emergent Wetland
629 - Mixed non-forested wetland

1 0.5 0 1 Miles

85°4'0"W 85°3'0"W 85°2'0"W 85°1'0"W 85°0'0"W 84°59'0"W
46°9'0"N 46°8'0"N 46°7'0"N 46°6'0"N

Table 1 – Total Acres by Cover Type and Age Class

Sault Ste. Marie Mgt. Unit **Compartment 106 Year of Entry 2013**

Karen Rodock : Examiner

Age Class

	Non-Forested	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +	Uneven Age	Total
Aspen	0	30	32	0	0	0	82	0	0	5	0	0	0	0	0	**148**
Bog	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**11**
Cedar	0	0	0	0	0	0	0	0	0	0	0	0	13	0	0	**13**
Jack Pine	0	0	0	74	0	0	0	0	0	0	0	0	0	0	0	**74**
Low-Density Trees	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**79**
Lowland Aspen/Balsam Poplar	0	0	0	0	0	0	0	26	0	0	0	0	0	0	0	**26**
Lowland Conifers	0	0	0	0	0	0	0	0	0	179	32	13	0	0	0	**223**
Lowland Mixed Forest	0	0	0	4	0	0	0	0	0	29	0	0	0	0	0	**34**
Lowland Shrub	250	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**250**
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	0	170	81	0	0	0	0	**250**
Marsh	38	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**38**
Mixed Upland Deciduous	0	0	0	39	0	0	0	0	0	0	3	0	0	0	0	**42**
Natural Mixed Pines	0	0	0	0	0	0	0	0	6	0	0	0	0	0	0	**6**
Northern Hardwood	0	0	0	0	0	0	0	0	0	9	0	0	0	0	8	**17**
Red Pine	0	40	224	0	0	0	0	0	156	0	0	0	0	0	0	**420**
Tamarack	0	0	0	0	0	0	0	0	0	0	0	49	0	0	0	**49**
Upland Conifers	0	0	0	30	0	0	42	0	6	0	0	0	0	0	0	**78**
Upland Shrub	124	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**124**
Upland Spruce/Fir	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	**19**
Total	**502**	**69**	**256**	**148**	**0**	**0**	**124**	**26**	**168**	**391**	**115**	**62**	**13**	**0**	**26**	**1900**

Table 2 – Proposed Treatment Summaries

Sault Ste. Marie Mgt. Unit
Year of Entry 2013

Compartment 106
Total Compartment Acres: 1900

Acres by Treatment Type

Commercial Harvest - 270	Site Prep - 93	Tree Planting - 31	Prescribed Burn - 0	Other - 79
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 264	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen	64	0	0	0	0	0	**64**
Lowland Spruce/Fir	80	0	0	0	0	0	**80**
Northern Hardwood	0	8	0	0	0	0	**8**
Red Pine	0	0	0	0	112	0	**112**
Upland Conifers	6	0	0	0	0	0	**6**
Total	**149**	**8**	**0**	**0**	**112**	**0**	**270**

Data updated yesterday after 6:00 PM

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
16	45106016-Cut	79.7	42320 - Upland Spruce	High Density Pole	86	Harvest	Clearcut with Reserves	42320 - Upland Spruce	Cmpt. Review Proposal

Prescription Specs: Clearcut with reserves following the retention guideline. Retain patch or patches of greater than 2.4 acres for the treatment area and leave conifer 4" and smaller on the site. Some paper birch and white pine should be retained for seed trees and future snags.

Other Comments: ORV trail goes through the stand. Leave trail marker trees where possible if cut then must be cut above 8 feet to mark the trail.

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is black spruce, aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white spruce and white pine.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
30	45106030-Cut	23.4	4139 - Aspen, Mixed Deciduous	High Density Log	51	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Clearcut with reserves following the retention guideline. Retain patch or patches of greater than 1 acre for the treatment area especiailly along stand 33 boundary and stand 22 for budding trees. Leave conifer 4" and smaller on the site. Some paper birch and white pine should be retained for seed trees and future snags.

Other Comments: ORV trail goes through the stand. Leave trail marker trees where possible if cut then must be cut above 8 feet to mark the trail.

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white spruce, black spruce and white pine.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
36	45106036-Cut	3.8	42110 - Planted Red Pine	High Density Log	74	Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Thin to around 120 Basal Area. Leave species diversity within the stand were present.

Other Comments:

Next Steps: No followup necessary

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
37	45106037-Cut	6.0	429 - Mixed Upland Conifers	Medium Density Pole	73	Harvest	Clearcut with Reserves	429 - Mixed Upland Conifers	Cmpt. Review Proposal

Prescription Specs: Clearcut with reserves following the retention guideline. Leave all conifer 4" and smaller on the site. Some paper birch and larger diameter white pine should be retained for seed trees and future snags.

Other Comments: Small opening in the stand. ORV trail goes through the stand. Leave trail marker trees where possible if cut then must be cut above 8 feet to mark the trail.

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white spruce, black spruce and white pine.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
46	45106046-Cut	51.6	42110 - Planted Red Pine	High Density Log	73	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Thin to around 120 Basal Area. Leave species diversity within the stand were present. A buffer of approximately 50' will be left along the Carp River as shown on map.

Other Comments: ORV trail goes through the stand. Leave trail marker trees where possible if cut then must be cut above 8 feet to mark the trail.

Next Steps: No followup treatment necessary.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
52	45106052-Cut	40.1	42110 - Planted Red Pine	High Density Log	74	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Thin to around 120 Basal Area. Leave species diversity within the stand were present.

Other Comments: ORV trail goes through the stand. Leave trail marker trees where possible if cut then must be cut above 8 feet to mark the trail.

Next Steps: No followup treatment necessary.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
53	45106053-Cut	16.9	42110 - Planted Red Pine	High Density Log	74	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Thin to around 120 Basal Area. Leave species diversity within the stand were present. A buffer of approximately 50' will be left along the Carp River.

Other Comments:

Next Steps: No followup necessary.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
65	45106065-Cut	21.0	4130 - Aspen	High Density Pole	51	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Specs: Clearcut with reserves following the retention guideline. Retain patch of maple in northeast corner for the treatment area and leave conifer 4" and smaller on the site.

Other Comments: Delayed for greenup requirement on stand 67. May want to chip harvest with adjacent treatment stands following the WBHG to retain 1/3 to 1/6 of tops.

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white spruce, black spruce and white pine.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
66	45106066-Cut	4.7	4130 - Aspen	High Density Pole	50	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Specs: Clearcut with reserves following the retention guideline. Do not cut cherry, maple and white pine to be retained for seed trees and future snags.

Other Comments: Delayed for greenup requirement on stand 67. May want to chip harvest with adjacent treatment stands following the WBHG to retain 1/3 to 1/6 of tops.

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white spruce, black spruce and white pine.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
70	45106070-Cut	9.8	4130 - Aspen	High Density Pole	50	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Specs: Clearcut with reserves following the retention guideline. Retain patch along east side of the treatment area and leave conifer 4" and smaller on the site.

Other Comments: Delayed for greenup requirement on stand 67. May want to chip harvest with adjacent treatment stands following the WBHG to retain 1/3 to 1/6 of tops.

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white spruce, black spruce and white pine.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
73	45106073-Cut	7.9	4112 - Maple, Beech, Cherry Association	High Density Log	85	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription Specs: Mark stand to 80 to 90 Basal Area. Aspen, cherry and all conifer should be left.

Other Comments: Harvest with adjacent stands including stands 98 and 100 in compartment 105..

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is maple, cherry, beech, paper and yellow birch, balsam fir, spruce, aspen and hemlock.

44	NF_45106044-Prep	69.3	Non-Forested		0	Site Prep	Trenching	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Trenching and hand planting of red pine seedling to acceptable regeneration levels will need to be completed within 2 years of the Timber Cutting Report date. After establishment of red pine regeneration, regeneration surveys need to be scheduled for 1 year and 3 years for monitoring of regeneration. Release as necessary determined by TMS.

Other Comments: ORV trail goes through the stand.

Next Steps: Monitor effects of release and treat as necessary. Monitor for RHPS and if monitoring shows that treatment is recommended, then spray when/if necessary with appropriate insecticide recommended by Forest Health Specialist/TMS.

67	NF_45106067-Prep	24.1	Non-Forested		0	Site Prep	Trenching	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Trenching and hand planting of red pine seedling to acceptable regeneration levels will need to be completed within 2 years of the Timber Cutting Report date. After establishment of red pine regeneration, regeneration surveys need to be scheduled for 1 year and 3 years for monitoring of regeneration. Release as necessary determined by TMS.

Other Comments:

Next Steps: Monitor effects of release and treat as necessary. Monitor for RHPS and if monitoring shows that treatment is recommended, then spray when/if necessary with appropriate insecticide recommended by Forest Health Specialist/TMS.

57	NF_45106057-Plant	30.8	Non-Forested		0	Tree Planting	Unspecified	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: The stand is to be trenched and hand planted in red pine seedling to acceptable regeneration levels will need to be completed within 2 years of the Timber Cutting Report date. After establishment of red pine regeneration, regeneration surveys need to be scheduled for 1 year and 3 years for monitoring of regeneration. Release as necessary determined by TMS.

Other Comments: Harvested in 2009 on Blueberry Red Pine RPP. FTP # C44-582. ORV trail goes through the stand.

Next Steps: Monitor effects of release and treat as necessary. Monitor for RHPS and if monitoring shows that treatment is recommended, then spray when/if necessary with appropriate insecticide recommended by Forest Health Specialist/TMS.

38	45106038-Spray	12.4	42110 - Planted Red Pine	Low Density Sapling	10	Pesticide	Aerial	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Monitor for RHPS and if monitoring shows that treatment is recommended, then spray when/if necessary with appropriate insecticide recommended by Forest Health Specialist/TMS.

Other Comments:

Next Steps: Continue to monitor site and the effects of spraying if treated.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
39	45106039-Spray	12.8	42110 - Planted Red Pine	High Density Sapling	11	Pesticide	Aerial	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Monitor for RHPS and if monitoring shows that treatment is recommended, then spray when/if necessary with appropriate insecticide recommended by Forest Health Specialist/TMS.

Other Comments:

Next Steps: Continue to monitor site and the effects of spraying if treated.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
41	45106041-Spray	44.7	42110 - Planted Red Pine	High Density Sapling	11	Pesticide	Aerial	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Monitor for RHPS and if monitoring shows that treatment is recommended, then spray when/if necessary with appropriate insecticide recommended by Forest Health Specialist/TMS.

Other Comments:

Next Steps: Continue to monitor site and the effects of spraying if treated.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
42	45106042-Spray	4.3	42110 - Planted Red Pine	High Density Sapling	12	Pesticide	Aerial	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Monitor for RHPS and if monitoring shows that treatment is recommended, then spray when/if necessary with appropriate insecticide recommended by Forest Health Specialist/TMS.

Other Comments:

Next Steps: Continue to monitor site and the effects of spraying if treated.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
47	45106047-Spray	39.8	42110 - Planted Red Pine	Medium Density Saplin	8	Pesticide	Aerial	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Monitor effects of release and treat as necessary. Monitor for RHPS and if monitoring shows that treatment is recommended, then spray when/if necessary with appropriate insecticide recommended by Forest Health Specialist/TMS.

Other Comments:

Next Steps: Continue to monitor site and the effects of spraying if treated

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
51	45106051-Spray	7.3	42110 - Planted Red Pine	High Density Sapling	12	Pesticide	Aerial	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Monitor for RHPS and if monitoring shows that treatment is recommended, then spray when/if necessary with appropriate insecticide recommended by Forest Health Specialist/TMS.

Other Comments:

Next Steps: Continue to monitor site and the effects of spraying if treated.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
55	45106055-Spray	19.7	42110 - Planted Red Pine	High Density Sapling	10	Pesticide	Aerial	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Monitor for RHPS and if monitoring shows that treatment is recommended, then spray when/if necessary with appropriate insecticide recommended by Forest Health Specialist/TMS.

Other Comments:

Next Steps: Continue to monitor site and the effects of spraying if treated.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
60	45106060-Spray	57.1	42110 - Planted Red Pine	High Density Sapling	14	Pesticide	Aerial	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Monitor for RHPS and if monitoring shows that treatment is recommended, then spray when/if necessary with appropriate insecticide recommended by Forest Health Specialist/TMS.

Other Comments:

Next Steps: Continue to monitor site and the effects of spraying if treated.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
63	45106063-Spray	65.8	42110 - Planted Red Pine	High Density Sapling	11	Pesticide	Aerial	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Monitor for RHPS and if monitoring shows that treatment is recommended, then spray when/if necessary with appropriate insecticide recommended by Forest Health Specialist/TMS.

Other Comments:

Next Steps: Continue to monitor site and the effects of spraying if treated.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
69	NF_45106069-Other	78.6	Non-Forested		0	Other	Unspecified	3105 - Mixed Upland Herbaceous	Cmpt. Review Proposal

Prescription Specs: Chip with adjacent stands for opening maintenance. Follow WBHG for retaining 1/3 to 1/6 tops on site.

Other Comments:

Next Steps: Check if additional treatment is necessary for the opening maintenance.

Total Treatment Acreage Proposed: 731.6

Table 4 -- Treatments Prescribed with a Limiting Factor

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
20	45106020-Cut	4.7	4134 - Aspen, Spruce/Fir	High Density Pole	84	Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Cmpt. Review Proposal

Prescription Specs: Clearcut with reserves following the retention guideline. Retain patch within the treatment area for retention and leave conifer 4" and smaller on the site. Some paper birch and white pine should be retained for seed trees and future snags.

Other Comment: Harvest with limiting factor stand 62 in Comp 107.

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is aspen, maple, cherry, cedar, yellow and paper birch, balsam fir, white spruce, black spruce and white pine.

Limiting Factor and No Treatment Reason: 2G: Blocked by physical obstacle
Very wet to the stand.

Total Treatment Acreage Proposed: **4.7**

Out of YOE -- Treatments
Prescribed with No Limiting Factor

Year of Entry: 2013

Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
45158_OutOfYOE-Cut	2.5				Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal

Prescription Specs: Mark stand to 80 to 90 Basal Area. Retain some beech with the smooth bark and wildlife trees. Some larger canopy gaps may be desirable to enhance the advanced regeneration present.

Other Comments:

Next Steps: Follow-up treatment with a regeneration survey as per the work instructions. Acceptable regeneration is aspen, maple, cherry, beech, yellow and paper birch, ironwood, balsam fir, white spruce, black spruce and white pine.

NF_45134015-NonFor	4.7	Unspecified		0	Non-Forest Management	Patch or Strip Clearcut	31021 - Cool Season Grass	Cmpt. Review Proposal

Prescription Specs: Treat with C149 s 63. Opening maintenance removing jack pine seedlings and saplings.

Other Comments:

Next Steps:

Total Treatment Acreage Proposed: **7.2**

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6122 - Black Spruce	High Density Pole	15.6	92		No access to this stand. Looks like the same as adjacent spruce stand in compartment and got data from Compartment 113 stand 56 which is the remaining part of the stand.
2	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	2.7	91		Very wet to access site.
3	6120 - Lowland Cedar	High Density Pole	13.2	113		Cedar stand which is wet and very wet getting to the stand. MNFI identified stand to the north as Hardwood conifer swamp feature.
4	6121 - Tamarack	Medium Density Pole	48.6	106		Tamarack stand with some poor quality cedar, balsam fir, aspen and spruce. Has lots of tag alder.
6	6122 - Black Spruce	Low Density Sapling	65.0	90		Very wet stand with no access. Very few trees within the stand.
8	6129 - Mixed Coniferous Lowland Forest	High Density Pole	31.6	90		Data from stand in adjacent compartment 113 stand 51
9	6122 - Black Spruce	High Density Pole	39.5	86		Black Spruce with some maple, aspen, birch, tamarack and fir. Stand has boggy wet area within it.
13	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	13.1	105		Heavy cedar regeneration of 3-10' with some 20' tall. Few small ridges within the stand. Data taken form adjacent compartment 113 stand 49.
14	42380 - Non Pine Upland Conifer, Mixed Deciduous	Medium Density	30.0	28		Mix of upland and lowland. Some really nice regeneration within the stand. Real mix of species within the stand. Harvested in 1983.
15	4199 - Other Mixed Upland Deciduous	High Density Sapling	39.2	28		Real nice regeneration within the stand. Few low areas but mostly upland type and a few more open areas. Cut in 1983.
16	6122 - Black Spruce	High Density Pole	79.7	86		The stand is a good spruce trees with some real wet areas and upland areas along the JT Camp Road. Motorcyle trail has small loop into the stand.
17	6124 - Lowland Spruce-Fir	Medium Density Pole	178.6	87		This stand is a conglomeration of lowland conifer species with some maple, aspen and birch. Few high spots and lots of lower wet areas with more tag alder with few trees.
18	4119 - Mixed Northern Hardwoods	High Density Log	8.9	89	81-110	Select harvested in 2001 on Pounding Hammer Hardwood #45-123-98-01. Some beech bark disease in the beech. Otherwise stand is looking good.
19	429 - Mixed Upland Conifers	High Density Pole	42.0	52		Few wet areas but mostly upland. Some mortality of the fir, spruce, birch and aspen. Small narrow ridge on south side of the stand.
20	4134 - Aspen, Spruce/Fir	High Density Pole	4.7	84		Mixed stand of aspen, fir, spruce, maple and birch.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
22	4130 - Aspen	High Density Sapling	23.0	15		Good regen ten to twenty + feet tall. Cut on Timber Doodle Aspen #44-28-94-01 finished in June 1996.
25	6122 - Black Spruce	High Density Pole	4.9	86		Very wet surrounding the stand same as previntory stand 17.
26	6139 - Mixed Lowland Forest	Low Density Pole	29.3	82		Very wet and mixed stand.
27	6122 - Black Spruce	High Density Pole	16.9	86		Black Spruce stand with a few other species mixed into the stand.
29	6122 - Black Spruce	High Density Pole	16.7	86		Black Spruce with a mix of some conifer and deciduous. Stand was wet. Adjacent red pine stand had been harvested and not regenerated at this time.
30	4139 - Aspen, Mixed Deciduous	High Density Log	23.4	51		Mackinac Mix stand with mostly upland and a little lowland wet areas. Some mortality is occurring in the stand.
32	6122 - Black Spruce	High Density Pole	11.7	82		Black Spruce stand with some aspen, paper birch and tamarack.
33	4130 - Aspen	Medium Density	29.6	4		Few open areas mostly real nice aspen. Few spruce and maple poles left 3- 10 feet tall. Motorcycle trail runs thru the stand.
36	42110 - Planted Red Pine	High Density Log	3.8	74	141-170	Small stand between stream corridor. Could thinned to 120.
37	429 - Mixed Upland Conifers	Medium Density Pole	6.0	73		Mackinac mix with some red and white pine. Very small stand with open areas within the stand.
38	42110 - Planted Red Pine	Low Density Sapling	12.4	10		Burned in August 1999 on Thunder Alley Fire. Salvaged on the Thunder Alley Fire Salvage #44-17-00-02. Planted on FTP #C44-518 by trenching and hand planting in April 2001.
39	42110 - Planted Red Pine	High Density Sapling	12.8	11		5 to 15 feet tall average. Good healthy trees. Harvested on sale #27-94-01 then burned and hand planted in May 2000 on FTP # C44-444.
40	4130 - Aspen	High Density Sapling	9.0	15		Good regererated aspen some more spruce in understory ORV trail run thru stand.
41	42110 - Planted Red Pine	High Density Sapling	44.7	11		Burned and planted in 1999 and 2000. Trees are 10-20 feet tall.
42	42110 - Planted Red Pine	High Density Sapling	4.3	12		Harvested on timber sale #27-94-01. Burned and machine planted in May of 1999 on FTP # C44-444. Looks good.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
43	6112 - Lowland Aspen	Medium Density Pole	26.2	69		Narrow drainage with intermittent stream flowing through the stand. There a patch of red pine on the northern part and scattered along edge with the aspen, red maple, spruce, fir and an elm.
46	42110 - Planted Red Pine	High Density Log	51.6	73	141-170	Nice healthy stand of red pine.
47	42110 - Planted Red Pine	Medium Density	39.8	8		Harvested in 2002 on timber sale #124-00-01 Rerun Pine. Burned and trenched in 2004 and planted in May of 2005. Stand has passed the regeneration count check and looks real good.
48	42110 - Planted Red Pine	High Density Log	19.3	74	111-140	Leave 10 years and recheck. Stand looks good. Treated in 2005 and 2006.
50	6130 - Fir, Aspen, Maple	Medium Density	4.3	24		Real mixed stand in a low area. Few older trees where left when harvested.
51	42110 - Planted Red Pine	High Density Sapling	7.3	12		Red pine looks real good at 10-20 feet tall. Harvested on sale #27-94-01. Burned and machine planted in May of 1999 on FTP #C44-444.
52	42110 - Planted Red Pine	High Density Log	40.1	74	141-170	Thinned in 1995.
53	42110 - Planted Red Pine	High Density Log	16.9	74		Part of stand is buffer for the Carp River.
54	42110 - Planted Red Pine	High Density Log	7.9	74	111-140	Thinned in 2006 on Open Red Pine sale 45-134-04-01.
55	42110 - Planted Red Pine	High Density Sapling	19.7	10		Harvested on sale #27-94-01. Stand was burned, trenched and hand planted in April 2001 on FTP #C44-444. Motorcycle trail runs thru the stand. Red pine looks good and healthy.
56	42290 - Natural Mixed Pine	High Density Log	6.1	73	111-140	Stand left as a buffer for Carp River. Nice red pine stand.
58	42110 - Planted Red Pine	High Density Log	12.2	74	81-110	Mixed stand with red pine, aspen and white pine. Red pine is good quality of larger diameter.
60	42110 - Planted Red Pine	High Density Sapling	57.1	14		Harvested on Lost County Road sale #30-94-01. Site was chipped and some piles burned along the center road. Stand was trenched and hand planted in September 1997 on FTP #44-441. Stand looks real good with red pine of 10-20 feet tall.
61	42220 - Natural Jack Pine	Low Density Sapling	25.2	20		Opening which is filling in with jack pine, mix of cherry and a few aspen clones. The open areas are filling in slowly within the stand.
62	4136 - Aspen, Mixed Conifer	High Density Pole	22.8	50		Aspen is of poorer quality with some good quality white spruce. Stand is mature.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
63	42110 - Planted Red Pine	High Density Sapling	65.8	11		Harvested on Deerfly sale #29-94-01. Site was burned, trenched and hand planted in May of 2000 on FTP #C44-441. Trees look real good and healthy at 10 to 20 feet tall.
64	42220 - Natural Jack Pine	Medium Density Pole	49.2	27		Poor quality site. Opening which has filled in with jack pine, spruce, aspen, cherry and white pine.
65	4130 - Aspen	High Density Pole	21.0	51		Mature aspen with a mix of poorer quality red maple.
66	4130 - Aspen	High Density Pole	4.7	50		More sparse along the edges and gaps. Pole log sized aspen stand in the middle.
68	42110 - Planted Red Pine	High Density Pole	4.3	73	111-140	Buffer left for Ozark Creek of red pine and jack pine. It grades into lowland.
70	4130 - Aspen	High Density Pole	9.8	50		
72	42320 - Upland Spruce	High Density Pole	18.5	Uneven Age		Long narrow stand with a portion of it is buffer for Ozark Creek.
73	4112 - Maple, Beech, Cherry Association	High Density Log	7.9	Uneven Age	111-140	Little hardwood stand with some aspen clones in it.

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
5	622 - Lowland Shrub	16.2	No	Unspecified	
7	622 - Lowland Shrub	1.7	No	Unspecified	
10	6225 - Bog	11.0	No	Unspecified	
11	622 - Lowland Shrub	39.5	No	Unspecified	
12	623 - Emergent Wetland	16.1	No	Unspecified	
21	622 - Lowland Shrub	65.9	No	Unspecified	
23	622 - Lowland Shrub	8.4	No	Unspecified	
24	622 - Lowland Shrub	21.7	No	Unspecified	
28	622 - Lowland Shrub	2.0	No	Unspecified	
31	623 - Emergent Wetland	17.1	No	Unspecified	
34	629 - Mixed non-forested wetland	4.0	No	Unspecified	
35	622 - Lowland Shrub	7.5	No	Unspecified	
44	320 - Upland Shrub	69.3	Planted	Red Pine	
45	623 - Emergent Wetland	1.3	No	Unspecified	
49	623 - Emergent Wetland	3.0	No	Unspecified	
57	320 - Upland Shrub	30.7	Planted	Red Pine	
59	622 - Lowland Shrub	61.9	No	Unspecified	
67	320 - Upland Shrub	24.1	Planted	Red Pine	

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
69	330 - Low-Density Trees	78.6	Yes	Low (NonForested)	
71	622 - Lowland Shrub	21.4	No	Unspecified	

7 – PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

Stand	SCA Type	SCA Name	Acres	Comments

8 – DEDICATED CONSERVATION AREA DETAILS

* This is a list of Dedicated Biodiversity Areas for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to Dedicated Conservation Area Map for areas that the below listed Conservation Areas are located.

ERA = Ecological Reference Area
HCVA = High Conservation Value Area
SCA = Special Conservation Area

Conservation Area	Type	Description
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of natural communities that have been identified as Element Occurrences (EOs) by the Michigan Natural Features Inventory (MNFI) within the context of their natural community classification system. Element Occurrences with viability ranks of A (Excellent) or B (Good) and a Global (G) or State (S) element (rarity) ranking of endangered (1), threatened (2), or rare (3) serve as an initial base of ERAs. They may be located upon any ownership in the State. The system is comprised of individual or associations of natural community types that are managed for restoration and maintenance of natural ecological processes and values. The public may submit recommendations for lands as ERAs using the DNR Conservation Area Recommendation Form.
SCA	Habitat Area	An area that provide some specific need for the life cycle of wildlife species, including State Wildlife Areas and Waterfowl Production Areas, deer wintering complexes in lowland conifer communities, grassland openings and savannas. Habitat areas are distinct from critical habitat designated for recovery of endangered or threatened species (such as Kirtland's warbler or piping plover areas) in that they are more general in nature, are not primarily associated with threatened or endangered species, and are not covered by species recovery plans that are developed in cooperation with Federal agencies.