DNR

TRAVERSE CITY FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 125 ENTRY YEAR: 2011

Compartment Acreage: 1520 County: Kalkaska

Stand Examiner: Dave Johnson

Legal Description: T26N - R06W - Sec. 20,21,22

Management Goals: Maintain specie diversity and age class distribution in the Aspen types. Maintain water quality along N. Branch of Manistee River.

Soil and Topography: Saugatuck Sand and Rifle Peat

Ownership Patterns, Development, and Land Use in and Around the Compartment:
State land lies to the northeast, north, and south of the compartment. Most of the land to the west is private and in agricultural use. Land use in and around the area is hunting and fishing. Aquisitions: Section 20, SESE. The only access to this parcel is through state land. The landowner does not have legal access and illegally put a bridge, on state land, across the creek several years ago.

Unique, Natural Features (include only non-site specific and non-sensitive information):
Natural features lists one species of special concern in section 21. The North Branch of the Manistee River runs through the compartment.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information): No features listed on the Archaelolgical Inventory sheet. An old logging camp, called "Watson Camp" on local maps, was located in what is now a small opening in the SW corner of Section 22. The area was heavily logged in the late 1800's.

Special Management Designations or Considerations: North Branch of Manistee River

Watershed and Fisheries Considerations: The North Branch of the Manistee River and several unnamed tributaries flow through Compartment 125. The North Branch is a tributary of the Manistee River, and is a Designated Trout Stream. It is also protected by the Manistee River Natural Rivers Designation. The North Branch of the Manistee River hosts a naturally reproducing population of brook trout. The unnamed tributaries in Compartment 125 are also Designated Trout Streams. For timber operations near the North Branch of the Manistee River and its tributary stream, Natural Rivers buffers should be followed.

Wildlife Habitat Considerations: A large area of outwash plain consisting of poorly drained organic soils covers much of the compartment. These wet soils support a variety of lowland communities, including some drier aspen sites. Maintaining some conifer cover in various age classes and a component of browse will benefit many species including deer and snowshoe hare. Many other species make use of lowland communities, including: blackburnian warbler, northern saw-whet owl, red squirrel, bobcat, and wood frog.

This compartment has a history of aspen cutting. Such early successional management is appropriate and will be continued in this area, with additional aspen harvests scheduled this inventory cycle in order to

increase age class diversity. The incorporation of snags, leave trees, and downed logs in these cuts will help to replicate a wildfire-altered forest and increase wildlife use by species like grouse, woodcock, golden-winged warbler, and deer.

The east end of the compartment has excessively drained sands, which support several pine plantations, aspen, and upland brush communities. Fire was a major disturbance on these dry soils and should be considered a valuable treatment tool in perpetuating these fire driven ecosystems. Several upland brush stands have been prescribed for burning to set back woody encroachment and stimulate native herbaceous vegetation. A variety of species make use of habitats found on these dry sandy soils, including: Kirtland's warbler, deer, ruffed grouse, smooth green snake, wild turkey, eastern box turtle, and badger.

Mineral Resource and Development Concerns and/or Restrictions:
Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 200 and 600 feet. Beneath the glacial drift are the Mississippian Marshall Sandstone and Michigan Formation. The Marshall was previously used as a building stone and the Michigan is quarried for gypsum in other areas of the state. Gravel pits are not located in the area, and potential appears to be limited. This area is located four miles north of the Garfield 15 Field that produces from the Devonian Richfield and the Ordovician Prairie du Chien. The Compartment was leased at the 2008 lease auctions.

Vehicle Access: No new access roads are needed, temporary bridge will be needed for any harvest activity in the SW 1/4 of Sec 21

Survey Needs: None Needed

Recreational Facilities and Opportunities: In the east half of Section 22, the Cranberry Lake Snowmobile Trail runs through the compartment. There are no treatments along this trail.

Fire Protection: This compartment is protected by the Kalkaska DNR Field Office, although section 22 is within Zone 5 dispatch, which means units from Grayling, Manton, and Houghton Lake also respond. VFD protection is from the Kalkaska VFD. Access is acceptable, travel time is not an issue. Urban innerface is not too much of an issue.

Additional Compartment Information:

****** Cover type details, proposed treatments and stands designated as FDF are listed in the attached reports:**

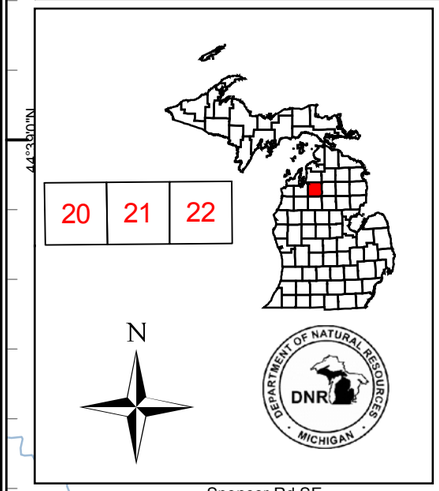
- **Cover Type by Age Class**
- **Cover Type by Management Objective**
- **Compartment Volume Summary**
- **Proposed Treatments – No Limiting Factors**
- **Proposed Treatments – With Limiting Factors**

****** The following information is displayed on the attached compartment maps:**

- **Base feature information, stand numbers, cover types**
- **Proposed treatments**
- **Proposed road access system**
- **Suggested potential old growth**

Cover Type & Treatment Map

Compartment 125
T26N, R06W, Sec. 20-22
County: Kalkaska
Unit: Traverse City
YOE: 2011
Acres: 1,518 GIS Calculated
Stand Examiner: David Johnson
Map Revised: 10/06/2009
Map Phase: Pre-Review



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

Legend

- Miris Corners
- Highways
- County Paved Road
- Public Paved Road
- Paved Road
- County Gravel Road
- Public Gravel Road
- Gravel Road
- County Poor Dirt Road
- Public Poor Dirt Road
- Poor Dirt Road
- Closed Road
- Intermittent Stream/Drain
- Stream
- Trails
- Snowmobile Trails
- Lakes and Rivers

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Prescribed Burn
- Mowing
- Other Treatment - See Comments

Forest Stands
Level 3

- 413 - Aspen Types
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands
Level 3

- 122 - Road/Parking Lot
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 629 - Mixed non-forested wetland

Stand Boundary Map

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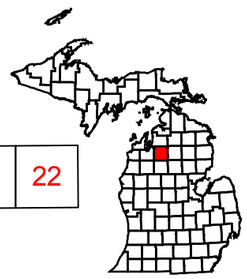

Stand # 23 — Stocking Density (412)0) - A7
Level 3 Level 4 — OI Code
Cover Type Code

Legend

- Miris Corners
- Highways
- County Paved Road
- Public Paved Road
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- Trails
- Snowmobile Trails
- Stand Boundaries

Forest Stands

Level 3

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1 0.5 0 1 Miles

85°4'0"W 85°3'0"W 85°2'0"W 85°1'0"W 44°39'0"N 44°38'0"N

Dedicated & Proposed Special Conservation Area Map

Compartment 125
T26N, R06W, Sec. 20-22
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Unit: Traverse City
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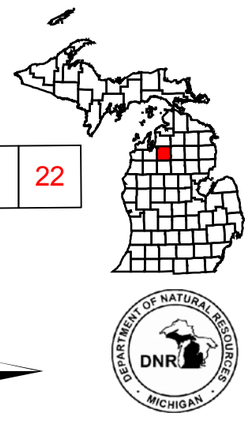
Stand Examiner: David Johnson
Map Revised: 10/06/2009
Map Phase: Pre-Review



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

Legend
- Miris Corners
- Stand Boundaries

Dedicated Special Conservation Areas
- Cold Water Streams
- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Research, Development, and Military Lands

Forest Stands
Level 3
- 413 - Aspen Types
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Non-Forest Stands
Level 3
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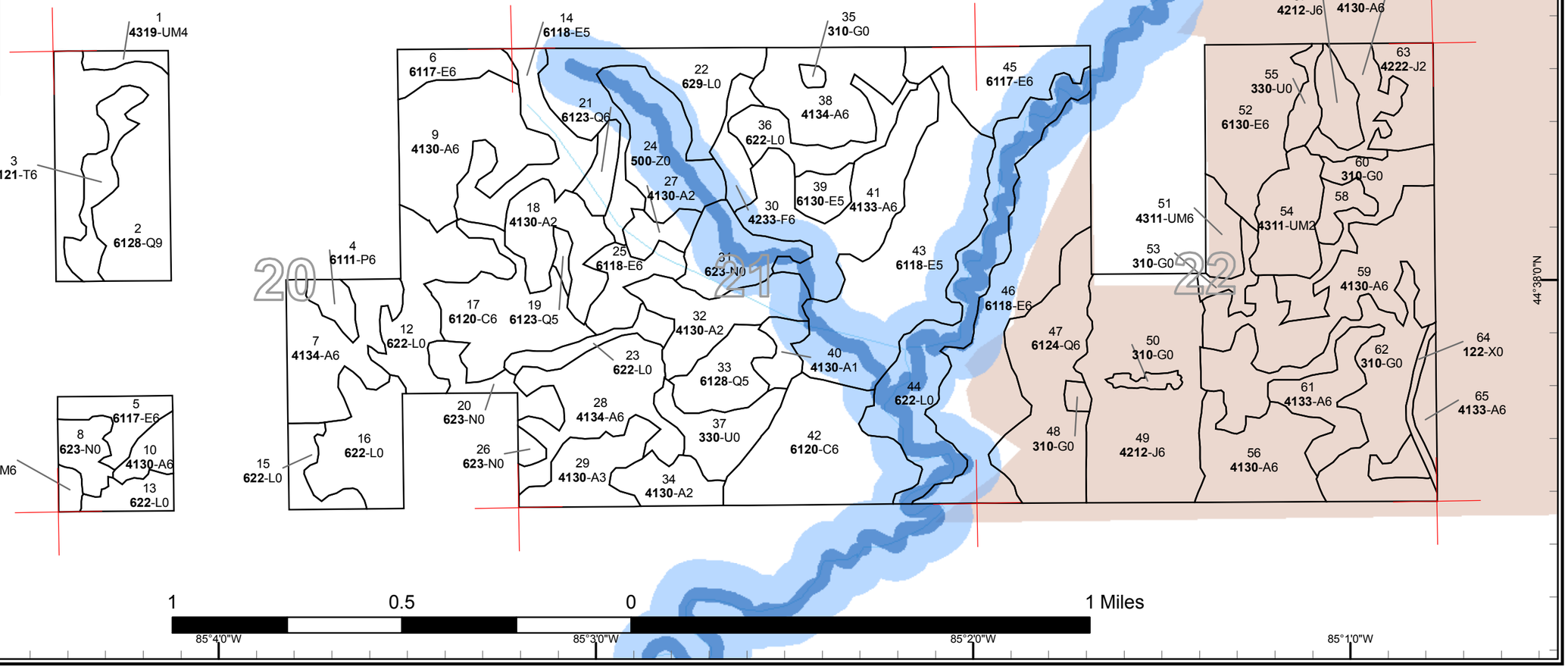

Covertype, Acres, and Age summary

(Level 3 Cover Type)

Traverse City Mgt. Unit

Compartment 125 Year of Entry 2011

Report Date: 10/06/2009

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 Types	0	79	20	0	85	182	66	0	0	0	0	0	0	0	0	**432**
Emergent Wetland	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**44**
Herbaceous Openland	90	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**90**
Low-Density Trees	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**24**
Lowland Coniferous Forest	0	0	0	0	0	15	10	68	0	50	61	35	0	0	0	**239**
Lowland Deciduous Forest	0	0	0	0	0	76	35	103	14	0	11	0	0	0	12	**251**
Lowland Mixed Forest	0	0	0	0	0	0	47	0	0	0	0	0	0	0	0	**47**
Lowland Shrub	162	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**162**
Mixed non-forested wetland	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**45**
Natural Pines	0	16	0	0	0	0	0	0	0	0	0	0	0	0	0	**16**
Other Upland Conifers	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	**10**
Planted Pines	0	0	0	0	0	0	86	0	0	0	0	0	0	0	0	**86**
Road/Parking Lot	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**4**
Upland Mixed Forest	0	22	0	0	0	4	12	0	0	0	0	0	0	0	0	**38**
Water	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**31**
Total	**399**	**116**	**20**	**0**	**85**	**277**	**265**	**171**	**14**	**50**	**72**	**35**	**0**	**0**	**12**	**1518**

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
43	**10535_island**	1.9	6118 - Lowland Deciduous with Cedar	Medium Density Pole	68	Harvest	Clearcut with Reserves	Aspen

Rev Cmnt:

Rev Spec: Habitat cut small portion of stand that contains quaking aspen and is situated next to stands 32 and 41.

Next Steps: Monitor regen and wildlife use.

11	**61125011-Cut**	3.0	4311 - Pine, Aspen Mix	High Density Pole	55	Harvest	Clearcut with Reserves	Pine, Aspen Mix

Rev Cmnt:

Rev Spec: remove all aspen, fir and red maple leaving white pine as diversity and visual mgt.

Next Steps: should regenerate to moderate stocked aspen with scattered white pine overstory. - check 2 years after harvest

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38	**61125038-Cut**	32.8	4134 - Aspen, Spruce/Fir	High Density Pole	34	Harvest	Clearcut with Reserves	Aspen, Spruce/Fir

Rev Cmnt:

Rev Spec: --Stephen Griffith : 10/05/2009 comments: Create some (approximately 1 tree per 2 acres) coarse woody debris (CWD) during harvest operations, preferably via timber sale specs. CWD trees should be log sized or bigger, the more decay resistant the tree species is the better, and cut approximately at breast height (4.5 feet). The log should be left within 3 feet it's stump. If possible leave tops unchipped for hare and other small mammal cover.

Final harvest leaving fingers or pockets of aspen/fir up to approx 3 acres total

Next Steps: should regenerate to a fully stocked aspen/fir stand - check 2 years after harvest

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49	**61125049-CC**	37.9	42121 - Planted Jack Pine, Mixed Deciduous	High Density Pole	57	Harvest	Clearcut	Mixed Upland Deciduous with Conifer

Rev Cmnt:

Rev Spec: --Stephen Griffith : 10/05/2009 comments: If possible leave scattered black cherry. Also, if possible include timber in stands 48 and 50. WLD will mark scattered leave trees. These two stands were WLD rye plantings and the Rx will be continued.

Next Steps:

51	**61125051-Cut**	9.1	4311 - Pine, Aspen Mix	High Density Pole	57	Harvest	Clearcut	Aspen, Jack Pine

Rev Cmnt:

Rev Spec: --Stephen Griffith : 10/05/2009 comments: If possible, include aspen clone from stands 53 and 55 in this sale.

Final harvest with no retention

Next Steps: Should regenerate to a mixed aspen/jack pine meduim stocked or better.

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
65	**61125065-Cut**	10.3	4133 - Aspen, Mixed Pine	High Density Pole	49	Harvest	Clearcut with Reserves	Aspen, Mixed Deciduous

Rev Cmnt:

Rev Spec:

Next Steps:

62	**NF_61125062-Burn**	89.7	Unspecified		0	Prescribed Burn	Unspecified	Warm Season Grass

Rev Cmnt: If FMFM agrees, aspen clones in stands 53 and 55 have been prescribed for cutting with timber sale in stand 51. These areas would then be left out of burn.

Rev Spec: Burn this stand at least once per entry period in order to set back woody encroachment, increase species diversity, stimulate native herbaceous vegetation, promote berry production, and recycle nutrients.

Next Steps:

37	**NF_61125037-Mow**	17.6	Unspecified		0	Non-Forest Management	Mowing	Low Density Deciduous Trees

Rev Cmnt:

Rev Spec: Should mow repeatedly in one growing season to set back bracken. First mowing should be when bracken is fully emerged. Second mowing should be as soon as new fronds unfurl. And then as needed.

Next Steps: Periodic maintenance such as mowing, fertilization, reseeding, and/or removal of woody encroachment.

48	**NF_61125048-Herbaceous**	2.1	Unspecified		0	Non-Forest Management	Other - Specify	Cool Season Grass

Rev Cmnt: Have asked FMFM to include some of the trees here in the harvest of stand 49. WLD will mark scattered leave trees.

Rev Spec: This opening is a traditional wildlife planting. Disk is crab/quack grass, plant to annual rye for several years and then convert back to a pasture mix (i.e. clover/alfalfa).

Next Steps: Periodic maintenance such as mowing, fertilization, reseeding, and/or removal of woody encroachment.

50	**NF_61125050-Herbaceous**	2.8	Unspecified		0	Non-Forest Management	Other - Specify	Cool Season Grass

Rev Cmnt: Have asked FMFM to include some of the trees here in the harvest of stand 49. WLD will mark scattered leave trees.

Rev Spec: This opening is a traditional wildlife planting. Disk is crab/quack grass, plant to annual rye for several years and then convert back to a pasture mix (i.e. clover/alfalfa).

Next Steps: Periodic maintenance such as mowing, fertilization, reseeding, and/or removal of woody encroachment.

Total Treatment Acreage Proposed: **207.5**

PROPOSED TREATMENTS WITH LIMITING FACTORS

Stand	Treatment Name	Acres	Stage1 Cover Type	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
9	61125009-Cut	45.0	4130 - Aspen	High Density Pole	50	Harvest	Clearcut with Reserves	Aspen, Mixed Deciduous

Limiting Factor and Comment: 2D: Road needed
Best access is from pvt. to the west of stand

Rev Cmnt: If pvt access is not secured a new rd can be built off Mecum rd but this will make sale winter harvest only as access will be through lowland type and rd wil have to be froze in.

Rev Spec: --Stephen Griffith : 10/05/2009 comments: Create some (approximately 1 tree per 2 acres) coarse woody debris (CWD) during harvest operations, preferably via timber sale specs. CWD trees should be log sized or bigger, the more decay resistant the tree species is the better, and cut approximately at breast height (4.5 feet). The log should be left within 3 feet it's stump. If possible leave tops unchipped for hare and other small mammal cover.

Final harvest leaving pockets or fingers of aspen along stand boundary - approx. 3-5 acres

Next Steps: should regen. to fully stocked aspen, mixed conifer-hwdwd stand. Check regen 2 years after harvest.

No Treatment Reason: Best access is from pvt. to the west of stand

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Stand	Treatment Name	Acres	Stage1 Cover Type	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective
7	61125007-Cut	32.5	4134 - Aspen, Spruce/Fir	High Density Pole	49	Harvest	Clearcut with Reserves	Aspen, Mixed Conifer

Limiting Factor and Comment: 2D: Road needed
Access must be from pvt. to the north and west of stand

Rev Cmnt: Possible pvt. access to the west or north side of stand - if denied extensive rd. building would make this stand impractical to harvest

Rev Spec: --Stephen Griffith : 10/05/2009 comments: Create some (approximately 1 tree per 2 acres) coarse woody debris (CWD) during harvest operations, preferably via timber sale specs. CWD trees should be log sized or bigger, the more decay resistant the tree species is the better, and cut approximately at breast height (4.5 feet). The log should be left within 3 feet it's stump.

Final harvest leaving pockets of mixed aspen,hdwd and fir. approx. 2 pockets of 2-3 acres

Next Steps: should regenerate to mixed aspen -mixed conifer - medium to full stocking - check regen in 2 years after harvest.

No Treatment Reason: Access must be from pvt. to the north and west of stand

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Total Treatment Acreage Proposed: 77.5

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.

Inventory Method: IFMAP

Stand	SCA Name	Acres	Comments

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
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.
SCA	Archaeological Site	An aquatic or terrestrial area of the State that contains physical remains of human occupation. These are sites of cultural and historical significance that may occur upon terrestrial areas and Great Lakes bottomlands. They include thousands of Native American settlements and burial sites, as well as French and British outposts, nineteenth century logging camps, mines and homesteads. Beneath the waters of the Great Lakes, there are shipwrecks and other remains documenting the maritime trade. Such sites may be identified by Natural heritage data from the State Historic Preservation Office. Proposed treatments in this compartment will be implemented in such a manner as to maintain the integrity of these sites. Due to the sensitive nature of this information, no further detail about location is available.
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.
SCA	Research and Military Areas	These areas provide facilities and lands specifically dedicated for research, or other purposes. They include the 5,847 acre Forest Fire Experiment Station, the 12,000 acre Houghton Lake Wildlife Research Area, the Beaver Islands Archipelago Wildlife Research Area (that includes most of Garden Island, all of High and Hog Islands, all state owned land on Beaver, South Fox and North Fox Islands), the Cusino Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research Station, the 125 acre Wyman Nursery, and over 144,000 acres of Military Lands.