



Gwinn Forest Management Unit
Compartment Review Presentation
Compartment 005 **Entry Year: 2013**
Compartment Acreage: 1, 339 **County: Marquette**

Revision Date: 08/18/2011

Stand Examiner: Theresa Sysol

Legal Description: T44N R23W Section 6,7,18

RMU (if applicable): Dead Horse Moraines Management Area

Management Goals: To maintain and improve forest health and sustainability, while providing for wildlife, fisheries and recreational needs.

Soil and Topography: Mainly Cathro-Ensley mucks within lowlands and drainageways, with Shoepac-Trenary silt loams, Trenary silt loams on upland moraines.

Ownership Patterns, Development, and Land Use in and Around the Compartment: Primarily State with some corporate lands (Plum Creek) within and adjacent, with little urban development. Land use is mainly for timber management, wildlife, and hunting.

Unique, Natural Features: Potential for osprey, eagle, and great blue heron rookery. Potential for red-shouldered hawk and goshawk. Potential for wood turtle in Werner Creek. Potential for rapids clubtail along Werner Creek where it passes through several northern hardwood stands. Potential for frigga fritillary, freija fritillary and red-disked alpine in bogs. Potential for moose and wolf. Potential for round-leaved orchis, calypso, ram's head lady's slipper, marsh grass-of-Parnassass, and limestone oak fern in Cedar Swamps. Potential for auricled tway-blade, western dock, and linear-leaved gentian along riparian areas. Potential for Farwell's water-milfoil and alternate-leaved water-milfoil in shallow lakes.

Archeological, Historical, and Cultural Features: None identified

Special Management Designations or Considerations:

Watershed and Fisheries Considerations: Deer Creek, Werner Creek

Wildlife Habitat Considerations: Identify and implement methods that increase mesic conifer in hardwood stands. Hunting is popular in this area for deer, bear, and upland birds. Within Special Conservation Areas along wildlife corridors, creeks and tributaries, maintain large closed canopy conifer to provide snow intercept and cover, mature forest structure and protection for wildlife corridors and riparian areas.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of medium-textured glacial till. There is insufficient data to determine the glacial drift thickness. The Ordovician Prairie du Chien and Black River Groups subcrop below the glacial drift. These formations are quarried for stone/dolomite in other areas of the State. The nearest gravel pit is located to the south of the compartment and potential appears to be good. Abandoned iron mines are located eight miles to the west. This compartment has not been leased for metallic exploration. There is no economic oil and gas production in the UP.

Vehicle Access: from the south - good via County Road RA, and poor dirt State roads, which have deteriorated in recent years due to several years of intensive timber harvesting on corporate lands. From the north – via Stack Grade, a poor dirt State road receiving minimal maintenance.

Survey Needs: none at this time

Recreational Facilities and Opportunities: Mainly hunting and trapping

Fire Protection: Fire risk is relatively low, due to lowland cover types within, although isolated lightning strikes have the possibility of creating suppression difficulties. There are also interior red pine plantation blocks on corporate lands within sections 6 and 7.

Additional Compartment Information:

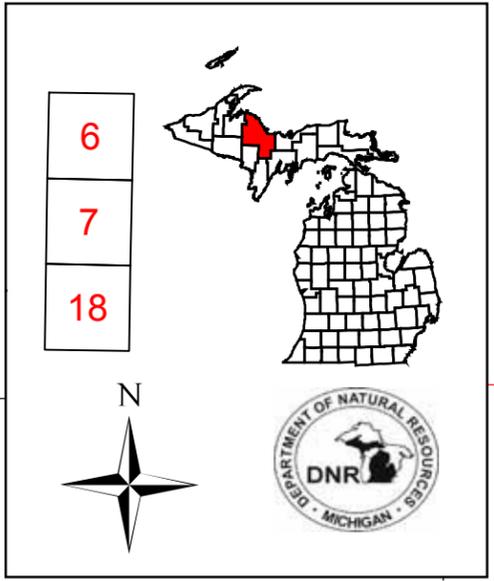
- **The following 5 reports from the Operations Inventory System (OIPC) are attached:**
 - ◆ **Cover Type by Age Class**
 - ◆ **Cover Type by Management Objective**
 - ◆ **Compartment Volume Summary**
 - ◆ **Proposed Treatments – No Limiting Factors**
 - ◆ **Proposed Treatments – With Limiting Factors**

- **The following information is displayed, where pertinent, 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 005
 T44N, R23W, Sec. 6, 7, 18
 County: Marquette
 Unit: Gwinn
 YOY: 2013
 Acres: 1,339 GIS Calculated
 Stand Examiner: Theresa Sysol
 Map Revised: 8/23/2011
 Map Phase: Pre-Review

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



Legend

- Miris Corners
- Remonumented Section Corners
- Wooden Post
- Iron Pin
- RIs Corner
- GPS Corner
- Poor Dirt Roads
- Closed Roads
- Gates
- Intermittent Stream/Drain
- Stream
- Lakes and Rivers

Treatments

- Selection (Group, Single Tree)

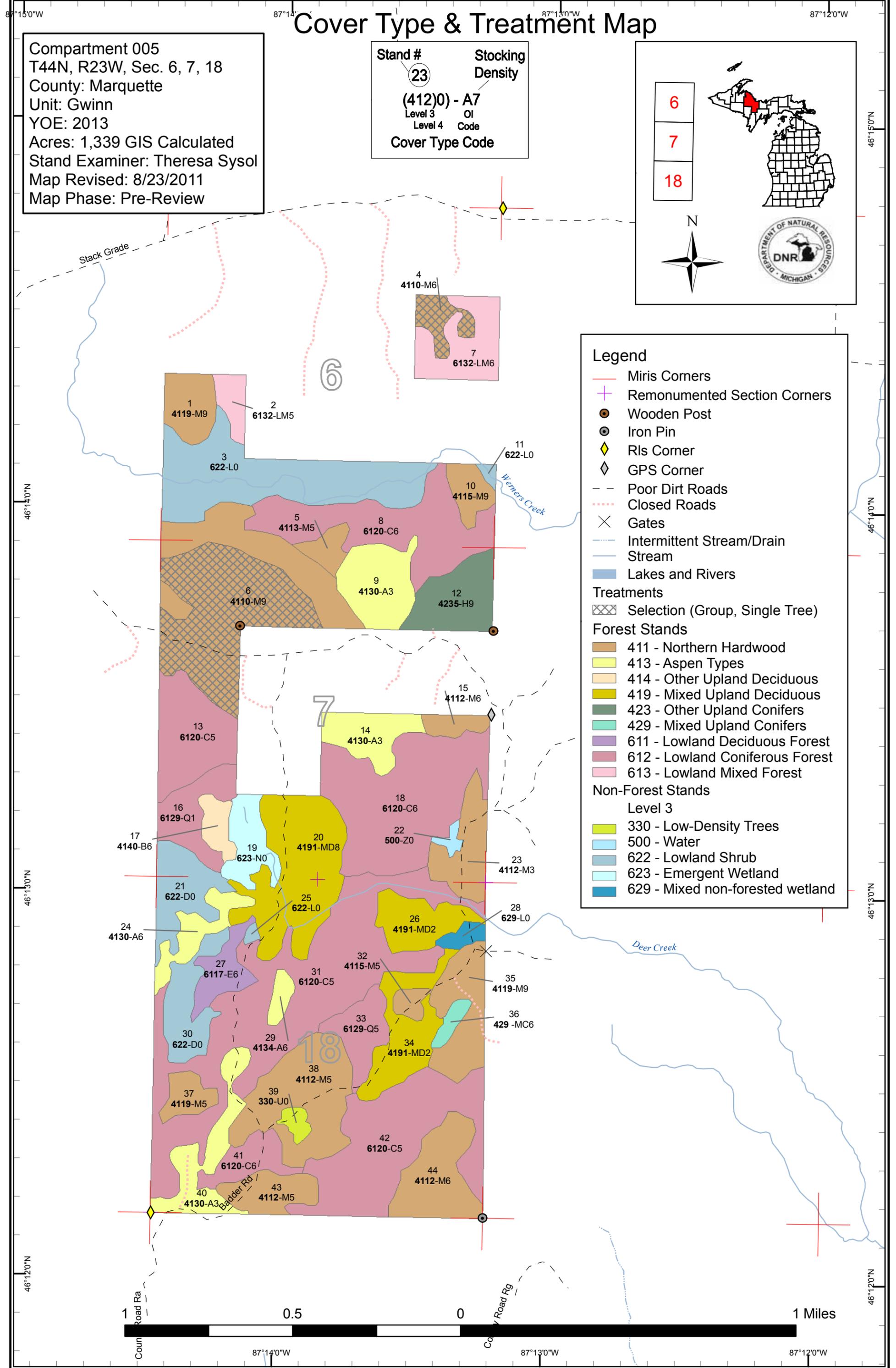
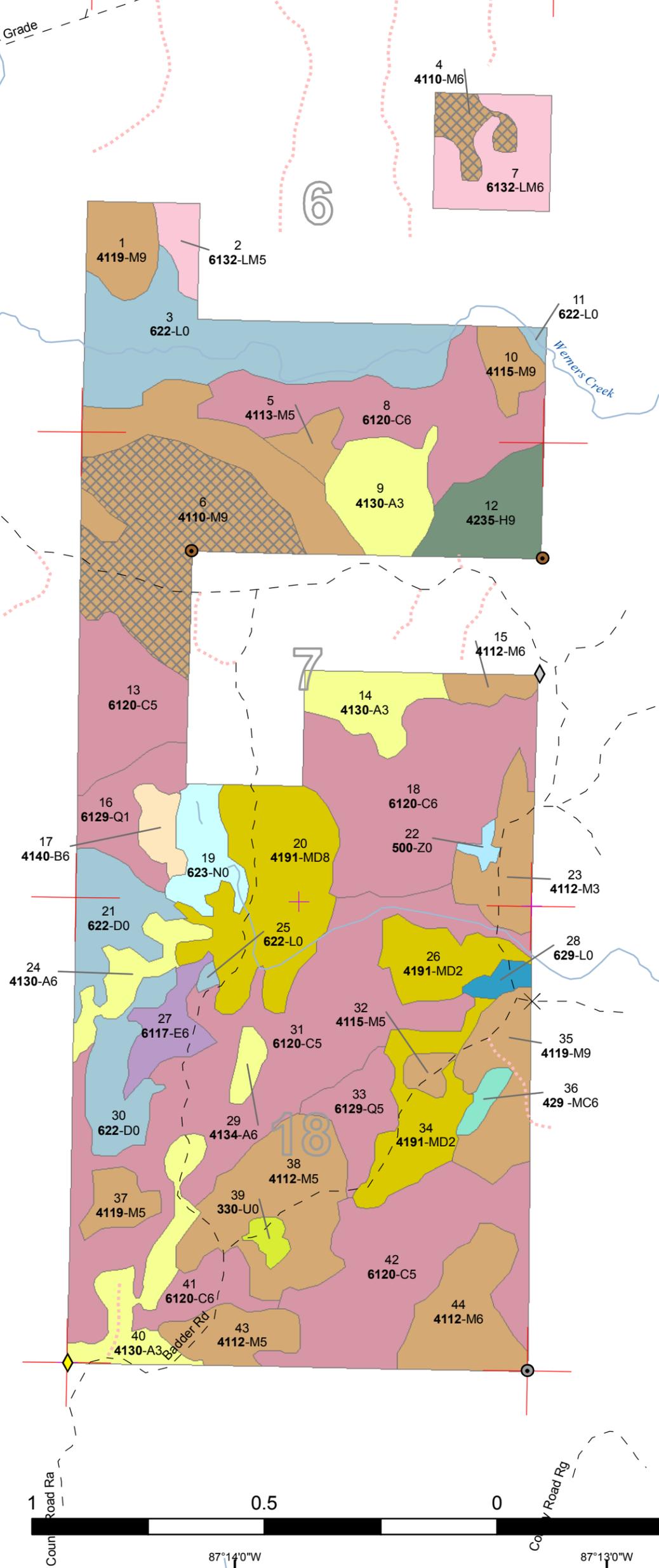
Forest Stands

- 411 - Northern Hardwood
- 413 - Aspen Types
- 414 - Other Upland Deciduous
- 419 - Mixed Upland Deciduous
- 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

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



Stand Boundary Map

Compartment 005
 T44N, R23W, Sec. 6, 7, 18
 County: Marquette
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 Map Revised: 8/23/2011
 Map Phase: Pre-Review

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

6
 7
 18



Legend

- Miris Corners
- Wooden Post
- Iron Pin
- ◆ Corner
- + Remonumented Section Corners
- ◆ RIs Corners
- - Poor Dirt Roads
- ⋯ Closed Roads
- ✕ Gates
- Intermittent Stream/Drain
- Stream
- Stand Boundaries

Forest Stands

- 411 - Northern Hardwood
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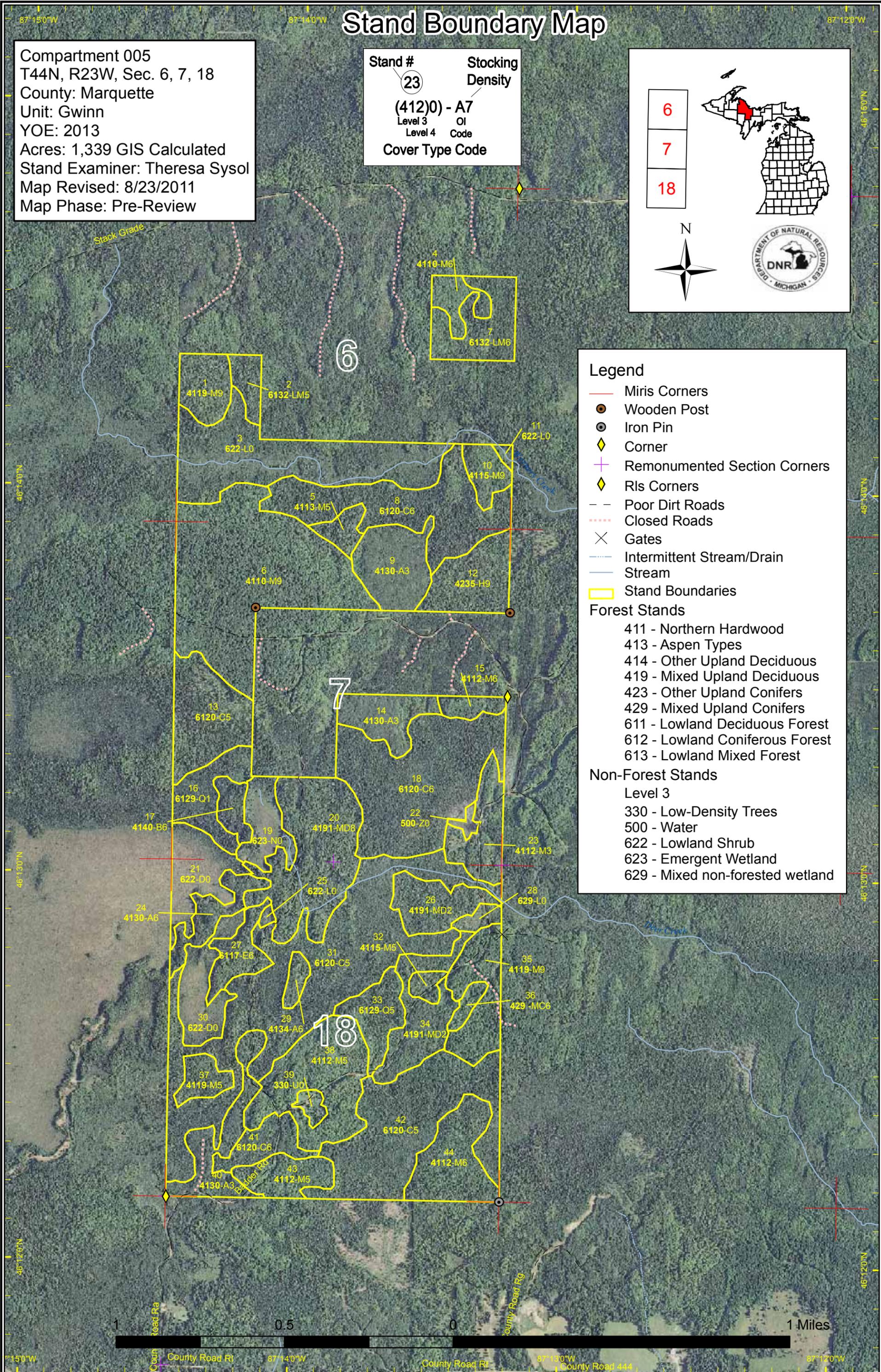


Table 1 – Total Acres by Cover Type and Age Class



	Age Class														Total	
	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 +		Unretn Age
Aspen	0	0	53	28	0	0	16	0	5	0	0	0	0	0	0	102
Cedar	0	0	0	0	0	0	0	0	100	149	93	66	0	0	40	449
Hemlock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	29
Low-Density Trees	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Lowland Conifers	0	0	0	0	0	0	0	0	19	0	0	0	0	0	23	42
Lowland Deciduous	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	15
Lowland Mixed Forest	0	0	0	0	0	0	0	0	0	0	0	38	0	0	0	38
Lowland Shrub	89	0	0	0	0	0	0	0	0	0	0	0	0	0	0	89
Marsh	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
Mixed Upland Deciduous	0	0	0	54	0	0	0	0	0	0	0	0	0	0	68	122
Northern Hardwood	0	0	0	24	0	0	0	0	0	35	26	0	0	0	277	362
Paper Birch	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	9
Treed Bog	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
Upland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5
Water	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Total	166	0	53	105	0	0	16	0	150	184	119	105	0	0	442	1339



Table 2 – Proposed Treatment Summaries

Gwinn Mgt. Unit
Year of Entry 2013

Compartment 005
Total Compartment Acres: 1339

Acres by Treatment Type

Commercial Harvest - 95	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

		Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Northern Hardwood	0	95	0	0	0	0	0	95
Total	0	95	0	0	0	0	0	95

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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
4 32005004-Cut	11.0	4110 - Sugar Maple Association	High Density Pole	90	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal

Prescription Mark hardwoods to 80-90 BA, using the Compleat Marker as a guide, and create some regeneration holes, where appropriate. Retain species diversity and leave wildlife cavity/den trees.

Other Access will be required across private corporate lands.

Comments:

Next Steps: Monitor for successful hardwood regeneration where gaps have been created.

6 32005006-Cut	83.7	4110 - Sugar Maple Association	High Density Log	94	Harvest	Single Tree Selection	4110 - Sugar Maple Association	Cmpt. Review Proposal
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Prescription Mark hardwoods to 80-90 BA, using the Compleat Marker as a guide. Retain under-represented species. Leave all white pine, white spruce, hemlock, cedar and oak within stand.

Other N and E stand edges drops into lower BA, with more hemlock and smaller diameter timber - these areas can be excluded from the treatment boundary. Girdling of basswood tops noted (porcupines). Private lines have been established by corporate owner (Plum)

Comments:

Next Steps: Monitor for successful regeneration of hardwood species. Acceptable mix includes sugar maple, red maple, basswood, birch, cherry, and oak.

**Total Treatment
Acreage Proposed: 94.7**

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Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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Prescription
Specs:

Other
Comment:

Next
Steps:

Limiting Factor and No
Treatment Reason

Total Treatment
Acreage Proposed: 0

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
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Prescription
Specs:

Other
Comments:

Next
Steps:

**Total Treatment
Acreage Proposed: 0**



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4119 - Mixed Northern Hardwoods	High Density Log	18.2	Uneven Age	81-110	Recommended old growth last entry.
2	6132 - Mixed Lowland Forest with Cedar	Medium Density Pole	9.1	108		Proposed old growth last entry
4	4110 - Sugar Maple Association	High Density Pole	10.9	Uneven Age	111-140	Potential old growth last entry - removal of designation proposed.
5	4113 - R.Maple, Conifer	Medium Density Pole	8.2	94	51-80	"McFarland Hardwoods" #007-03 (unit 6) - cut Sept, 2006. Lower ground than adjacent stand.
6	4110 - Sugar Maple Association	High Density Log	128.6	Uneven Age	111-140	"Bravo Two Block" sale # 001-93 (Units 3-7) - completed 1996. Rolling terrain; draws. Lower quality/lower topography at north end of stand (a small portion of which was proposed as potential old growth last entry). Trace amount of cedar, white pine, and paper birch noted.
7	6132 - Mixed Lowland Forest with Cedar	High Density Pole	29.0	108		Proposed old growth last entry.
8	6120 - Lowland Cedar	High Density Pole	66.4	102		Proposed old growth last entry. Trace amounts of balsam fir and white spruce in canopy; sub-canopy has trace of ash, yellow birch, fir and spruce.
9	4130 - Aspen	High Density Sapling	31.1	16		"Bravo Two Block" #001-93 (unit 2) - cut 1994, 1995. Mix of upland and lowland grounds; lower, more open areas with balsam poplar, willow, F/S and maple.
10	4115 - Y.Birch, Hemlock NH	High Density Log	11.4	Uneven Age	111-140	Isolated hardwood patch between creek and cedar swamp. Proposed old growth last entry; SCA = riparian corridor for Werner Creek.
12	42350 - Upland Hemlock	High Density Log	29.5	Uneven Age	81-110	"Bravo Two Block" #001-93 (unit 1) - cut 1995-96.
13	6120 - Lowland Cedar	Medium Density Pole	39.9	Uneven Age	51-80	portion of stand treated as "McFarland Hardwoods" #007-03 (unit 7) - cut Feb, 2007 (seed tree). Mixed stand, due to treatment.
14	4130 - Aspen	High Density Sapling	21.7	15		"Bravo Two Block" #001-93 (unit 8). Mixed aspen stand.
15	4112 - Maple, Beech, Cherry Association	High Density Pole	7.2	90	81-110	"McFarland Hardwoods" #007-03 (unit 5) - thinned August, 2006. Trace amount of hemlock and paper birch noted.
16	6129 - Mixed Coniferous Lowland Forest	Low Density Sapling	22.9	Uneven Age		Spruce/tamarack bog
17	4140 - Other Upland Deciduous	High Density Pole	9.2	76		Proposed old growth last entry. Average BA=100.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
18	6120 - Lowland Cedar	High Density Pole	93.3	97	171-200	Nice cedar stems. Trace amounts of w. spruce, hemlock, red maple, yellow birch, ash and aspen noted.
20	4191 - Mixed Upland Deciduous with Conifer	Medium Density Log	68.3	Uneven Age	51-80	part of "McFarland Hardwoods" #007-03 (unit 4 and 3?) - cut Oct, 2006 - Feb, 2007. Inclusions of potential old growth areas (hemlock).
23	4112 - Maple, Beech, Cherry Association	High Density Sapling	23.8	24		Cut 1987 - sprout-origin maple/cherry; some lowland inclusions within. Aspen/paper birch mainly along road edges.
24	4130 - Aspen	High Density Pole	16.3	50	81-110	Steep razorback ridge of aspen along bog edge.
26	4191 - Mixed Upland Deciduous with Conifer	Medium Density	22.7	24		Cut 1987. Aspen, maple and cherry with fir. Trace amounts of red and white pine, tamarack.
27	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	15.4	75		
29	4134 - Aspen, Spruce/Fir	High Density Pole	5.3	75		
31	6120 - Lowland Cedar	Medium Density Pole	149.2	81		"McFarland Hardwoods" #007-03 (unit 2 - former stand 53) within; cut Jan, 2007. Had difficulties freezing ground for harvest.
32	4115 - Y.Birch, Hemlock NH	Medium Density Pole	4.9	Uneven Age	81-110	T. sale #002-93 (unit 3) - cut F,'93 - W,'94. Trace amounts of sugar maple, paper birch.
33	6129 - Mixed Coniferous Lowland Forest	Medium Density Pole	19.4	74	51-80	
34	4191 - Mixed Upland Deciduous with Conifer	Medium Density	31.1	24		Cut 1987 - mixed aspen, cherry, maple with fir. Trace amounts of white pine, tamarack.
35	4119 - Mixed Northern Hardwoods	High Density Log	29.8	Uneven Age	81-110	"Raish Landing Sale" #002-93 (unit 3) - cut F, '93 - W, '94. Could delay treatment one more cycle.
36	429 - Mixed Upland Conifers	High Density Pole	4.6	Uneven Age		Small hemlock area within hardwoods.
37	4119 - Mixed Northern Hardwoods	Medium Density Pole	10.4	90	81-110	"McFarland Hardwoods" #007-03 (unit 1) - cut Jan, 2007 (after numerous freezing issues).
38	4112 - Maple, Beech, Cherry Association	Medium Density Pole	54.7	Uneven Age	81-110	Portion cut in 1987 and also "Raish Landing Sale" #002-93 (unit 2) - cut Su/F, 1993. Heavier conifer cover around G type; hemlock patches within.
40	4130 - Aspen	High Density Sapling	27.8	24		cut in 1987 (sale #30-85?) - contains inclusion of cedar/spruce/tagalder lowland along road.

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Gwinn Mgt. Unit

5 – Forested Stands

Compartment: 005
Year of Entry: 2013

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
41	6120 - Lowland Cedar	High Density Pole	16.0	78		
42	6120 - Lowland Cedar	Medium Density Pole	84.2	78		Small sale patches within ("Deer Creek Hardwoods" # 008-03 (OI stand 41 - unit 1) - cut Feb, 2007. Some cutting also done in 1993.
43	4112 - Maple, Beech, Cherry Association	Medium Density Pole	18.5	Uneven Age	51-80	"Raish Landing Sale" #002-93 (unit 1) - cut Su, 1993.
44	4112 - Maple, Beech, Cherry Association	High Density Pole	34.9	87	81-110	Set-up under sale #002-93 (unit 4) - never cut. Re-set up as "Deer Creek Hardwoods" #008-03 (units 2,3) - cut Feb, 2007.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
3	6220 - Alder/willow	81.4	No	Unspecified	Lowland stand of mainly tagalder with a few trees. Standing water, club moss, grasses/sedge. Recommended potential old growth last entry - agree.
11	6220 - Alder/willow	1.7	No	Unspecified	Contains Werner Creek
19	6239 - Mixed Emergent Wetland	18.5	No	Unspecified	
21	6224 - Treed Bog	26.7	No	Unspecified	Bog
22	50 - Water	2.7	No	Unspecified	Flooding into surrounding stand 18
25	6220 - Alder/willow	1.3	No	Unspecified	treed bog/tagalder lowland along trail
28	629 - Mixed non-forested wetland	5.0	No	Unspecified	Dead timber/snags within
30	6224 - Treed Bog	23.8	No	Unspecified	Treed bog - mainly black spruce 5-10' hts in the interior, taller on perimeter. Some labrador tea, tagalder noted.
39	3302 - Low Density Conifer Trees	4.3	Yes	Low (NonForested)	



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
1	Unique Site - SCA	32005001	18.2	SCA - abundant large diameter legacy trees within stand, which are mainly wildlife quality - opportunity for natural processes to enhance Mesic Northern Forest composition. Ties in with watershed and wildlife corridor to the south.
2	Unique Site - SCA	32005002	9.1	SCA = riparian and wildlife objectives. Follow BMPs, modify work or protect areas that transition from upland to lowland with heavy wildlife use along river and stream corridors, and maintain large conifer for snow intercept and thermal protection. Minimize activity to protect watershed integrity. Along these wildlife travel corridors, manage for increased forest structure and large legacy trees for wildlife.
4	SCA Removal	32005004	10.9	Hardwood pole stand with good component of cherry. It is a fairly pure component of the stand, in places. Mark to create large enough openings to encourage regeneration. The adjacent industry lands (Plum Creek) have been thinned down to ~60 - 90 BA, and have had good maple and cherry regeneration success (10 - 20' hts). Access to stand will require crossing these lands, via old skid roads, if harvest.
7	Unique Site - SCA	32005007	29.0	SCA = riparian and wildlife objectives. Protect areas that transition from upland to lowland with heavy wildlife use and maintain large conifer for snow intercept and thermal protection. Along these wildlife travel corridors, manage for increased forest structure and large legacy trees for wildlife.
8	Unique Site - SCA	32005008	66.4	SCA = riparian and wildlife corridor for Werner Creek. Follow BMPs, modify work or protect areas that transition from upland to lowland with heavy wildlife use along river and stream corridors, and maintain large conifer for snow intercept and thermal protection. Minimize activity to protect watershed integrity. Along these wildlife travel corridors, manage for increased forest structure and large legacy trees for wildlife.
10	Unique Site - SCA	32005010	11.4	SCA = riparian and wildlife corridor for Werner Creek. Follow BMPs, modify work or protect areas that transition from upland to lowland with heavy wildlife use along river and stream corridors, and maintain large conifer for snow intercept and thermal protection. Minimize activity to protect watershed integrity. Along these wildlife travel corridors, manage for increased forest structure and large legacy trees for wildlife.
16	SCA Removal	32005016	22.9	Treed bog stand.
17	SCA Removal	32005017	9.2	Silviculturally, stand is ready for treatment, but access across low bog/marsh ground would severely restrict.
20	SCA Removal	32005020	68.3	Stand incorporates hemlock patches which were identified as old growth previously; any future management would be to enhance/expand these hemlock sites. Mesic Northern Forest type.



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Stand	SCA Type	SCA Name	Acres	Comments
31	Unique Site - SCA	32005031	149.2	SCA = riparian and wildlife objectives. Deer Creek and numerous flows/drainages feed through lowland conifers and cedar, with slightly higher ground supporting more diverse species. Minimize activity to protect watershed integrity.
3	Unique Site - SCA	NF_32005003	81.4	SCA = riparian corridor Werner Creek
11	Unique Site - SCA	NF_32005011	1.7	SCA - riparian zone Werner Creek
28	Unique Site - SCA	NF_32005028	5.0	SCA - wetlands protection; flow ties in with Deer Creek
30	Unique Site - SCA	NF_32005030	23.8	SCA - Treed bog/marsh; potential for T&E species



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
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