



Compartment Review Presentation

Gwinn Forest Management Unit

Compartment 49

Entry Year 2015

Acreage: 1,874

County Marquette

Management Area: Chain Lakes Moraine

Revision Date: 08/06/2013

Stand Examiner: Theresa Sysol

Legal Description:

T44N R26W Section(s) 10-12

Identified Planning Goals:

To maintain the health and sustainability of the forest, while providing for wildlife, fisheries, environmental and recreational needs.

Soil and topography:

Uplands of Rubicon sand, Sayner-Rubicon, Croswell sand with lowland conifer swamps containing Carbondale and Tawas, and Tawas-Deford mucks. Some well-drained Garlic-Alcona-Voelker complex found within hardwood uplands along the Perrin Bros. Road.

Ownership Patterns, Development, and Land Use in and Around the Compartment:

Isolated 40 ac and 1 ac private holding(s) within central portion of compartment, otherwise State ownership. Numerous camps and private landholdings adjacent, making this a fairly high-use hunting and recreation area.

Unique Natural Features:

See MNFI comments. Potential for calypso orchid and ram's head lady's-slipper. Potential for eagle, osprey, frigga fritillary, red-shouldered hawk, goshawk and wood turtle. Potential for gray wolf.

Archeological, Historical, and Cultural Features:

none identified with HAL

Special Management Designations or Considerations:

Chain Lakes Moraine Management Area. Rich conifer swamp within Section 12 (See MNFI comments/abstracts)

Watershed and Fisheries Considerations:

Anderson Lake, Flacks Lakes, Chandler Brook and Miller Creek all fall within the compartment.

Wildlife Habitat Considerations:

Compartment 49 is found within the Chain Lakes Management Area; which is a Disintegration Moraine in Southwestern Marquette County. The State Forest covers about 84,600 acres and is mostly contiguous. State Forest Lands are the major ownership in this vicinity. The dominant Natural Communities are dry mesic northern forests, poor conifer swamps, and mesic northern forests. Major forest cover types include Aspen, Mixed Lowland Conifer, and Jack Pine. In general, this area has a mid-range site quality. This management area provides multiple benefits to the public including forest products, dispersed recreational activities, and habitat for fish and wildlife species. Some of the most significant wildlife management issues in the management area are: mast (hard and soft); habitat fragmentation; mature forest conditions; mesic conifer; coarse woody debris; and retention or development of large living and dead standing trees (for cavities). Wildlife Division would like to increase the oak resource within this management area and to optimize acorn production. This management area represents approximately 1/4 of the oak resource on WUP state forest. In addition to promoting mast crops another priority is to maintain or increase wildlife corridors especially along riparian corridors.

The following have been identified as featured species for the Chain Lakes Management Area: Black bear, Gray Jay, Pileated Woodpecker, Northern Goshawk, Red Crossbill. However, the featured species concept does not preclude the management for other wildlife species within a particular MA, rather it is simply intended to be as a tool to help prioritize or focus habitat management.

For lands purchased with Pittman–Robertson Act or Game and Fish funds, the primary objective of vegetative management must be wildlife restoration.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of medium-textured glacial till, and minor amounts of peat and muck and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 100 and 200 feet. The Cambrian Trempealeau Formation and Munising Group subcrop below the glacial drift. The Trempealeau could be used for stone. Gravel pits are located two miles to the northeast, and there should be some potential on the uplands. Abandoned iron mines are located four miles to the northeast. This compartment has not been leased, but leases for metallic exploration were located in the Township to the south. There is no economic oil and gas production in the UP.

Vehicle Access:

The Perrin Bros. Road, a county maintained good gravel seasonal road bisects the compartment, with only a few closed two-track roads providing additional access. The Miller Creek Road, a State maintained Road, provides access to the NW portion of the compartment. This road receives heavy year-round traffic, and is in need of maintenance. Access on the east is via the Anderson Lake SFCG Road.

Survey Needs:

None at this time.

Recreational Facilities and Opportunities:

Anderson Lake and Flacks Lakes trails, Anderson Lake State Forest Campground and boat access site. A State-sponsored snowmobile trail (Trail #33) utilizes both the Perrin Bros. and Miller Creek Roads during the winter months. Heavy hunting use.

Fire Protection:

Fire response time will be around 1/2 hour, with control efforts requiring around the same amount of time if located on upland grounds. Lowland ground fires would require additional control time and alternate suppression tactics.

Additional Compartment Information:

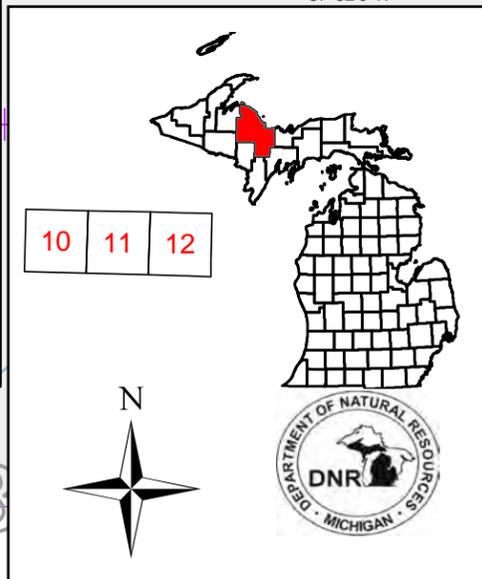
The following reports from the Inventory are attached:

- Total Acres by Cover Type and Age Class
- Cover Type by Harvest Method
- Proposed Treatments – No Limiting Factors
- Proposed Treatments – With Limiting Factors
- Stand Details (Forested and Nonforested)
- Dedicated and Proposed Special Conservation Areas
- Site Condition Details

The following information is displayed, where pertinent, on the attached compartment maps:

- Base feature information, stand boundaries, cover types, and numbers
- Proposed treatments
- Site condition boundaries
- Details on the road access system

Compartment: 049
 T44N R26W Sec. 10, 11, 12
 County: Marquette
 Unit: Gwinn
 YOE: 2015
 Acres: 1,874 GIS Calculated
 Examiner: Theresa Sysol
 Map Revised: 08/06/2013
 Map Phase: Pre-Review



Cover Type & Treatment Map

Stand #
 23
 (4120) - A7
 Level 3 OI
 Level 4 Code
 Cover Type Code

Legend

- Remonumented Section Corners
- PLSS Corner
- Wood Post
- GPS Point
- Miris Corners
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Closed Roads
- Gate
- Berms
- Bridges
- Structures
- Ski Trail
- Hiking Trail
- Snowmobile Trail
- Hiking Trails
- Ski Trails
- Snowmobile Trails
- Stream
- Intermittent Stream
- Lakes and Rivers
- State Forest Land

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Shelter Wood (w/Reserves)
- Selection (Group, Single Tree)

Forest Stands

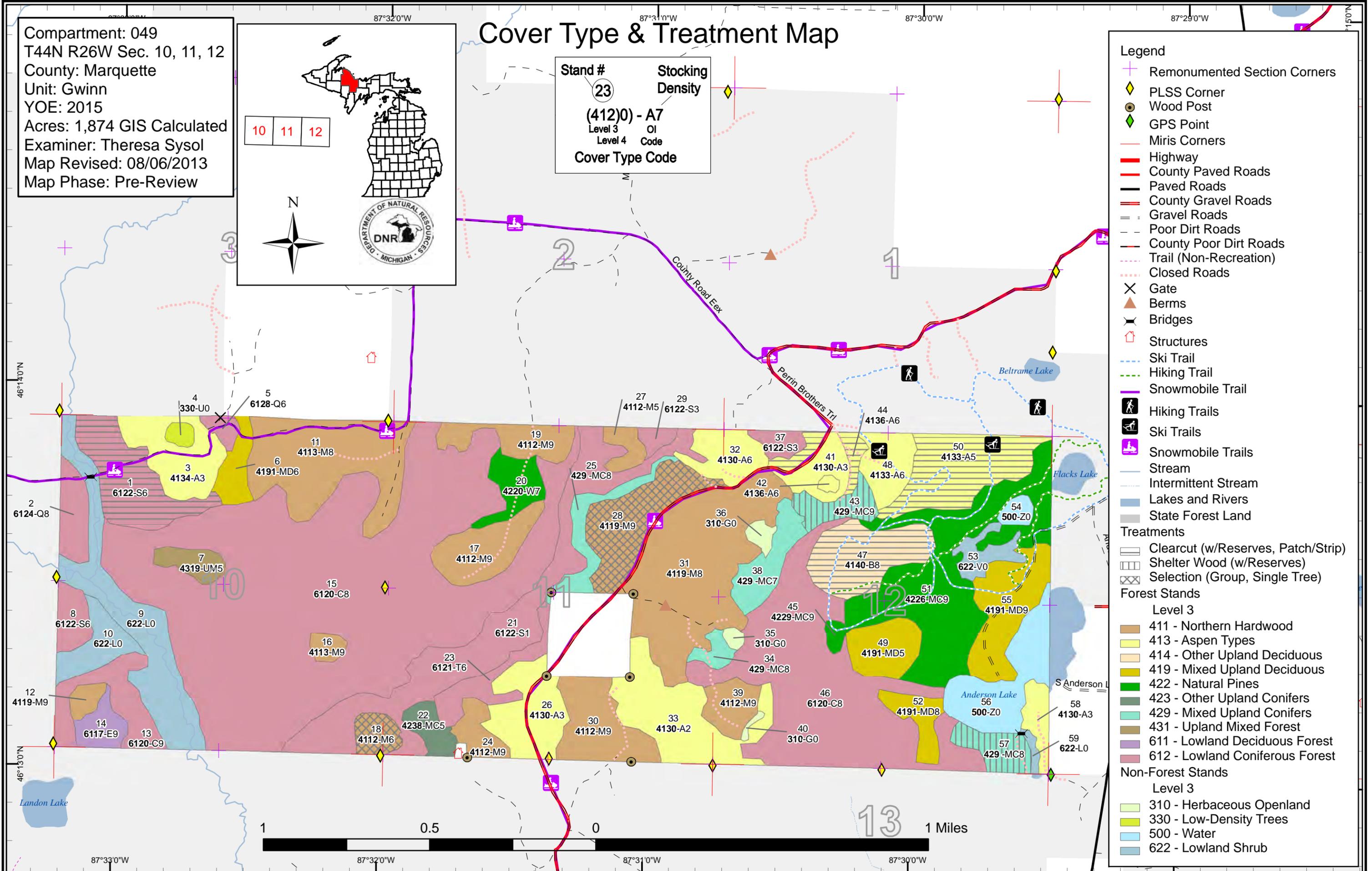
Level 3

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

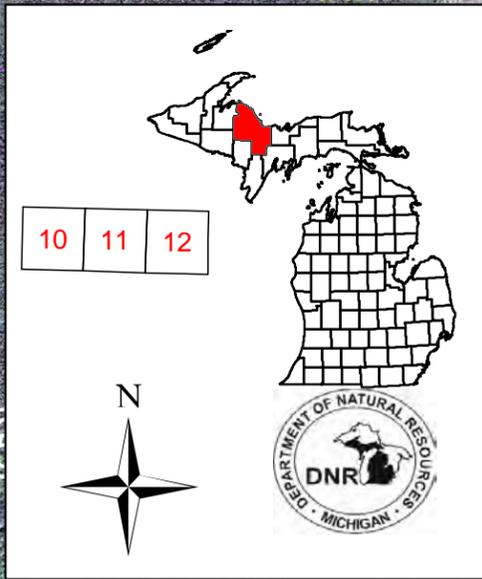
Non-Forest Stands

Level 3

- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub



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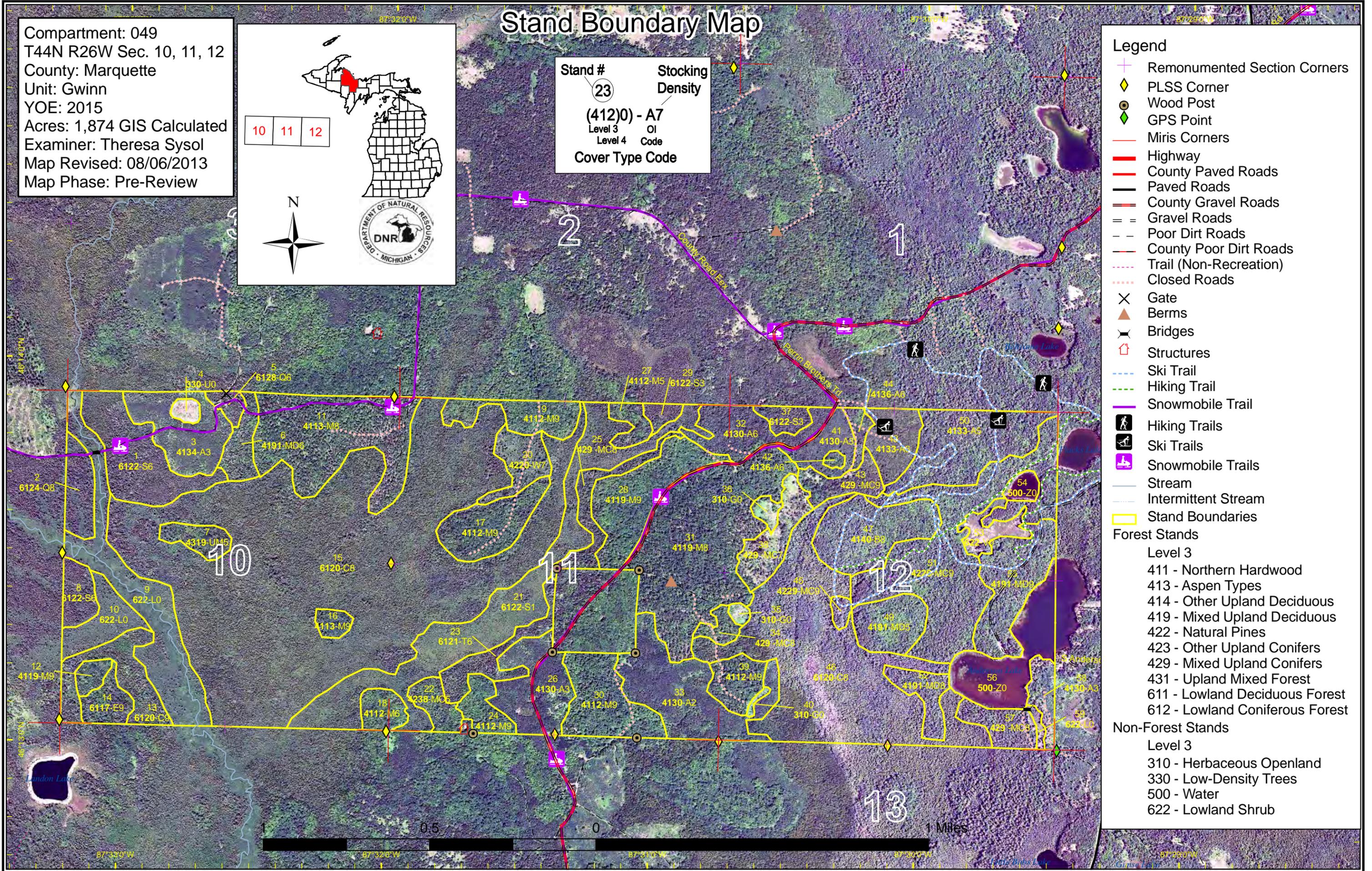


Stand Boundary Map

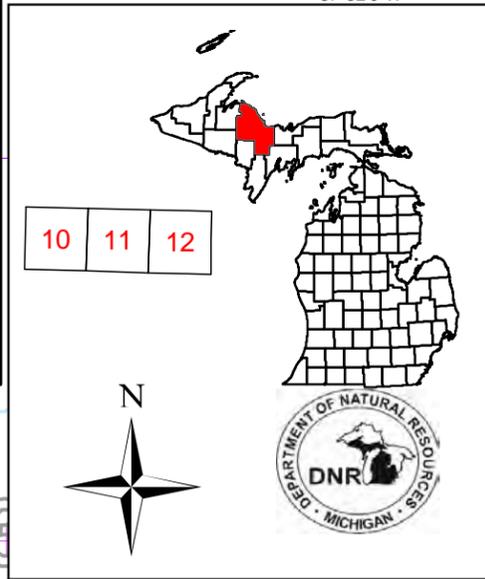
Stand # 23
 Stacking Density
 (4120) - A7
 Level 3 OI
 Level 4 Code
 Cover Type Code

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- ✚ Remonumented Section Corners
 - ◆ PLSS Corner
 - ⊙ Wood Post
 - ◆ GPS Point
 - Miris Corners
 - Highway
 - County Paved Roads
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 - Closed Roads
 - ✕ Gate
 - ▲ Berms
 - ⊗ Bridges
 - ⬆ Structures
 - Ski Trail
 - Hiking Trail
 - Snowmobile Trail
 - ⚡ Hiking Trails
 - ⚡ Ski Trails
 - ⚡ Snowmobile Trails
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 - Intermittent Stream
 - Stand Boundaries
- Forest Stands**
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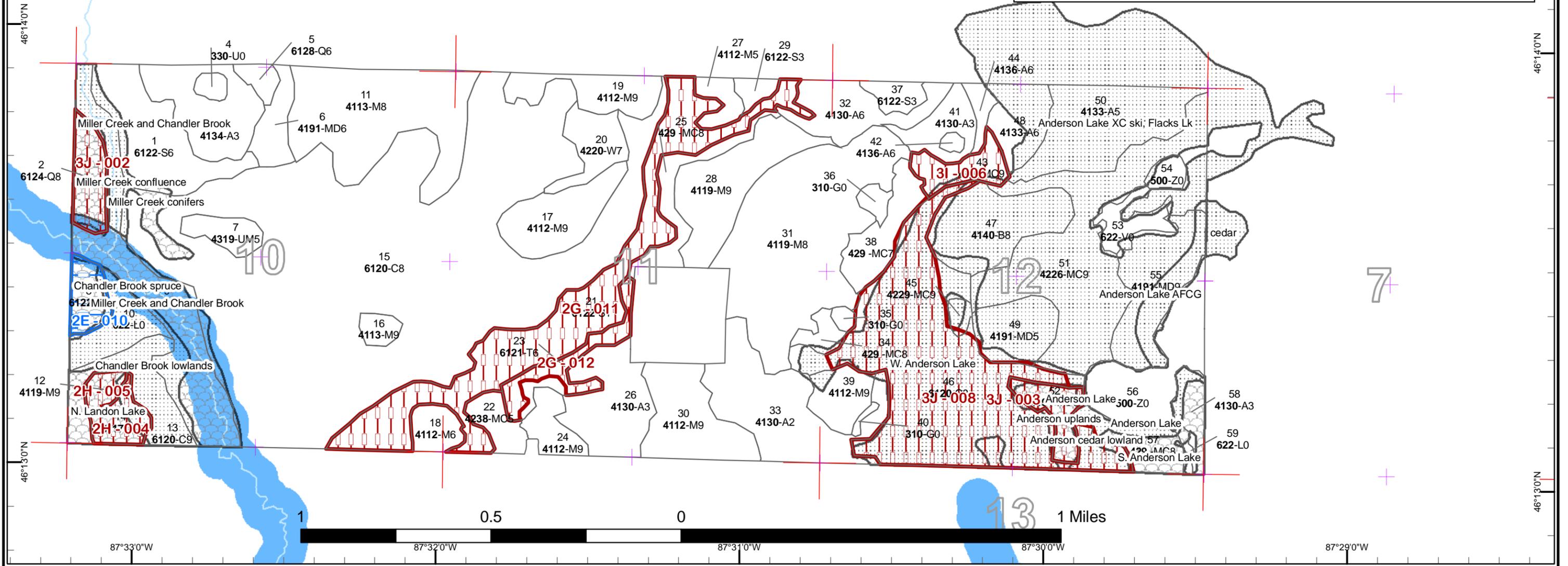


Special Conservation Areas & Site Conditions Map

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

Legend

- Remonumented Section Corners
- Miris Corners
- Stand Boundaries
- Site Condition Available
- Available w/ Constraints (Factor - Number)
- Unavailable (Factor - Number)
- Site Condition Type
- Available Factors W/ Constraints
- 2E: Road needed
- Unavailable Factors
- 2G: Too wet (sensitive soils, does not include access issues)
- 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
- 3I: Historical / archeological (add locked comments)
- 3J: Water quality / BMPs (stream, river, or lake)
- Reviewable SCAs
- Proposed SCA
- SCA Removal
- Dedicated Special Conservation Areas
- Cold Water Streams
- High Priority Trout Stream Buffer



Report 1 – Total Acres by Cover Type and Age Class



	Age Class													Total	
	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 +		Uneven Age
Aspen	0	56	87	49	0	0	0	47	2	0	0	0	0	0	240
Bog	11	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Cedar	0	0	0	0	0	0	0	0	0	150	0	0	450	0	600
Herbaceous Openland	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Low-Density Trees	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Lowland Conifers	0	0	0	0	0	0	0	5	0	15	0	0	0	0	20
Lowland Deciduous	0	0	0	0	0	0	0	0	11	0	0	0	0	0	11
Lowland Shrub	81	0	0	0	0	0	0	0	0	0	0	0	0	0	81
Lowland Spruce/Fir	0	0	0	7	0	0	0	0	95	57	0	0	0	0	159
Mixed Upland Deciduous	0	0	0	0	0	0	0	21	50	0	0	0	0	12	83
Natural Mixed Pines	0	0	0	0	0	0	0	3	98	0	0	0	0	0	101
Northern Hardwood	0	0	0	0	0	0	0	0	8	326	0	0	0	20	354
Paper Birch	0	0	0	0	0	0	0	38	0	0	0	0	0	0	38
Tamarack	0	0	0	0	0	0	0	0	0	18	0	0	0	0	18
Upland Conifers	0	0	0	0	0	0	0	0	14	10	19	0	0	35	79
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10
Water	43	0	0	0	0	0	0	0	0	0	0	0	0	0	43
White Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	16	16
Total	145	56	87	55	0	0	0	114	278	586	19	0	450	82	1874



Report 2 – Proposed Treatment Summaries

Gwinn Mgt. Unit
Year of Entry 2015

Compartment 049
Total Compartment Acres: 1,874

Acres by Treatment Type

Commercial Harvest - 214 Tree Planting - 0 Other - 0
 Habitat Cut - 0 Opening Maintenance - 0

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen Types	58	0	0	0	0	0	58
Lowland Coniferous Forest	42	0	0	0	0	0	42
Mixed Upland Conifers	0	0	0	28	0	0	28
Northern Hardwood	0	49	0	0	0	0	49
Other Upland Deciduous	38	0	0	0	0	0	38
Total	138	49	0	28	0	0	214



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1	32049001-Cut	41.8	6122 - Black Spruce	High Density Pole	91	81-110	Harvest	Clearcut with Reserves	6122 - Black Spruce	Cmpt. Review Proposal

Prescription Cut all merchantable black spruce, tamarack. Leave all cedar, white pine.

Specs:

Other Will need to be winter cut, which will conflict with snowmobile trail use. Minimize time period of harvest, so trail is not plowed all winter long.

Comments: Leave a 4" snow base on road/trail as part of cutting specs. Miller Creek road is also in need of repairs. Retain riparian buffer along Miller Creek, which can also provide spruce seed source, as well as some spruce, tamarack around/near white pine, which will be left (clumps of 15+ trees preferred). Evaluate and leave windfirm white spruce, if present.

Next Monitor for successful regeneration of spruce and/or other mixed lowland species.

Steps:

Proposed

Start Date: 10/01/2014

18	32049018-Cut	9.7	4112 - Maple, Beech, Cherry Association	High Density Pole	95	81-110	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal
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Prescription Selectively mark hardwoods, using marking guidelines, managing for best tree in place. Maintain stand diversity, and leave wildlife trees. Leave all hemlock, and mark white spruce to cut, if needed. If healthy and available, retain black cherry and yellow birch.

Specs:

Other Low quality red maple stand fringed with conifers - difficult access for volume of wood involved (see Stage 1 mgmt comments). Cull yellow birch, and cherry is dying. Try and negotiate sale.

Next Monitor for adequate regeneration prior to next harvest.

Steps:

Proposed

Start Date: 10/01/2014

28	32049028-Cut	39.7	4119 - Mixed Northern Hardwoods	High Density Log	90	111-140	Harvest	Single Tree Selection	4119 - Mixed Northern Hardwoods	Cmpt. Review Proposal
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Prescription Selectively mark hardwoods, using marking guidelines, managing for best tree in place. Target BA = 70-90. Create canopy gaps, where appropriate to establish regeneration, and maintain stand diversity throughout. Leave obvious wildlife trees. Leave all cedar, hemlock and smaller conifers. Remove at risk white spruce (mark), if necessary, but retain as much as possible (crossbill).

Specs:

Other Lower quality hardwoods - may need to thin a little heavier. Marking/cruising test plot area - do not maintain.

Comments:

Next Monitor for successful regeneration of northern hardwoods, per work instructions.

Steps:

Proposed

Start Date: 10/01/2014

32	32049032-Cut	5.5	4130 - Aspen	High Density Pole	31		Harvest	Clearcut	4130 - Aspen	Cmpt. Review Proposal
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Prescription Cut older portion of stand along Perrin Bros Road, due to declining health. Leave roadside maple, cherry and healthy paper birch (some will need to be harvested - mark to cut or leave). Leave white pine and windfirm white spruce.

Specs:

Other Combine as sale with adjacent stand for marketability.

Comments:

Next Monitor for regeneration.

Steps:

Proposed

Start Date: 10/01/2014



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
43	32049043-Cut	13.3	429 - Mixed Upland Conifers	High Density Log	94	51-80	Harvest	Shelterwood	42260 - Natural Pine, Mixed Deciduous	Cmpt. Review Proposal
<u>Prescription</u> Remove merchantable aspen, maple, PB, balsam fir and spruce, leaving red and white pine and some windfirm white spruce. Avoid wetland										
<u>Specs:</u> portions of stand.										
<u>Other</u> Prepare with adjacent stand for marketability. See Stage 1 mgmt notes.										
<u>Comments:</u>										
<u>Next</u> Monitor for regeneration. Mixed species are acceptable.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2014										
44	32049044-Cut	5.0	4136 - Aspen, Mixed Conifer	High Density Pole	38	81-110	Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<u>Prescription</u> Small wedge of timber with blowdown occurring. Remove all quaking aspen, balsam fir. Retain bigtooth aspen (for goshawk potential).										
<u>Specs:</u>										
<u>Other</u> Avoid areas that grade into more lowland types - drainage. Treat with adjacent stand 43, if possible.										
<u>Comments:</u>										
<u>Next</u> Monitor for successful regeneration.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2014										
47	32049047-Cut	38.2	4140 - Other Upland Deciduous	Medium Density Log	79		Harvest	Clearcut with Reserves	4137 - Aspen, Birch	Cmpt. Review Proposal
<u>Prescription</u> Harvest all aspen, balsam fir, red maple and most paper birch, spruce. Leave some paper birch (larger, healthy trees), white spruce (windfirm)										
<u>Specs:</u> for seed and diversity, esp. along cross-country ski trail influence. Leave any hemlock, cedar, if present, and all white and red pine.										
<u>Other</u> SCA - Recreation influence - Anderson Lake X-C ski trail, Flacks Lake Interpretative trail. Harvest during the summer months so as not to										
<u>Comments:</u> conflict with ski trail activities. Early set-up with 2014 YOE compartment to the north, due to access.										
<u>Next</u> Monitor for successful regeneration of aspen, birch and a component of mixed conifers is acceptable.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										
50	32049050-Cut	47.1	4133 - Aspen, Mixed Pine	Medium Density Pole	74	51-80	Harvest	Clearcut with Reserves	4133 - Aspen, Mixed Pine	Cmpt. Review Proposal
<u>Prescription</u> Cut most aspen, birch, red maple, leaving retention groups (15+ trees) around pine concentrations - can try using leave tree specs to accomplish										
<u>Specs:</u> (vs. marking leave trees). Leave all red and white pine, and hemlock. Protect WP regeneration (5 - 20' hts noted) as much as possible throughout. Protect trail integrity.										
<u>Other</u> SCA - recreational influence - Anderson Lake X-C ski trail. Should treat with C. 48 (2014 POW) stand 45 to north to lessen the overall long-term										
<u>Comments:</u> trail impact and provide harvest access via north (Perrin Bros. Rd).										
<u>Next</u> Monitor for adequate regeneration of aspen, birch - a component of mixed conifers is acceptable also.										
<u>Steps:</u>										
<u>Proposed</u>										
<u>Start Date:</u> 10/01/2013										

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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
57 32049057-Cut	14.2	429 - Mixed Upland Conifers	Medium Density Log	84	51-80	Harvest	Shelterwood	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal

Prescription Remove aspen, paper birch, red maple, spruce, balsam fir. Some windfirm white spruce and paper birch can be left for seed source and diversity.

Other SCA - Recreation influence - Anderson Lake, boardwalk trail around lake. Treat with compartment 50 to the south, when prescribed, protecting trail integrity and lake riparian zone.

Next Steps: Monitor for adequate regeneration of aspen, birch, maple and mixed conifers.

Proposed
Start Date: 10/01/2016

**Total Treatment
Acreage Proposed: 214.5**



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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#Type!

Prescription
Specs:

Other
Comment:

Next
Steps:

Proposed
Start Date: #Type!

Limiting Factor

**Total Treatment
Acreage Proposed: 0**

Report 5 – Site Conditions

Gwinn Mgt. Unit
Theresa Sysol : Examiner

Compartment 049
Year of Entry 2015

Availability for Management

Total Acres			Dominant Site Conditions					
Acres	Available	Not Available	No	3J	3I	2H	2G	2E
240	240		Aspen	240				
600	462	138	Cedar	462	138			
20	5	15	Lowland Conifers	5	15			
11		11	Lowland Deciduous			11		
159	64	95	Lowland Spruce/Fir	53			95	11
83	70	13	Mixed Upland Deciduous	70	13			
101	101	0	Natural Mixed Pines	101	0			
353	348	5	Northern Hardwood	348		5		
38	38		Paper Birch	38				
18	3	14	Tamarack	3			14	
78	65	14	Upland Conifers	65	0	13		
10	10		Upland Mixed Forest	10				
16	16		White Pine	16				
1,728	1,422	306	Total Forested Acres	1,411	166	13	16	109
	82%	18%	Relative Percent					

**Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.*

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
002	Not Available	3J: Water quality / BMPs (stream, river, or lake)	15				
Comments:							
003	Not Available	3J: Water quality / BMPs (stream, river, or lake)	13	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	2E: Road needed		
Comments:							

Report 5 – Site Conditions

Gwinn Mgt. Unit
Theresa Sysol : Examiner

Compartment 049
Year of Entry 2015

004	Not Available	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	11	2E: Road needed
Comments:				
005	Not Available	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	5	2E: Road needed
Comments:				
008	Not Available	3J: Water quality / BMPs (stream, river, or lake)	139	1C: Other dept or div proc/practices
Comments:				
010	Available	2E: Road needed	11	
Comments: Access via adjacent compartment.				
011	Not Available	2G: Too wet (sensitive soils, does not include access issues)	95	
Comments:				
012	Not Available	2G: Too wet (sensitive soils, does not include access issues)	14	
Comments:				



Report 6 – 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.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Anderson Lake Comments hiking trail along lakeshore	Visual Management Area	Recreational/Scenic Value Area	SCA	0.9
Comments	Habitat Areas or Corridors	Other Habitat Area	SCA	2.7
Anderson Lake Comments Visual along Anderson Lake; Loop B hiking trail	Visual Management Area	Recreational/Scenic Value Area	SCA	5.7
cedar Comments SCA - maintain wildlife thermal cover and RMZ for Anderson Lake	Habitat Areas or Corridors	Other Habitat Area	SCA	7.7
Anderson cedar lowland Comments also contains lakeshore trail	Habitat Areas or Corridors	Habitat Corridor	SCA	9.8
Anderson Lake AFCG Comments also includes boat launch and picnic site	Concentrated Recreation Area	State Forest Campground	SCA	15.7
Miller Creek and Chandler Brook Comments Continuation of SCA which should be covered by static coldwater lakes, streams layer	Spring-Seeps, Riparian Areas	Riparian Area	SCA	18.5
Chandler Brook lowlands Comments corridor south to Landon Lake	Habitat Areas or Corridors	Habitat Corridor	SCA	50.2
W. Anderson Lake Comments rich conifer swamp with drainages	Habitat Areas or Corridors	Other Habitat Area	SCA	146.4
Anderson Lake XC ski, Flacks Lk Comments also includes hiking trail along Anderson Lake	Visual Management Area	Recreational/Scenic Value Area	SCA	330.0



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SCA Name	SCA Category	Detail Type	Recommendation	Acres
Miller Creek conifers Comments	Potential Old Growth		SCA Removal	7.9
Chandler Brook spruce Comments possible treatment with adjacent compt	Potential Old Growth		SCA Removal	9.5
Anderson uplands Comments BMP's and visual management guidelines would apply	Potential Old Growth		SCA Removal	13.3
Miller Creek confluence Comments protect watershed through BMP's	Potential Old Growth		SCA Removal	14.9
S. Anderson Lake Comments Visual /BMP guidelines along Anderson Lake would still apply	Visual Management Area	Recreational/Scenic Value Area	SCA Removal	18.5
N. Landon Lake Comments near Landon Lake - follow BMP's	Potential Old Growth		SCA Removal	20.0
Miller Creek and Chandler Brook Comments SCA is covered by static coldwater lakes, streams layer	Spring-Seeps, Riparian Areas	Riparian Area	SCA Removal	45.1



Report 7 – 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	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	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	6122 - Black Spruce	High Density Pole	41.8	91	81-110	Some higher ground, but mainly low; perched roots, blowdown. Ground cover of sphagnum, bunchberry, snowberry, lab tea noted. Oversized white pine with dead tops; some cavity trees. Trace amounts of red maple, paper birch and quaking aspen.
2	6124 - Lowland Spruce-Fir	Medium Density Log	15.1	91		Small strip of timber between Miller Creek and Chandler Brook. Trace amount of cherry, paper birch. Ground cover of sphagnum, snowberry, bunchberry, lab tea.
3	4134 - Aspen, Spruce/Fir	High Density Sapling	31.7	13		"Miller Creek Bridge Aspen" sale #012-95 - cut Oct-Nov, 1998. Ground cover of blackberry, bracken fern, club moss noted.
5	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	5.0	74		Some dead/dying tops on white pine. Trace amount of hemlock, cedar within. Ground cover of sphagnum, lab tea (medium-heavy density).
6	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	12.1	Uneven Age	1-50	Hardwood stand with thick spruce/fir understory; residual hemlock and white spruce. Cut 1980. Ground cover of princess pine, club moss.
7	4319 - Mixed Upland Forest	Medium Density Pole	9.9	92		
8	6122 - Black Spruce	High Density Pole	11.3	92		Ground cover noted of sphagnum, lab tea, tagalder.
11	4113 - R.Maple, Conifer	Medium Density Log	72.8	94	81-110	Cut in 1980 and also as t. sale #001-05 "Miller Creek South" - select cut Fall, 2009. Not much new regeneration noted yet. Ground cover includes club moss, raspberry, princess pine.
12	4119 - Mixed Northern Hardwoods	High Density Log	5.4	90	111-140	Isolated island of low quality hardwoods - difficult access.
13	6120 - Lowland Cedar	High Density Log	26.6	122	81-110	Some lower stocked areas within. Cedar measured up to 17" dbh. Hardwood and W. Spruce mainly along more upland edges.
14	6117 - Lowland Deciduous, Mixed Coniferous	High Density Log	11.1	85		Difficult access to stand.
15	6120 - Lowland Cedar	Medium Density Log	423.5	134	51-80	Thicker spruce/fir along transition edges, dropping into lower tagalder areas with cedar, white pine and spruce. Historic evidence of cedar cutting. High water table - perched roots. Sphagnum, lab tea, club moss ground cover.
16	4113 - R.Maple, Conifer	High Density Log	5.0	90		Isolated island of timber within cedar swamp.
17	4112 - Maple, Beech, Cherry Association	High Density Log	27.4	95	51-80	T. sale #013-95 "Big Wheels Block" (U2 - 29 acs) - cut Feb, 1997. Also thinned in 1969. Ground cover of club moss, bracken fern, princess pine, hazel.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
18	4112 - Maple, Beech, Cherry Association	High Density Pole	9.7	95	81-110	Low quality red maple stand fringed with conifers - difficult access for volume of wood involved. Some sparser areas. Ground cover of club moss, princess pine. Treat with Compt. 50, if cut.
19	4112 - Maple, Beech, Cherry Association	High Density Log	19.9	Uneven Age	81-110	T. sale # 013-95 "Big Wheels Block" (U1 - 21acs) - cut Fall, 1996. Black knot on cherry, maple with forks, crook, stain, sweep. Patchy white pine regeneration present.
20	42200 - Natural White Pine	Low Density Log	15.7	Uneven Age	1-50	T. sale #013-95 "Big Wheels Block" (Unit 3 - 18 acs) - cut Fall, 1997.
21	6122 - Black Spruce	Low Density Sapling	95.0	89		Ground cover of sphagnum, grasses.
22	42380 - Non Pine Upland Conifer, Mixed Deciduous	Medium Density Pole	10.1	90	51-80	Some sparser areas and heavier understory fir.
23	6121 - Tamarack	High Density Pole	17.6	95		Some areas heavier to spruce. Trace amount of paper birch present, mainly on stand edges. Ground cover includes leatherleaf, lab tea, sphagnum, grasses.
24	4112 - Maple, Beech, Cherry Association	High Density Log	11.4	90	81-110	Thinned under T. sale #015-95 - some lower BA, in places. Overall stand quality is low - stain, crook, forks, spiral seams. Cherry with black knot. Ground cover of princess pine, club moss.
25	429 - Mixed Upland Conifers	Medium Density Log	15.7	Uneven Age	51-80	High and low grounds. Hardwood mainly located along transition edges - stand drops into pocket of thicker cedar with tagalder, lab tea, sphagnum. Other ground cover noted includes club moss, grasses.
26	4130 - Aspen	High Density Sapling	34.0	26		Mix of upland and slightly lowland aspen; residual marked trees left. Ground cover of bracken fern, club moss, grasses, hazel, tagalder and raspberry noted. T. sale #11-85 "Perrin Bros. Aspen Block" (Unit1)
27	4112 - Maple, Beech, Cherry Association	Medium Density Pole	7.6	88	81-110	Low quality stand.
28	4119 - Mixed Northern Hardwoods	High Density Log	39.7	90	111-140	T. sale #027-84 "Perrin Bros. Hardwood Block III" (Block A,B) - thinned 1986. Ground cover of princess pine, club moss.
29	6122 - Black Spruce	High Density Sapling	4.4	92		Spruce bog. Ground cover of sphagnum, lab tea.
30	4112 - Maple, Beech, Cherry Association	High Density Log	33.4	90	81-110	T. sale #028-84 "Perrin Bros. Hardwood Block IV" - cut 1986. Also T. sale #003-05 "Big Rock Hardwoods" - thinned Su, 2006. Contains thick F/S regeneration patch along west side. Some uprooted maple, dead white spruce noted. Ground cover includes heavy club moss; princess pine, raspberry, trace amount of yew.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
31	4119 - Mixed Northern Hardwoods	Medium Density Log	106.8	90	51-80	T. sale #027-84 (Block C,D,E,F) - thinned 1986 and T. sale #002-05 "Perrin Bros. Hardwood" (U1-4, U6) - thinned summer 2008, summer 2009.
32	4130 - Aspen	High Density Pole	25.2	31		Older aspen along roadway (10-15" dbh) - poor health, road hazard - with younger timber beyond (4-7" dbh). Heavier spruce/fir scattered within. Harvested with adjacent compartment (C. 48) under t. sale #15/77A "Miller Creek Block No. 1" - winter, 1980.
33	4130 - Aspen	Medium Density	52.6	26		T. sale #011-85 "Perrin Bros. Aspen Block" (Unit2) - cut Nov.-Dec, 1985. Ground cover includes: bracken fern, raspberry, tagalder.
34	429 - Mixed Upland Conifers	Medium Density Log	5.8	Uneven Age	81-110	Transition between hardwoods and lowland conifers.
37	6122 - Black Spruce	High Density Sapling	6.8	31		T. sale #15/77A - cut Winter, 1980. Thick black spruce understory with scattered overstory maple, cedar, spruce and white pine. Ground cover of lab tea, blueberry.
38	429 - Mixed Upland Conifers	Low Density Log	19.5	100	1-50	T. sale #002-05 "Perrin Bros. Hardwood" (Unit 7) - cut Su, 2009. Contains blowdown white spruce and snag trees.
39	4112 - Maple, Beech, Cherry Association	High Density Log	14.4	90	51-80	T. sale #002-05 "Perrin Bros. Hardwood" (Unit 5) - cut Su, 2009. Trace amount of balsam fir, white spruce present.
41	4130 - Aspen	High Density Sapling	14.6	14		T. sale #014-95 "Ski Trail Aspen" - cut August-Sept, 1998. Conifer retention along Perrin Bros. Road, as well as no-cut patch retention (stand 41).
42	4136 - Aspen, Mixed Conifer	High Density Pole	1.7	82		Retention patch surrounded by young aspen.
43	429 - Mixed Upland Conifers	High Density Log	13.3	Uneven Age	51-80	Semi-open grown stand. Heavily weeviled, large diameter white pine; older scattered aspen, multi-clump red maple, dead and oversized balsam fir. Ground cover of club moss, princess pine.
44	4136 - Aspen, Mixed Conifer	High Density Pole	5.0	38	81-110	Small wedge of timber with blowdown occurring.
45	42290 - Natural Mixed Pine	High Density Log	3.0	79	81-110	Knob of red and white pine fringed with spruce, cedar.
46	6120 - Lowland Cedar	Medium Density Log	150.3	92		contains small creek/flow
47	4140 - Other Upland Deciduous	Medium Density Log	38.2	79		Oversized aspen and birch in decline. Some red and white pine overstory with pockets of good regeneration established.
48	4133 - Aspen, Mixed Pine	High Density Pole	18.4	38		T. sale #006-74 - cut Summer, 1974.

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Gwinn Mgt. Unit

Report 8 – Forested Stands

Compartment: 049

Year of Entry: 2015



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
49	4191 - Mixed Upland Deciduous with Conifer	Medium Density Pole	20.6	79	51-80	Paper birch is dead/dying; larger balsam fir already dead. White pine with dead and/or snapped off tops - no pine regeneration noted. Trace amounts of yellow birch, cedar and hemlock (patches). Stand will slowly convert.
50	4133 - Aspen, Mixed Pine	Medium Density Pole	47.1	74	51-80	Aspen, birch with mixed red and white pine.
51	42260 - Natural Pine, Mixed Deciduous	High Density Log	98.2	85	81-110	Anderson Lake and Flacks Lake trail(s) fall within stand. Heavy to pine, with patchy aspen, birch and maple which is in decline and a trail hazard, in places. Understory is mainly fir.
52	4191 - Mixed Upland Deciduous with Conifer	Medium Density Log	12.7	81	1-50	Ridge stand. Ground cover of club moss, princess pine and bracken fern noted.
55	4191 - Mixed Upland Deciduous with Conifer	High Density Log	37.5	85	51-80	Heavy recreation influence - remove mainly hazard trees only.
57	429 - Mixed Upland Conifers	Medium Density Log	14.2	84	51-80	Mixed upland gradually sloping into lowland terrain with heavier white pine along E/SE side, transitioning into more spruce on the W. Ground cover of sphagnum, wintergreen, club moss noted.
58	4130 - Aspen	High Density Sapling	10.0	13		Stand of mainly wildfire origin - site burned on May 3, 1999 (Mqt#012). Ground cover of bracken fern, grasses, blueberry, wintergreen and pipsissewa noted.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
4	3303 - Mixed Low Density Trees	3.4	No	Unspecified	W32-575: opening creation - rock rake, disc and seeded June, 2000 (3.2 acs). Encroachment of spp, esp. quaking aspen
9	6220 - Alder/willow	61.3	No	Unspecified	Contains both Chandler Brook and Miller Creek
10	6220 - Alder/willow	17.7	No	Unspecified	Contains scattered trees.
35	3103 - Rubus-Fern	2.1	No	Unspecified	W32-411: opening creation - rock rake, disc, seed June, 1990.
36	3103 - Rubus-Fern	3.8	No	Unspecified	W32-411: opening creation - rock rake, disc, seed June, 1990. White pine seedlings 10-20 foot hts.
40	3103 - Rubus-Fern	1.1	No	Unspecified	W32-411: opening creation - rock rake, disc, seeded June, 1990. More bracken fern than grasses visible.
53	6225 - Bog	10.7	No	Unspecified	Leatherleaf bog/marsh
54	50 - Water	4.9	No	Unspecified	(part of) Flacks Lake
56	50 - Water	38.2	No	Unspecified	Anderson Lake
59	6220 - Alder/willow	2.2	No	Unspecified	