DNR DISCHARGE

Compartment Review Presentation

Gwinn Forest Management Unit

Compartment 32034 Entry Year 2016

Acreage: 1494.55740000

County Marquette

Management Area: Chain Lakes Moraine

Revision Date: 2014-09-18

Stand Examiner: Kevin LaBumbard

Legal Description:

T45N R26W Sections 5,8,17

Identified Planning Goals:

To improve the quality and diversity of State forests and wildlife through proper habitat management, while protecting the riparian values of our wetlands and waters.

Soil and topography:

Terrain ranges from fairly level to very steep with high ridges, sink holes, and drainages. Soils are primarily excessively drained sands including Rubicon, Croswell, Munising, and Kalkaska with Tawas, Lupton, and Carbondale mucks along the drainages.

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

Primarily state land with a few inholdings of private ownership mostly in section 8.

Unique Natural Features:

No Unique Natural Features known.

Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

Special Management Designations or Considerations:

SCA's along drainages and Bear Creek.

Watershed and Fisheries Considerations:

Bear Creek and it's tributaries.

Wildlife Habitat Considerations:

Compartment 34 is found within the Chain Lakes Moraine Management Area; on a Disintegration Moraine in Southwestern Marquette County. The dominant Natural Communities are dry mesic northern forests, poor conifer swamps, and mesic northern forests. This management area offers opportunities to increase diversity and perhaps long-term oak sustainability through under planting white and red pine. Another priority is to maintain or increase wildlife corridors especially along riparian corridors. Wildlife management issues in the management area are: mast (hard and soft); habitat fragmentation; mature forest conditions; mesic conifer; course woody debris; and retention or development of large living and dead standing trees (for cavities). This management area represents approximately ½ of the oak resource on WUP state forest.

The following have been identified as featured species for Chain Lakes Management Area: black bear, gray jay, pileated woodpecker, Northern goshawk, red crossbill.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of coarse-textured glacial till and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 100 and 200 feet. Archean Granite/Gneiss subcrops below the glacial drift. Some of the granite/gneiss has been/could be used as dimension stone. Gravel pits are located one mile to the south and there should be some potential. Abandoned iron mines are located five miles to the east. This area was previously leased for metallic exploration. There is no economic oil and gas production in the UP.

Vehicle Access:

Good from Co. Rd 565, Chain-o-Lakes Road and various 2-tracks.

Survey Needs:

None at this time.

Recreational Facilities and Opportunities:

Bass Lake motorcycle trail runs thru section 17.

Fire Protection:

This compartment has a moderate risk for fire but access is good.

Additional Compartment Information:

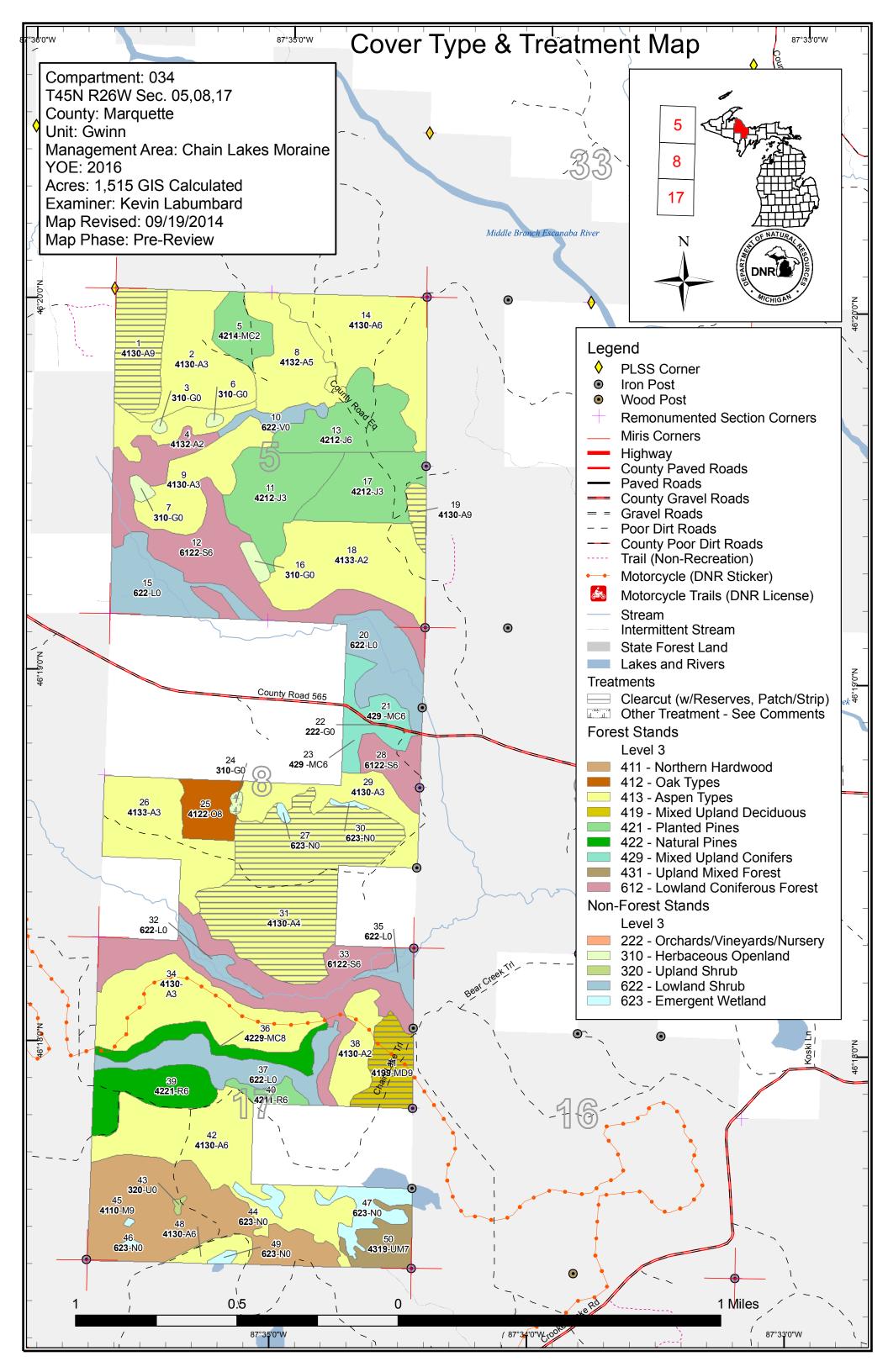
The following reports from the Inventory are attached:

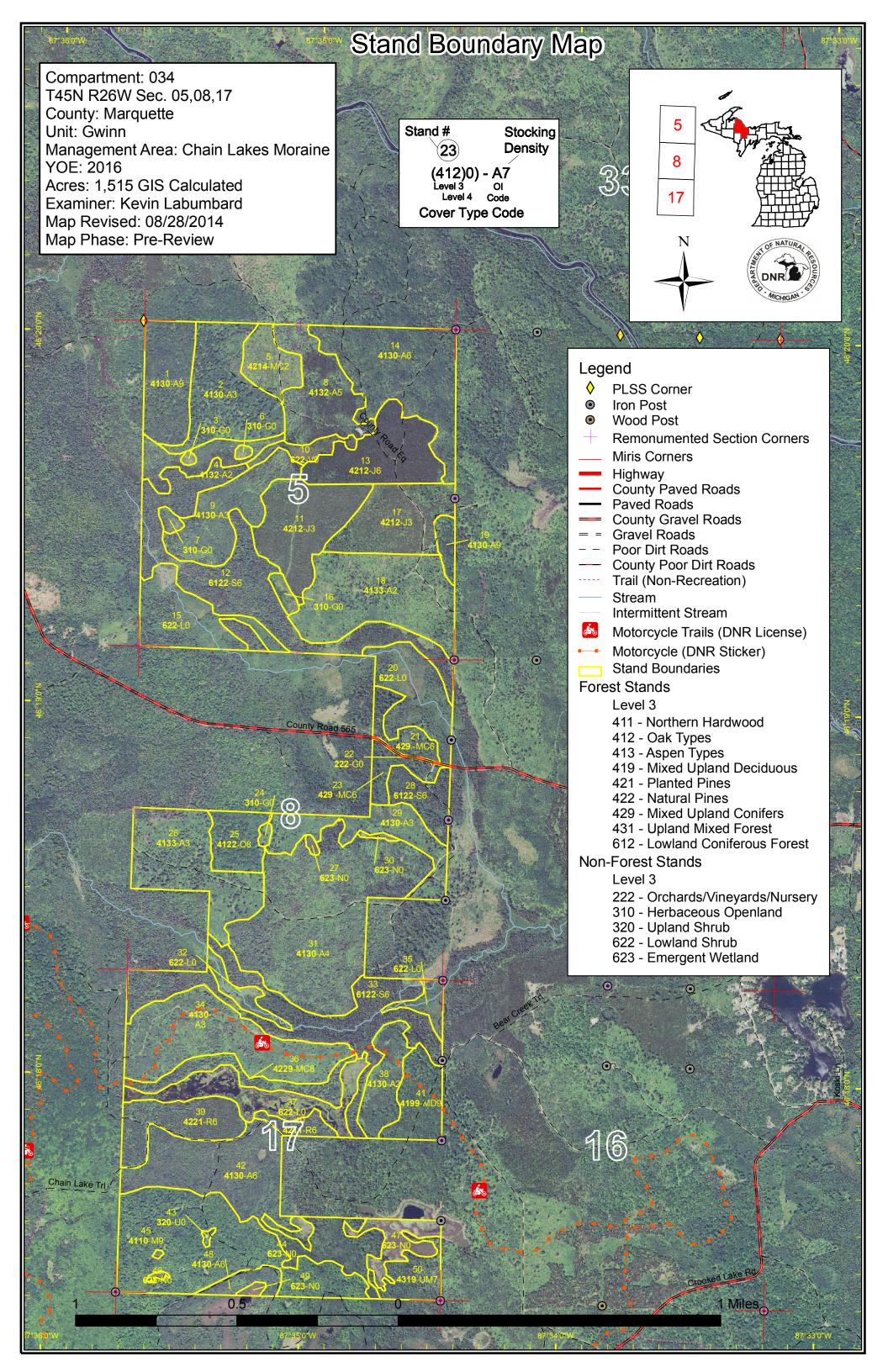
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

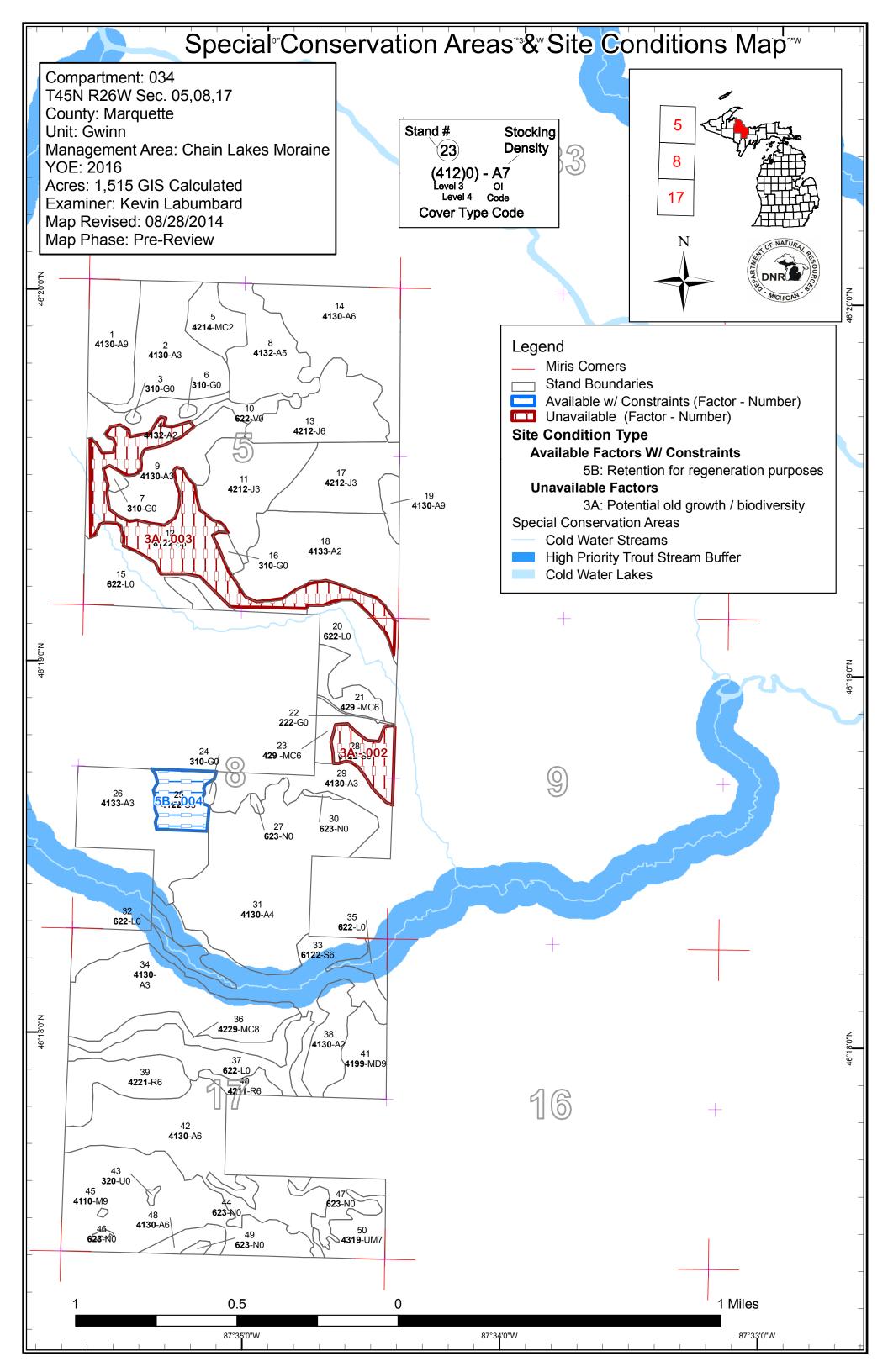
The following information is displayed, where pertinent, on the attached compartment maps:

Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries

Details on the road access system







Kevin Labumbard : Examiner

Compartment 034 Year of Entry 2016



Age Class																
		00	70,70	S. S	John John John John John John John John	par s	\$a,\$\	\$ \$ \$	18 /	\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	82	a a a	72,73	,	& /	, No.
Aspen	260	71	61	206	132	0	0	6	36	0	0	0	0	0	771	
Bog	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8	
Cropland	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Herbaceous Openland	10	0	0	0	0	0	0	0	0	0	0	0	0	0	10	
Jack Pine	0	41	47	43	0	0	0	0	0	0	0	0	0	0	132	
Lowland Shrub	125	0	0	0	0	0	0	0	0	0	0	0	0	0	125	
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	183	0	0	0	0	0	183	
Marsh	26	0	0	0	0	0	0	0	0	0	0	0	0	0	26	
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	24	0	0	0	0	0	24	
Natural Mixed Pines	0	0	0	0	0	0	0	0	0	20	0	0	0	0	20	
Northern Hardwood	0	0	0	0	0	0	0	0	0	98	0	0	0	0	98	
Oak	0	0	0	0	0	0	0	0	0	19	0	0	0	0	19	
Planted Mixed Pines	0	18	0	0	0	0	0	0	0	0	0	0	0	0	18	
Red Pine	0	0	39	0	0	0	0	0	0	0	0	0	0	0	39	
Upland Conifers	0	0	24	0	0	0	0	0	0	0	0	0	0	0	24	
Upland Mixed Forest	0	0	0	0	0	0	0	17	0	0	0	0	0	0	17	
Upland Shrub	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
Total	430	130	171	249	132	0	0	23	242	137	0	0	0	0	1515	



Report 2 – Proposed Treatment Summaries

Gwinn Mgt. Unit

Aspen Types

Mixed Upland Deciduous

Compartment 034 Year of Entry 2016 **Total Compartment Acres: 1,515**

Acres by Treatment Type

Commercial Harvest - 198 Tree Planting - 132 Other - 0

Habitat Cut - 0

Opening Maintenance - 2

Total

198

0

0

0

Cover Type by Harvest Method The second secon Zinin S 174 174 24 0 0 0 0 24 0

0

0

198

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Report 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 034 Year of Entry 2016

a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1	32034001-Cut	35.6	4130 - Aspen	High Density Log	85 J		Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal

Prescription Final harvest all aspen, red maple, white birch retaining red oak and white pine. Leave a few patches of larger bigtooth aspen where possible.

Specs:

S

Other Avoid damage to existing wp regeneration.

Comments:

Next Monitor regen per work instructions.

Steps:

Proposed

10/01/2015 Start Date:

High 74 Cmpt. Review 19 32034019-Cut 6.3 4130 - Aspen Harvest Clearcut with 413 - Aspen Density Loa Reserves Proposal

Prescription Final harvest all species except white pine. Retain a few large big-tooth aspen in patches along the steep bank, east side.

Specs:

Large big-tooth aspen with wp, red maple. Losing the white birch. Large boulders, steep drop to the east. Nice wp in understory. Remove all Other

species except white pine. Retain a few large bta along steep bank. Comments:

Monitor regen per work instructions. Next

Steps: Proposed

10/01/2015 Start Date:

32034031-Cut 132.1 4130 - Aspen Low 41 Harvest Clearcut 4212 - Planted Jack Cmpt. Review Density Pine Proposal

Pole

Prescription Clearcut, herbicide and convert to red pine. Retain the patches of white pine in the sourth and western portions of the stand, as well as the

Specs: peninsula of black spruce in the north.

1-3 stick aspen poles in variably stocked clonesand scattered jack pine over cherry brush, wp,bs saps. Aspen has high mortality, losing the Other

Comments: stand. About 35 ba of aspen average. Contains a 3 acre peninsula of black spruce in the north.

Next

Herbicide, plant to jack pine, monitor planting success.

Steps:

Proposed

Start Date: 10/01/2015

413 - Aspen 32034041-Cut 23.6 4199 - Other Mixed 51-80 Clearcut with Cmpt. Review High 86 Harvest **Upland Deciduous** Density Log Reserves Proposal

Prescription In order to promote red oak sprouting and full big-tooth regen, harvest white birch, red maple and big-tooth aspen, retain all white pine (5 ba) and reduce the 30 ba of red oak to a residual stocking of 10 ba. Retain a few patches of healthy big tooth. Provide for Bass Lake motorcycle Specs:

trail protection in sale specs.

Good quality red oak, white birch, red maple and pockets of bigtooth aspen. Scattered large white pine. R8B4A4M4W7 Areas of heavy wp Other

Comments: regen. Avoid damage to existing wp regen.

<u>Next</u> Steps: Monitor regeneration per work instructions.

Proposed

Start Date: 10/01/2015

NF 32034024-310 - Herbaceous Non-Forest Other - Specify 3102 - Grass Cmpt. Review 24 NonFor Openland Management Proposal

Prescription Use chainsaws to maintain opening. Planting of hard/soft mast trees/shrubs to benefit feature species.

Specs:

<u>Other</u> Old ftp W-32-555 (1997) - this opening was to be expanded to 2 acres and seeded to grasses and legumes.

Comments:

<u>Next</u> Steps:

Proposed

Start Date: Unspecified

CoverType

Size

Density

Stand

Age

Report 3 -- Treatments Prescribed with No Limiting Factor

Treatment

Туре

BA

Range

Compartment: 034 Year of Entry 2016

Treatment

Method

Cover Type Objective Name Total Treatment

Treatment

S t

n

Acreage Proposed:

199.1

Acres

Gwinn Mgt. Unit Report 4 -- Treatments Prescribed with Compartment: 034 a Site Condition s Year of Entry 2016 t а **Treatment** Acres CoverType Size Stand ВА **Treatment Treatment Cover Type Approval** n Method Objective Status Name Range Density Age Type #Type! #Type! **Prescription** Specs: Other Comment: **Next** Steps: <u>Proposed</u> #Type!

Total Treatment

Start Date: # Limiting Factor

Acreage Proposed: 0.0

Kevin Labumbard: Examiner

Compartment 034 Year of Entry 2016

Availa	ability for I	Vianagement						
Total	Acres	Acres		Domina	nt Site	e Cond	ditions	S
Acres	Available	Not Available		No	5C	5B	3J	3A
750	748	2	Aspen	748			1	0
132	132	0	Jack Pine	132				0
181	32	149	Lowland Spruce/Fir	14	18		73	76
24	23	0	Mixed Upland Deciduous	23			0	
20	20		Natural Mixed Pines	20				
98	98		Northern Hardwood	98				
19	19		Oak			19		
18	18		Planted Mixed Pines	18				
39	39		Red Pine	39				
24	24		Upland Conifers	24				
17	17		Upland Mixed Forest	17				
1,321	1,170	151	Total Forested Acres	1,134	18	19	75	76
	89%	11%	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.

	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
002	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	18				
С	omments:						
S	CA Riparian zone	, wildlife travel corridor.					
003	Not Available	3A: Potential old growth / biodiversity	77				
	omments: iparian corridor.						
004	Available	5B: Maintain for regeneration purposes	19				
С	omments:						

Report 5 - Site Conditions

Gwinn Mgt. Unit
Kevin Labumbard: Examiner

Compartment 034
Year of Entry 2016

Not Available 3J: Water quality / BMPs (stream, river, or lake)

Comments:
Riparian/migration corridor

Compartment: 034 Year of Entry: 2016



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
Comments				

Gwinn Mgt. Unit Compartment: 034





Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS

* This is a list of SCA's for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to the Special Conservation Area Map for locations of the below listed Conservation Areas.

Conservation Area	n Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area					
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygstocked trout populations and those of other coldwater fivear to year. Coldwater streams in Michigan typically procontributions of groundwater to their stream flows. Such designated as trout resources by Fisheries Order 210.	ish species (e.g., slimy sculpin) to persist from ovide these conditions due to substantial					
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosy influences the aquatic ecosystem and vice-versa. Becau streams and open water wetlands, riparian areas harbor communities are ecologically and socially significant in tas aesthetics, habitat, bank stability, timber production,	use of the unique conditions adjacent to lakes, r a high diversity of plants and wildlife. Riparian their effects on water quality and quantity, as well					

S t	Gwinr	Gwinn Mgt. Unit			– Forested	Stands Compartment: 034 Year of Entry: 2016
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4130 - Aspen	High Density Log	35.6	85		A6O7B4M4W7 Mature bigtooth aspen with associated species. Final harvest retaining red oak, white pine.
2	4130 - Aspen	High Density Sapling	52.2	16		10-20 ba of red oak sawtimber over dense A3. There is pretty good red oak regen 3-10' high in places from acorn origin fighting thru the aspen regen. Aspen was cut under contract #13-96-01.
4	4132 - Aspen, Jack Pine	Medium Density	18.6	16		4" aspen with scattered pockets of jack pine.
5	42140 - Planted Mixed Pine	Medium Density	18.0	11		Mix of planted red pine with volunteer jack pine in the skips.
8	4132 - Aspen, Jack Pine	Medium Density Pole	41.0	39		Aspen shorter than the stand to the east with lower stocking levels and pockets of J6. A5J4W2 Semi open in places.
9	4130 - Aspen	High Density Sapling	39.2	26		Treated under sale # 011-86-01. 4" A saps with balsam fir and scattered white pine.
11	42120 - Planted Jack Pine	High Density Sapling	47.3	21		Well stocked jp. approx 30% 5" dbh poles.
12	6122 - Black Spruce	High Density Pole	89.4	83		Black Spruce and tamarack along drainage. Retain as SCA for riparian/wildlife travel corridor. 70 ba bs, 10 ba tamarack.
13	42120 - Planted Jack Pine	High Density Pole	43.4	39		Just transitioning to a pole stand. J5J3. Tall, dense jack pine.
14	4130 - Aspen	High Density Pole	69.6	39		
17	42120 - Planted Jack Pine	High Density Sapling	41.2	14		J3 2"
18	4133 - Aspen, Mixed Pine	Medium Density	73.6	6		Jack pine and aspen removed under sale #016-06-01. A3W8R7 over W1F1M1 Good conifer regen where scarified.
19	4130 - Aspen	High Density Log	6.3	74		Large big-tooth aspen with wp, red maple. Losing the white birch. Large boulders, steep drop to the east. Nice wp in understory. Remove all species except white pine. Retain a few large bta along steep bank.
21	429 - Mixed Upland Conifers	High Density Pole	12.3	27		A mix of everything, mostly upland but includes some lowland. A5A2S4B4W7W2T1. Heavy pockets of wp regen.
23	429 - Mixed Upland Conifers	High Density Pole	11.6	27		A mix of everything, mostly upland but includes some lowland. A5A2S4B4W7W2T1
25	4122 - Oak, Pine	Medium Density Log	19.3	99	51-80	Red oak sawtimber over aspen and red oak saps. Cut under contract # 015-96-01.

S t	Gwinn Mgt. Unit			Report 8	– Forested	Stands Compartment: 034 Year of Entry: 2016
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
26	4133 - Aspen, Mixed Pine	High Density Sapling	57.1	4		Cut by LaFleur under contract # 017-06-01. A3W7R7. Stand contains small pockets of heavier stocked white pine sawtimber less than 5 acres. Numerous wp seedlings less than 2' tall. Excellent wp regen where the soil was scarified. Rocky. Northern part of stand blends into a larger black spruce stand.
28	6122 - Black Spruce	High Density Pole	17.6	89		3-4 stick black spruce with tamarack.
29	4130 - Aspen	High Density Sapling	34.8	4		A3F1. Cut by laFleur under contract # 017-06-01. Scattered large white pine.
31	4130 - Aspen	Low Density Pole	132.1	41		1-3 stick aspen poles in variably stocked clonesand scattered jack pine over cherry brush, wp,bs saps. Aspen has high mortality, losing the stand. About 35 ba of aspen average. Contains a 3 acre peninsula of black spruce in the north.
33	6122 - Black Spruce	High Density Pole	75.7	80		Black spruce/lowland conifer stand along Bear Creeks. Riparian Zone and wildlife travel corridor.
34	4130 - Aspen	High Density Sapling	94.1	6		A3F1W7 Excellent A regeneration from 2007 harvest. Aspen fully stocked and looks healthy. Pockets of wp sawtimber plus scattered. Occ rp. Stand contains small depression (bs and tam bog). Beaver chewing aspen along south edge.
36	42290 - Natural Mixed Pine	Medium Density Log	19.9	92	51-80	Former POG, retain as SCA Riparian zone and wildlife travel corridor. Steep bank above Bear Creek. Mix of wp and bf mostly, heavier to rp east half.
38	4130 - Aspen	Medium Density	22.0	27		Cut in 1989 under contract # 27-86-01. Fair quality aspen with scattered fir.
39	42210 - Natural Red Pine	High Density Pole	31.5	22	111-140	Nice 1 stick red pine.
40	42110 - Planted Red Pine	High Density Pole	7.5	22	111-140	Nice 1 stick red pine.
41	4199 - Other Mixed Upland Deciduous	High Density Log	23.6	86	51-80	Good quality red oak, white birch, red maple and pockets of bigtooth aspen. Scattered large white pine. R8B4A4M4W7 Areas of heavy wp regen.
42	4130 - Aspen	High Density Pole	86.1	34		Healthy 3-4 stick mixed aspen stand with scattered large white pine, red oak and smaller fir. More bigtooth aspen east.
45	4110 - Sugar Maple Association	High Density Log	97.8	99	81-110	Patchy sugar maple regeneration of low to medium stocking where present. Fair amount of ironwood but not too bad. Rocky, rolling terrain, sink holes. Small linear area of blowdown from windshear event running SE. Treat stands 3 and 4 of Cmpt 37 at the same time, probably when cmpt 37 gets inventoried. Also contains a "frost pocket" of mostly red maple poles/sawtimber over heavy fir saps in a steep bowl surrounding a small bog.

s t	Gwin	Gwinn Mgt. Unit			- Forested	Stands Compartment: 034 Year of Entry: 2016
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
48	4130 - Aspen	High Density Pole	8.8	31		Young, healthy big-tooth aspen. A little blowdown from the wind shear event that hit the large hardwood stand.
50	4319 - Mixed Upland Forest	Low Density Log	17.2	77		Low, narrow ridges among wet area. Old, sparse, most of the aspen blew down within the last year or so. Not worth salvaging. Heavy wildlife use around the pond and associated bog. Transitions to tag alder south.

Compartment: 034 Year of Entry: 2016



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
3	310 - Herbaceous Openland	1.0	No	Unspecified	
6	310 - Herbaceous Openland	1.2	No	Unspecified	
7	310 - Herbaceous Openland	2.6	No	Unspecified	
10	6225 - Bog	8.3	No	Unspecified	
15	6229 - Mixed lowland shrub	37.4	No	Unspecified	
16	310 - Herbaceous Openland	3.9	No	Unspecified	
20	622 - Lowland Shrub	35.0	No	Unspecified	
22	222 - Orchards/Vineyards/Nursery	1.0	No	Unspecified	County Road 565
24	310 - Herbaceous Openland	1.5	No	Unspecified	
27	623 - Emergent Wetland	1.1	No	Unspecified	bog
30	623 - Emergent Wetland	1.1	No	Unspecified	small bog
32	6220 - Alder/willow	9.0	No	Unspecified	
35	6220 - Alder/willow	7.8	No	Unspecified	
37	6220 - Alder/willow	35.5	No	Unspecified	Mix of active beaver flooding and tag alder along tributary of Bear Creek. Water level varies year to year
43	320 - Upland Shrub	0.8	No	Unspecified	
44	623 - Emergent Wetland	4.0	No	Unspecified	
46	623 - Emergent Wetland	1.2	No	Unspecified	
47	623 - Emergent Wetland	16.5	No	Unspecified	bog

Report 9 - Nonforested Stands

Compartment: 034 Year of Entry: 2016



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
49	623 - Emergent Wetland	1.6	No	Unspecified	bog