

Compartment Review Presentation

Gwinn Forest Management Unit

Compartment 32017 Entry Year 2019 Acreage: 1,076

County Marquette

Management Area: Dead Horse Moraines

Revision Date: 2017-08-01 Stand Examiner: Ben Travis

Legal Description:

T44N, R24W, Sections 1, 2, and 3

Identified Planning Goals:

Manage for sustained timber production, wildlife habitat improvement, and dispersed forest recreation.

Soil and topography:

Topography is generally flat, with large lowland areas and scattered upland rises. Soils are not conducive for road building and hold a lot of moisture, rendering them inoperable except during very dry spells and when in frozen condition.

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

Compartment lies adjacent to a large block of state ownership to the south. A large acreage of Weyerhauser lands adjoins the compartment to the east. Small private landowners are found along the west and north sides of compartment.

Unique Natural Features:

Large areas of non-productive, very poorly drained wetlands.

Archeological, Historical, and Cultural Features:

None found in MNFI and Archeological Concerns Database.

Special Management Designations or Considerations:

None

Watershed and Fisheries Considerations:

Wildlife Habitat Considerations:

Compartment 017 is found within the Dead Horse Moraines Management Area; on Ground Moraines in southeastern Marquette, southwestern Alger, and northwestern Delta Counties. The dominant Natural Communities are poor conifer swamps, mesic northern forests, and dry northern forests. Major forest cover types include Northern Hardwood, Aspen, and Mixed Lowland Conifer. This management area contains a large proportion of hardwood forest which regenerates well partly due to the heavier snow cover and lower deer numbers than the southern portion of this Management Area. The most significant wildlife management issues in the management area are: mast (hard and soft); mature forest (upland deciduous, especially aspen and mixed forest with little understory); course woody debris, early successional forest, and deer wintering complexes.

The following have been identified as featured species for the Dead Horse Moraines Management Area: black bear, pileated woodpecker, ruffed grouse, and white-tailed deer.

Mineral Resource and Development Concerns and/or Restrictions

Sections 1-3, T44N R24W, Marguette County

The nearest sand/gravel pit is located three miles to the south, and sand and gravel potential within the compartment may be limited due to thin glacial drift in the area. There may be some potential for production of crushed stone within the compartment sourced from the bedrock formations. Metallic mineral potential is considered low in this area. There is no economic oil and gas production in the UP.

Vehicle Access:

M-35 divides this compartment into west and east portions. Stack Grade is classified as a secondary forest road. The state holds a public use easement for this road over any associated private lands. It is the main access route into compartment east of M-35. The road has been substantially improved by Weyerhauser in 2016 by lifting road with fill and placing culverts, many of which the DNR provided. The road deteriorates in wet periods and after snowmelt. Access to the compartment west of M-35 is provided by a forest access route which is in poor condition, especially during wet periods.

New railroad crossing warning signs are being placed by FRD staff in 2017. Both roads provide access to several seasonal camps.

Survey Needs:

Additional survey monuments will be need to be established in the future.

Recreational Facilities and Opportunities:

Hunting, trapping, snowmobiling and ORV riding are primary forms of forest recreation.

Fire Protection:

This area has a low risk for fire incidence.

Additional Compartment Information:

One full-time residence is located down Stack Grade.

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

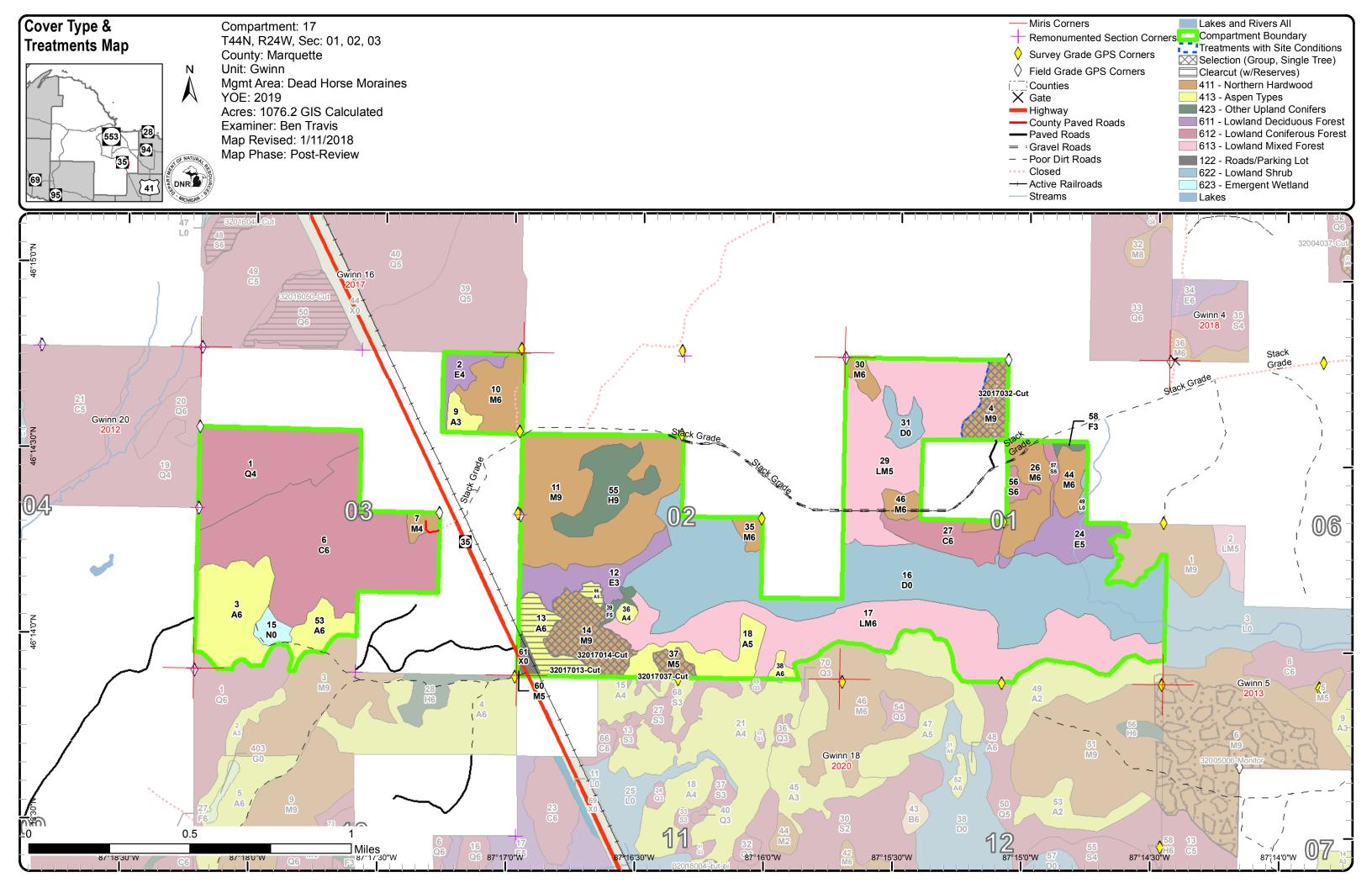
Gwinn Mgt. Unit Ben Travis : Examiner

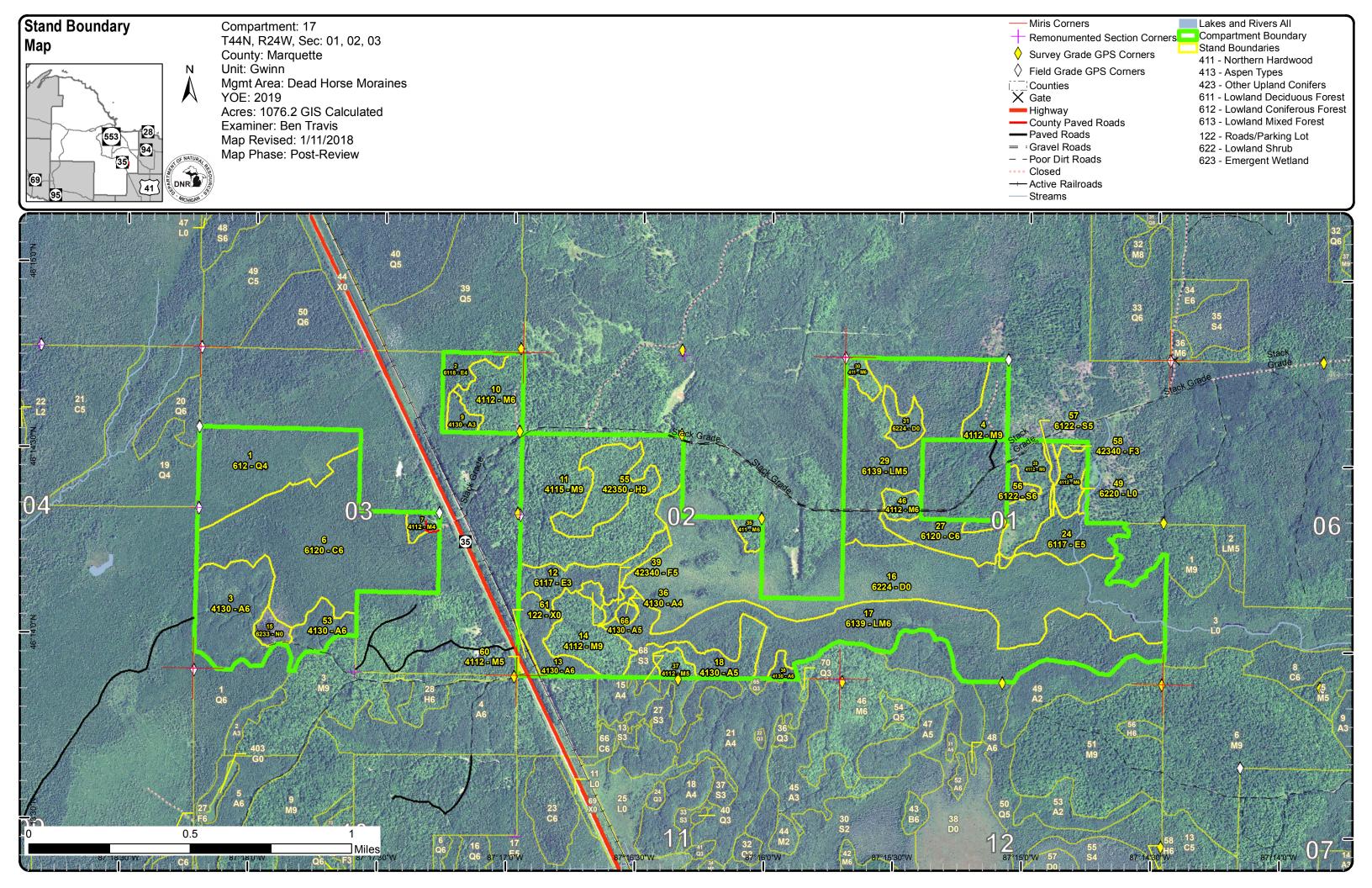
Compartment 17 Year of Entry 2019

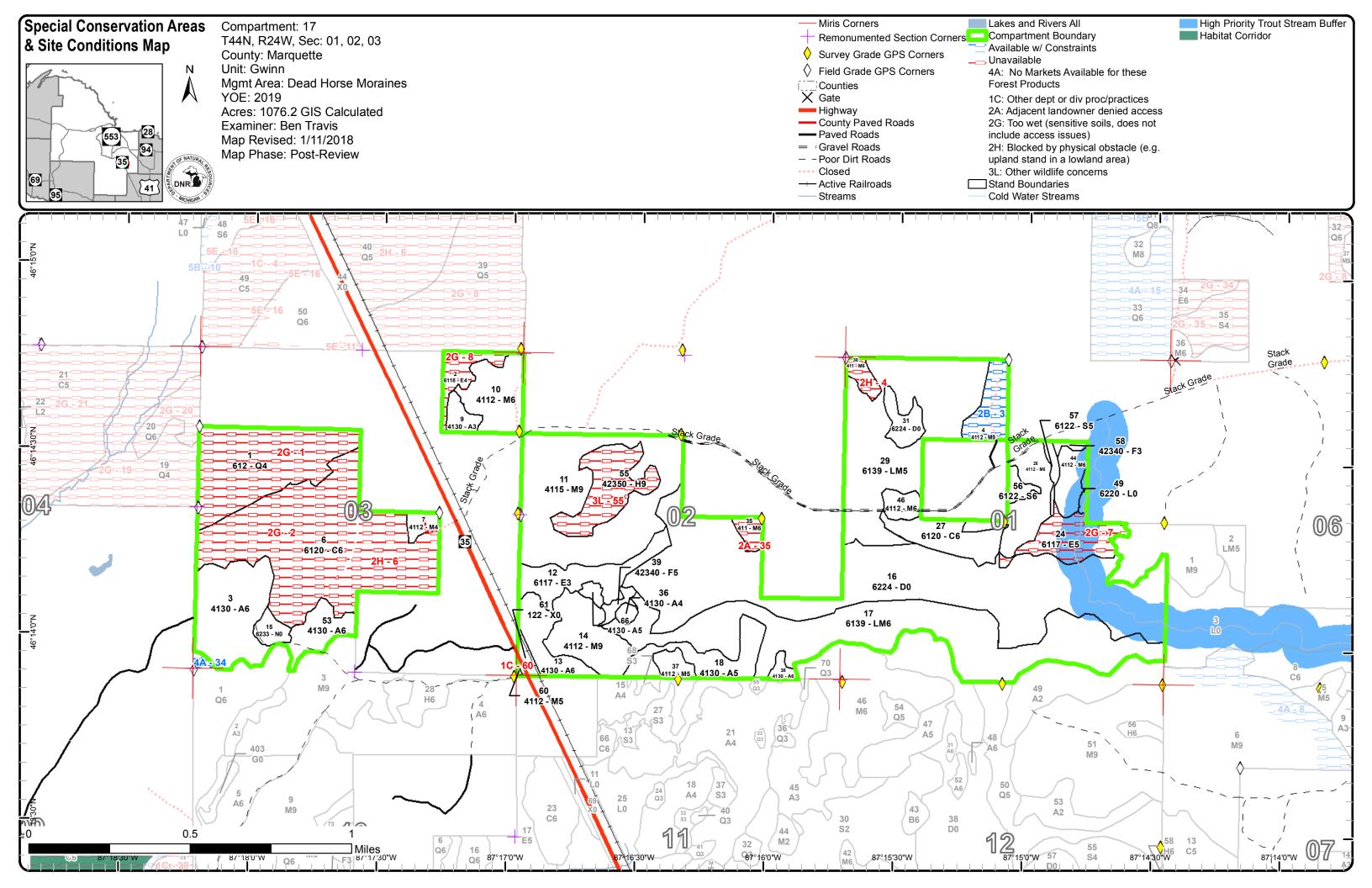


Age Class

	No.	kodeš /		\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	\$2. \$2. \$0.	§ / §	\$2,000	, % / %		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	800	§ /ø/	70,	,	\$\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	85.75 KM	St. J.	Dx Jue	OF TO TO
Aspen	0	0	6	57	43	2	0	0	0	0	0	0	0	0	0	0	0	0	108
Cedar	0	0	0	0	0	0	0	0	0	0	134	0	20	0	0	0	0	0	154
Hemlock	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	28	28
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	63	0	0	0	0	0	0	0	63
Lowland Deciduous	0	0	0	23	0	0	0	0	0	0	10	22	0	0	0	0	0	0	55
Lowland Mixed Forest	0	0	0	0	0	0	0	0	223	0	0	0	0	0	0	0	0	0	223
Lowland Shrub	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	4	0	3	0	0	0	0	0	0	0	7
Marsh	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Northern Hardwood	0	0	0	0	0	0	0	0	0	5	25	0	0	0	0	0	0	187	217
Treed Bog	204	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	204
Upland Spruce/Fir	0	2	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Urban	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Total	216	2	6	80	46	2	0	0	227	5	235	22	20	0	0	0	0	215	1076









Report 2 – Treatment Summary

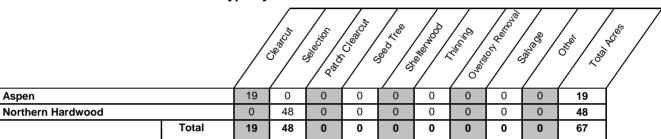
Gwinn Mgt. Unit Year of Entry: 2019

Acres of Harvest

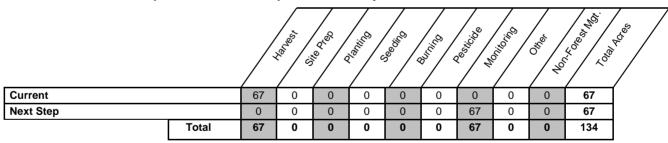
Compartment 17
Total Compartment Acres: 1,076

Commercial Harvest - 52 Harvests with Site Condition - 15 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



3 -- Treatments Compartment: 17
Year of Entry: 2019



a n d	Treatment Name	Acres	Stand CoverType	Size S Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
13	32017013-Cut	16.6	4130 - Aspen	Poletimber Well	38	81-110	Harvest	Clearcut	413 - Aspen	Even-Aged	Draft Field Boundary

Habitat Cut: No Site Condition:

Prescription Overstory removal of all trees except white pine, cedar, hemlock, yellow birch. Leave some scattered black cherry (larger trees) and white birch.

Specs: May leave small pockets of purer maple if desired.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Trembling aspen, fir, bigtooth aspen, balsam poplar, birch, black cherry, and maple.

Regen:

Other Will be harvested in conjunction with adjoining stands. Will require a winter cutting/ frozen ground spec in contract as forest access road to north

Comment: is in failed state due to wet areas.

WLD -: Leave some of the larger black cherry (5%) black bear

Proposed Start Date: 10/01/2018

32017014-Cut 27.3 4112 - Maple. Sawtimber 111-Harvest Single Tree 411 - Northern Uneven-Draft Field Beech, Cherry Well 140 Selection Hardwood Aged Boundary

Association

Habitat Cut: No Site Condition:

<u>Prescription</u> Mark for removal enough trees per acre to achieve a residual basal area of between 50 and 70 sq. ft.. Make some larger regeneration gaps <u>Specs:</u> where appropriate. Follow guidance provided in relevant DNR marking manuals. Protect any vernal ponds. Leave all hemlock, cedar, white pine,

white spruce, and yellow birch. Favor leaving black cherry if possible.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Maple, birch, black cherry, basswood, aspen, fir, and spruce.

Regen:

Other Very dense maple regeneration, so will want to mark and cruise during leaf-off periods. Stand will be harvested in conjunction with adjoining

Comment: stands. Will require a winter cutting/ frozen ground spec in contract as forest road access to north is in failed state due to wet areas.

Proposed Start Date: 10/01/2018

32017032-Cut 15.1 4112 - Maple, Sawtimber 101 Unspec Harvest Single Tree 411 - Northern Even-Aged Draft Field Beech, Cherry Well ified Selection Hardwood Boundary Association

Habitat Cut: No Site Condition: Unknown Access

<u>Prescription</u> Mark for removal enough trees per acre to achieve a residual basal area stocking of between 50 and 70 sq. ft.. Protect any vernal ponds. Leave <u>Specs:</u> all hemlock, cedar, white pine, and yellow birch. Leave some cherry, spruce, and white birch. Look for opportunity to leave some of the bigtooth

aspen for potential raptor nesting sites.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Maple, aspen, fir, spruce, birch, basswood, and black cherry,

Regen:

Other Will need survey corners placed. Will need to secure written access. Consider marking trees to leave to bring down stocking.

Comment:

Proposed Start Date: 10/01/2018

Uneven-32017037-Cut 5.5 4112 - Maple, Poletimber 96 111-Harvest Single Tree 411 - Northern Draft Field Beech, Cherry Medium 140 Selection Hardwood Aged Boundary

Association

Habitat Cut: No Site Condition:

<u>Prescription</u> Mark for removal enough trees per acre to achieve a residual basal area stocking of between 50 and 70 sq. ft.. Follow guidance provided in <u>Specs:</u> relevant DNR marking manuals. Protect any vernal pools. Leave all hemlock, cedar, white pine, white spruce, and yellow birch. Favor leaving

most black cherry.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Maple, birch, basswood, black cherry, aspen, fir, and spruce.

Regen:

Other Very dense maple regeneration, so will want to mark and cruise during leaf-off periods. Stand will be harvested in conjunction with adjoining

<u>Comment:</u> stands. Will require a winter cutting/ frozen ground spec in contract as forest access road to north is in failed state due to wet areas.

Proposed Start Date: 10/01/2018

Gwinn Mgt. Unit Report 3 -- Treatments

s Year of Entry: 2019 t а **Cover Type Treatment** Acres Stand Size Stand BA **Treatment Treatment** Age **Approval** n Method Objective d Name CoverType Density Age Range Type Structure **Status** 32017066-Cut 81-110 Draft Field 66 2.4 4130 - Aspen Poletimber 41 Harvest Clearcut 413 - Aspen Even-Aged Medium Boundary

Compartment: 17

Habitat Cut: No Site Condition:

<u>Prescription</u> Overstory removal of all trees except white pine, cedar, hemlock, and yellow birch.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, balsam poplar, fir, birch, black cherry, and maple.

Regen:

Other Will be harvested in conjunction with adjoining stands. Will require a winter cutting/ frozen ground spec in contract as forest access road to north

Comment: is in failed state due to wet areas.

Proposed Start Date: 10/01/2018

Total Treatment
Acreage Proposed:

66.9

Compartment: 17

Gwinn Mgt. Unit

Ben Travis : Examiner Year of Entry: 2019

Availa	ability for	Managemer	nt							
Total	Acres	Acres Avail	Acres		Domina	nt Site	e Con	ditions	5	
Acres	Available	With Condition	Not Available		2B	1C	2A	2G	2H	3L
108	108	0	0	Aspen						
154	20	0	134	Cedar				90	44	
28	0	0	28	Hemlock						28
63	0	0	63	Lowland Conifers				63		
56	23	0	33	Lowland Deciduous				33		
223	223	0	0	Lowland Mixed Forest						
2	2	0	0	Lowland Shrub						
7	7	0	0	Lowland Spruce/Fir						
5	5	0	0	Marsh				0		
217	192	15	10	Northern Hardwood	15	0	5		5	
204	204	0	0	Treed Bog			0			
5	5	0	0	Upland Spruce/Fir						
4	4	0	0	Urban						
1,076	793	15	268	Total Forested Acres	15	0	5	185	49	28
<u>-</u>	74%	1%	25%	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
1	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	63	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	Unspecified	Unspecified	Unspecified
С	omments:						
2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	90	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						

Report 4 – Site Conditions

Gwinn Mgt. Unit

Ben Travis : Examiner

Compartment: 17
Year of Entry: 2019

3	Available	2B: Unknown if access through adjacent landowner(s) is possible	15	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: 15 acre hardwood	stand with a fir component.					
4	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	5	2A: Adjacent landowner denied access	Unspecified	Unspecified	Unspecified
(Comments:						
6	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	44	2G: Too wet (sensitive soils, does not include access issues)	Unspecified	Unspecified	Unspecified
(Comments:						
7	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	22	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	Unspecified	Unspecified	Unspecified
(Comments:						
8	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	10	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						
34	Available	4A: No Markets Available for these Forest Products	2	Unspecified	Unspecified	Unspecified	Unspecified
(Comments:						

Report 4 – Site Conditions

Gwinn Mgt. Unit Ben Travis : Examiner Compartment: 17
Year of Entry: 2019

35	Unavailable	2A: Adjacent landowner denied access	5	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	Unspecified	Unspecified	Unspecified
C	Comments:						
55	Unavailable	3L: Other wildlife concerns	28	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Maintain in existing	condition for special wildlife h	abitat.				
60	Unavailable	1C: Other dept or div proc/practices	0	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						

Mgt. Unit

Compartment: #Type! Year of Entry:

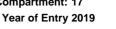


Report 5 - PROPOSED SPECIAL CONSERVATION AREA* (SCA) DETAILS

* 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.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				

Gwinn Mgt. Unit Compartment: 17





Report 6 – 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 oxygen of stocked trout populations and those of other coldwater fish syear to year. Coldwater streams in Michigan typically provide contributions of groundwater to their stream flows. Such stream designated as trout resources by Fisheries Order 210.	species (e.g., slimy sculpin) to persist from e these conditions due to substantial				
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecos influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjace streams and open water wetlands, riparian areas harbor a high diversity of plants and wildl communities are ecologically and socially significant in their effects on water quality and quas aesthetics, habitat, bank stability, timber production, and their contribution to overall biod					

S t	Gwinr	Gwinn Mgt. Unit			- Forested	Stands Compartment: 17 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	612 - Lowland Coniferous Forest	Poletimber Poor	62.8	90	1-50	Scattered black spruce and cedar poles. Unproductive site due to high water table.
2	6118 - Lowland Deciduous with Cedar	Poletimber Poor	10.3	98	Unspecified	
3	4130 - Aspen	Poletimber Well	43.2	26	51-80	Harvested under permit #32-021-89-01. Stand inaccessible due to beaver flooding of old winter road.
4	4112 - Maple, Beech, Cherry Association	Sawtimber Well	15.1	101	Unspecified	Scattered white pine supercanopy trees.
6	6120 - Lowland Cedar	Poletimber Well	134.1	91	171-200	Tight, healthy canopy.
7	4112 - Maple, Beech, Cherry Association	Poletimber Poor	4.6	86	1-50	Overstory density ranges from seed tree to light shelterwood. Uncommon overstory associate are white pine, fir, white birch, white spruce, sugar maple, black spruce, cedar, yellow birch, and balsam poplar.
9	4130 - Aspen	Sapling Well	5.6	15	Immature	Dense understory of sugar maple. Some sparse aspen overstory areas. White pine sawtimber, black cherry poletimber, red maple poletimber, and sugar maple poletimber left as sparse residual from cutting. White pine and white spruce saplings found.
10	4112 - Maple, Beech, Cherry Association	Poletimber Well	24.1	106	81-110	Cut under permit # 003-99-01.Higher percentage of overstory red maple to north. Occasional trembling aspen, basswood, and cedar within canopy. White spruce, white pine, and hemlock saplings present.
11	4115 - Y.Birch, Hemlock NH	Sawtimber Well	88.3	111	51-80	Abundant, vigorous hemlock and yellow birch saplings along forest road. Scattered groves of hemlock. Found several vernal ponds. White pine, cedar, black cherry, and white birch are overstory associates. White pine, white spruce, black spruce, and white birch saplings found. Cut under permit #32-003-99-01.
12	6117 - Lowland Deciduous, Mixed Coniferous	Sapling Well	23.4	27	Immature	Patchy species composition in canopy. More spruce stems to east.
13	4130 - Aspen	Poletimber Well	16.6	38	81-110	Harvested in 1980. 4 and 5 sticks of merchantable height. Vigorous stand, nice boles, no health issues. White pine, red maple, and sugar maple are uncommon within canopy. Yellow birch and sugar maple saplings present.
14	4112 - Maple, Beech, Cherry Association	Sawtimber Well	27.3	121	111-140	Very high maple regeneration stem count. White birch and fir saplings present. Hemlock, fir, white spruce, and white pine uncommon overstory associates. Vernal ponds to protect. Access road very wet - winter cut only.
17	6139 - Mixed Lowland Forest	Poletimber Well	131.2	71	51-80	
18	4130 - Aspen	Poletimber Medium	21.4	37	81-110	

S t	Gwinn Mgt. Unit			Report 7	Forested	Stands Compartment: 17 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
24	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Medium	22.4	108	51-80	
26	4112 - Maple, Beech, Cherry Association	Poletimber Well	25.2	96	1-50	White birch, white pine, hemlock, cedar, and fir poles found. Fir, white pine, and hemlock saplings present.
27	6120 - Lowland Cedar	Poletimber Well	20.3	111	171-200	Occasional white pine, sugar maple, white spruce, and yellow birch in overstory. Variable cedar stocking, tending to be lower further to the west. Sparse cedar regeneration found. Fir and alder understory becomes denser to west.
29	6139 - Mixed Lowland Forest	Poletimber Medium	92.1	71	51-80	
30	411 - Northern Hardwood	Poletimber Well	5.1	101	111-140	Access and survey limitations.
35	411 - Northern Hardwood	Poletimber Well	4.8	101	111-140	
36	4130 - Aspen	Poletimber Poor	2.1	38	51-80	
37	4112 - Maple, Beech, Cherry Association	Poletimber Medium	5.5	96	111-140	
38	4130 - Aspen	Poletimber Well	2.9	37	81-110	
39	42340 - Upland Spruce/Fir	Poletimber Medium	3.1	37	51-80	
44	4112 - Maple, Beech, Cherry Association	Poletimber Well	10.5	96	51-80	
46	4112 - Maple, Beech, Cherry Association	Poletimber Well	6.1	96	81-110	
53	4130 - Aspen	Poletimber Well	14.1	26	51-80	Harvested under permit #32-021-89-01. Aspen averages two- stick in merchantable height. Higher water table, so aspen slightly off-site. Perhaps consider scheduling rotation once stand hits average of three stick stems? Vernal ponds.
55	42350 - Upland Hemlock	Sawtimber Well	28.1	181	81-110	
56	6122 - Black Spruce	Poletimber Well	3.9	79	51-80	Sphagnum with many pools. Purer concentration of black spruce to south, with associated Lab tea. Provides good patch heterogeneity in landscape.
57	6122 - Black Spruce	Poletimber Medium	3.0	91	51-80	Drainage.
58	42340 - Upland Spruce/Fir	Sapling Well	1.7	6	Immature	Harvested in late winter of 2012 under contract #32-007-09.

S t	Gwini	n Mgt. Unit		Report 7	– Forested	Stands Compartment: 17 Year of Entry: 2019
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
60	4112 - Maple, Beech, Cherry Association	Poletimber Medium	0.2	76	51-80	Stand should be part of Compartment 18 as sliver of land on west side of M-35 which provides access to Compartment 18.
66	4130 - Aspen	Poletimber Medium	2.4	41	81-110	

Compartment: 17 Year of Entry: 2019



Stand	Cover Type	Acres	Managed Site	General Comments:
15	6233 - Wet Meadow	5.5	No	Beaver flooding, active lodge. Standing dead cedar. Excellent waterfowl area.
16	6224 - Treed Bog	195.6	No	Few scattered islands of larger trees,
31	6224 - Treed Bog	8.6	No	
49	6220 - Alder/willow	1.7	No	
61	122 - Road/Parking Lot	3.5	No	M-35 and railroad ROW.