

Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 61233 Entry Year 2024 Acreage: 1,400

County Manistee

Management Area: Manistee Plains

Stand Examiner: Patrick Cotant

Legal Description:

T24N, R14W, section 1, 2, 5, 8, 9, 11, 12, 15, 17

Identified Planning Goals:

The Betsie River is a state designated Natural River. There are three parcels of state ownership with river frontage where maintaining vegetative cover and visual management along the river will be a priority. The compartment has historically been classified as mixed use in the Pere Marquette Management Plan. For other parcels within the compartment not effected by the Betsie River or its tributaries; provide for intensive timber management; maintain or enhance wildlife habitat; protect areas of unique threatened, endangered and special concern species; and provide for dispersed forest-based recreational uses.

Soil and topography:

Dominant soil type is Rubicon loamy, excessively drained. Topography is level. The compartment lies within land type association 6-1-1-1 (broad flat lake plain: excessively drained sand and loamy sand.)

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

The majority of land within the compartment is private. State ownership is fragmented with only one large contiguous block of 480 acres. The remainder of state ownership consists of smaller, scattered parcels. There is one newly acquired parcel; the SESE of section 15 and the railroad grade running through the section was purchased in 2009. The acquisition of this parcel helps to fill a major gap in the Interlochen to Kaleva Trail as well as provide legal access to approximately 600 acres of state owned land in adjacent compartment 61033. There was one small disposal of state owned land in section 15, SWSE. Approximately 1.5 acres was sold to resolve an historic building found to be in trespass on state land

Unique Natural Features:

Potential for red shouldered hawk, goshawk, and wood & box turtle occurrences within the compartment. MNFI layers identify observations in the past but recent records since the last review period are absent.

Archeological, Historical, and Cultural Features:

None known or identified in HAL database.

Special Management Designations or Considerations:

The Betsie River is a state designated Natural River.

Watershed and Fisheries Considerations:

The Betsie River and a small, unnamed tributary flow through Compartment 233. Both are Designated Trout Streams. The Betsie River is a State Designated Natural River. A native vegetation buffer of 100 feet on each side of the river must be maintained. The Betsie River has populations of rainbow trout (steelhead), brown trout, coho salmon, and chinook salmon. The tributary in Section 9 has a naturally reproducing population of resident brook trout. The tributary is also vital to the Betsie River in that it provides cold groundwater to the Betsie, helping to keep it cool enough for trout survival.

Wildlife Habitat Considerations:

This compartment falls within a flat lake plain landscape, characterized by loamy sands and relatively flat terrain. The presettlement forest cover in this landscape was dominated by beech-maple and white pine-beech-red maple. The compartment today is dominated by pine plantations, aspen-hardwood mixes on moist to wet soils, and some wetlands and remnant fields. This landscape is less fire-prone than the outwash plains to the north. GLO surveyors reported large wind throw areas which were perhaps the dominant natural change factor, along with natural succession.

Well advanced forest stands adjacent to the river should be maintained as late successional forest for riparian habitat and as a remnant of historic forest cover. Mink, barred owls, pileated woodpeckers, wood frogs, deer, and numerous other species will benefit from such cover. These areas are also important for the state-threatened, red-shouldered hawk.

Low lying aspen and shrub wetlands dominate section 17. Maintaining a variety of aspen age classes here through periodic cutting will benefit numerous species such as ruffed grouse, woodcock, golden-winged warbler, and black bear.

Harvests should incorporate leave trees, snags, and creation of some down logs. Wild raisin, chokeberry, and blueberry are particularly abundant in this area and provide an extremely important soft mast resource. Patches of old white pine offer important diversity and should be maintained. Red-shouldered hawks are also known to use this area. Any nesting sites discovered should be protected following Department guidelines.

Most of the rest of the state lands in the compartment are fragmented parcels with pine plantations, remnant fields, and small stands of hardwoods. Any thinnings can only benefit wildlife by allowing some sunlight into these stands which will in turn diversify ground flora and habitat. Wetlands should be buffered when thinning adjacent stands. Openings should be maintained where they exist to enhance local diversity for deer, turkey, cedar waxwing, red fox, American goldfinch, and other species using open habitats.

Mineral Resource and Development Concerns and/or Restrictions

The nearest active sand/gravel pit is more than two miles east. There is potential for sand and gravel within the compartment, but aside from small borrow pits, development potential appears limited. The compartment is within the Silurian reef trend and several successful wells have been drilled in and around the compartment; nearly all appear to be plugged and abandoned or temporarily abandoned. There may be potential for additional reef discoveries beneath the compartment as well as potential for gas storage. There has also been some Antrim Shale gas production in this area, but it is unlikely additional Antrim wells will be drilled within the compartment as long as natural gas prices remain low. State-owned mineral rights in the compartment are currently leased and held by production. There is no known metallic mineral potential in this part of the state. The state does not own all the mineral rights within the compartment. Because the mineral estate is the dominant estate, reasonable access to the surface must be provided to private owners if they choose to explore or develop their mineral rights.

Vehicle Access:

Due to the fragmented nature of this compartment, vehicle access is not a problem. Most parcels have access via county roads. The only exception is the NESW of section 12 which is land locked and has no legal access.

Survey Needs:

The compartment is well surveyed. Survey needs that were identified in 2004 have all been completed. There are no known survey needs at this time.

Recreational Facilities and Opportunities:

The Betsie River Snowmobile Trail runs through the compartment. The trail was recently moved off of a series of forest roads and on to the former Ann Arbor Railroad grade that runs from Thompsonville to Kaleva. The Betsie River is used for canoeing, kayaking, and fishing. Access to the river is currently limited to the Psutka Rd. crossing in section 8. The small parcel in section 2 (stand 66) could possibly be developed into an access site along Kurick Rd. Dispersed camping activities associated with fall hunting appear to be generally light throughout the compartment.

Fire Protection:

Local volunteer response for initial attack is from the Copemish-Cleon Volunteer Fire Department. DNR initial attack response is from the Platte River Field Office and the Traverse City Field Office.

Additional Compartment Information:

Recommended land disposals:

The NE1/4SW1/4 section 12. This parcel has no legal access; therefore it is unavailable to the public for any type of recreation and is inaccessible for forest management activities. Cover consists of low quality hardwood and white pine.

Recommended land acquisitions:

Any large parcels that have frontage on the Betsie River that could improve access opportunities.

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

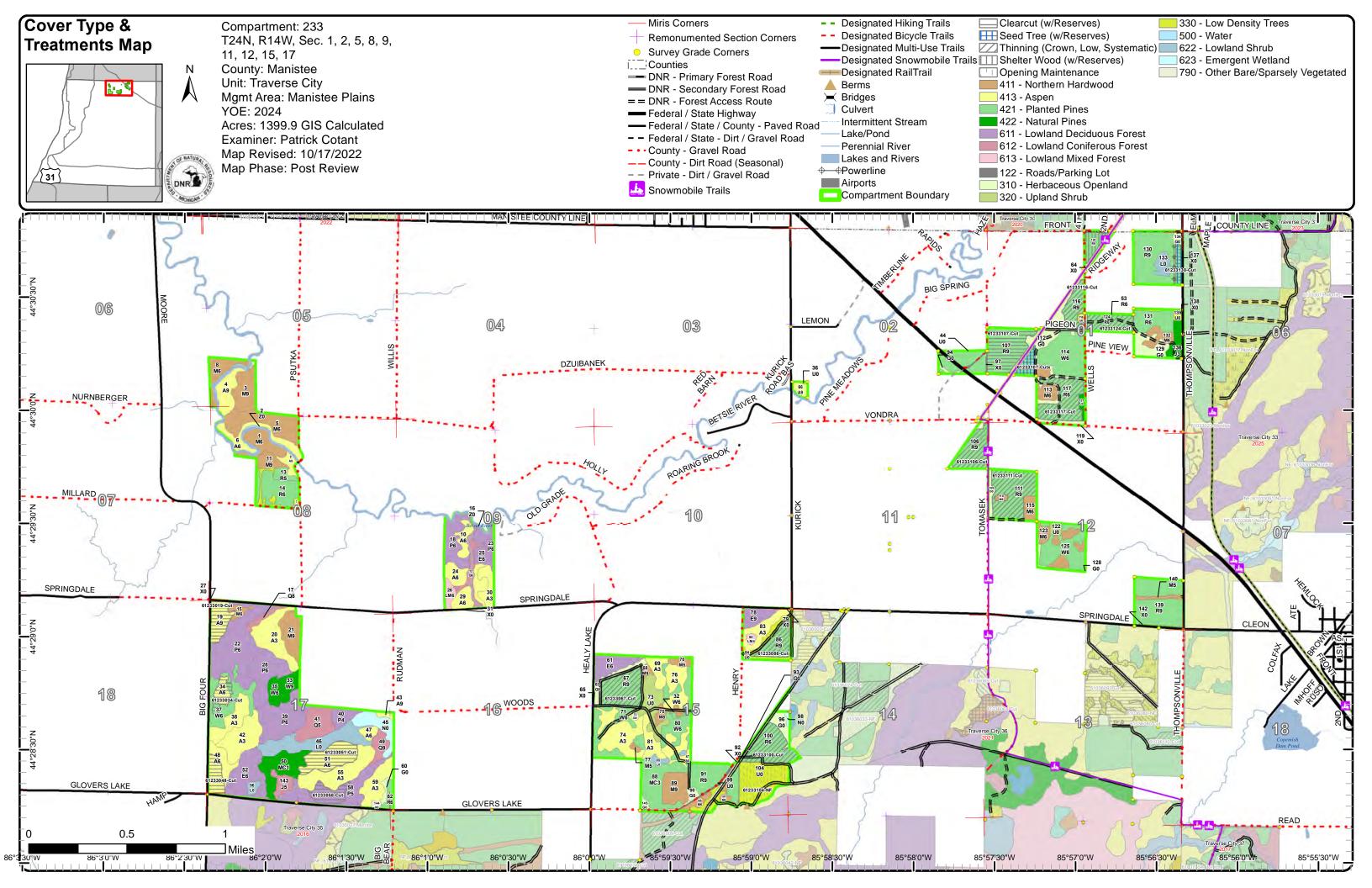
The following information is displayed, where pertinent, on the attached compartment maps:

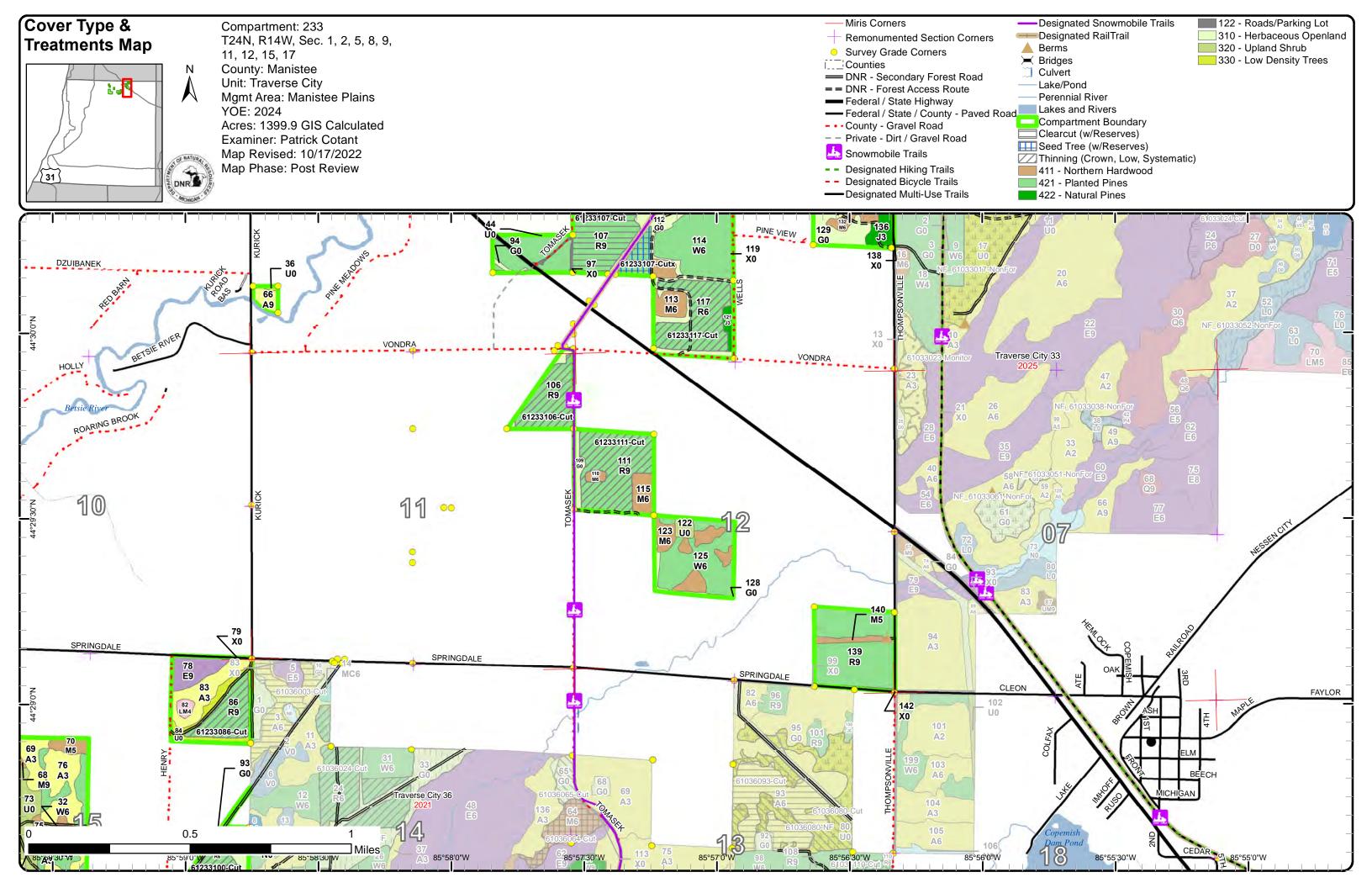
Base feature information, stand boundaries, cover types, and numbers Proposed treatments

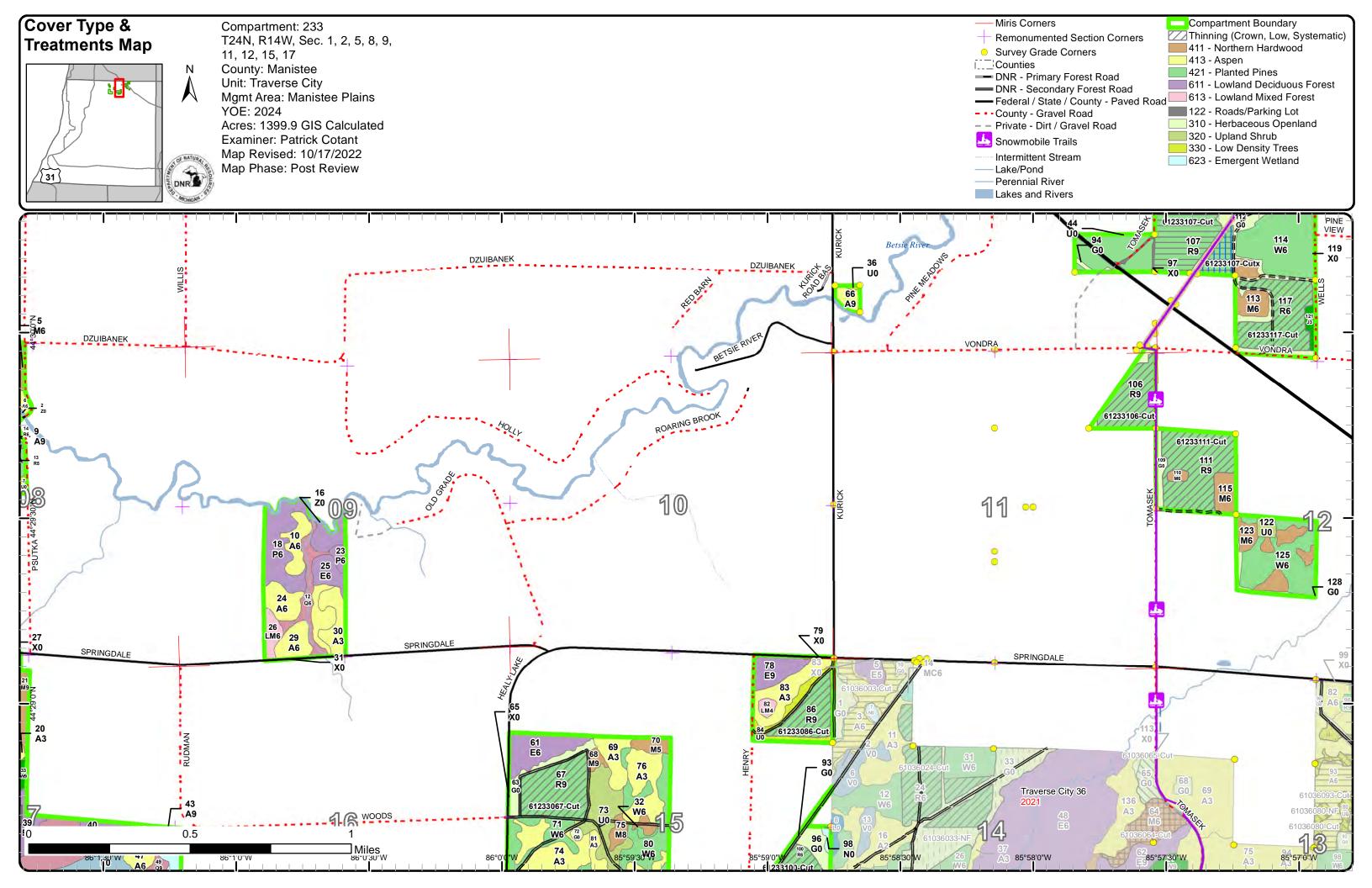
Proposed treatments

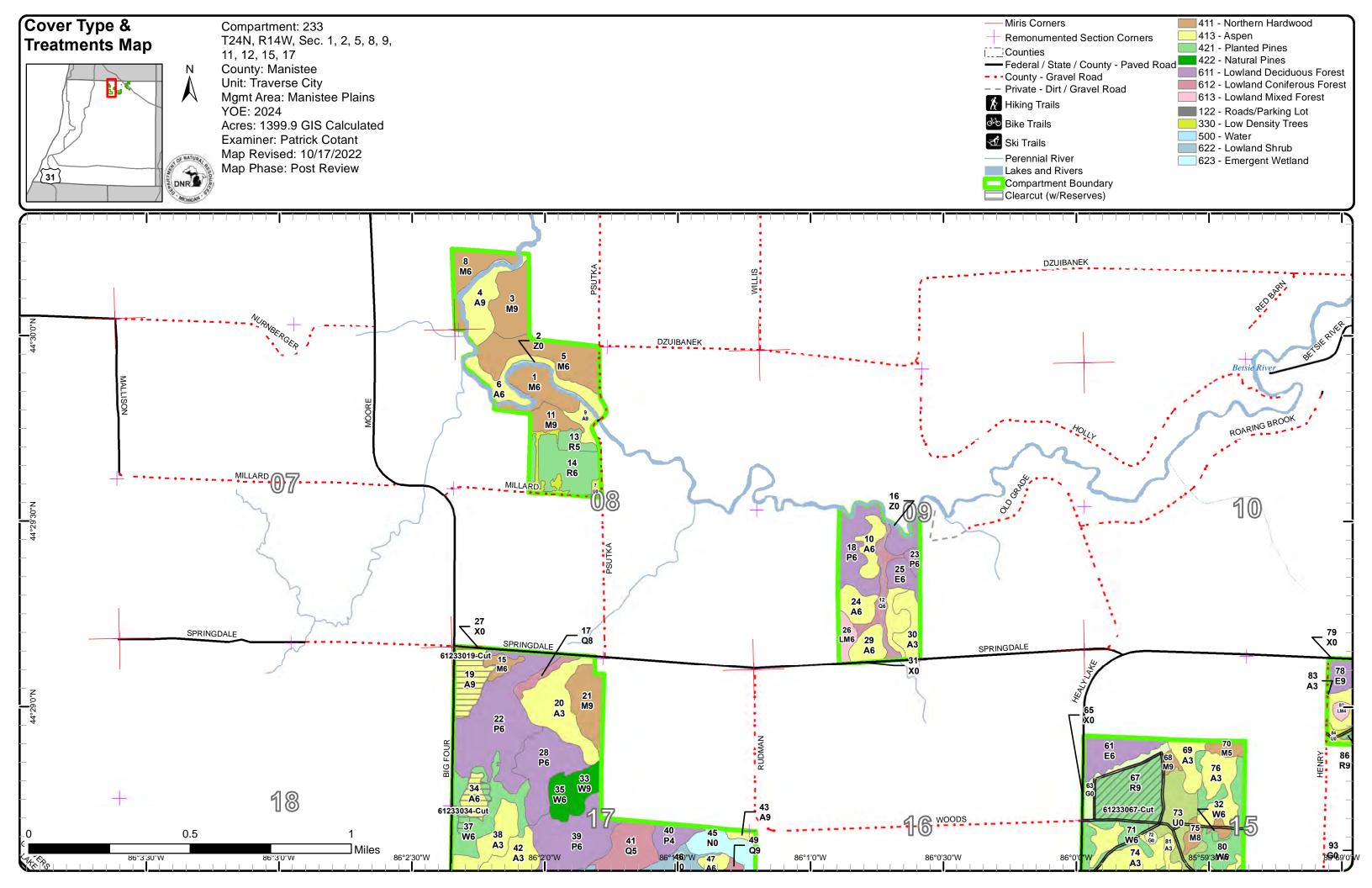
Site condition boundaries

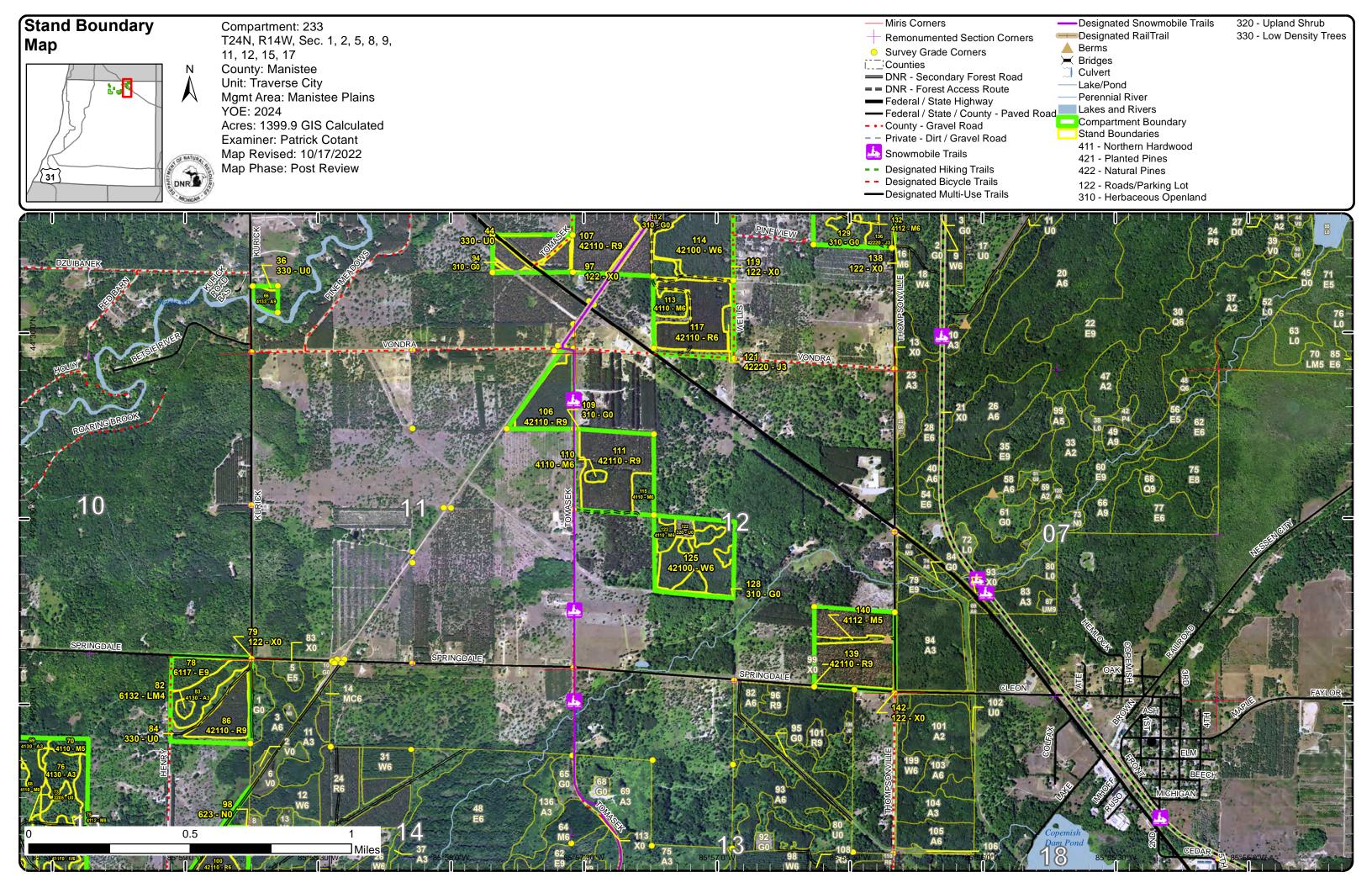
Details on the road access system

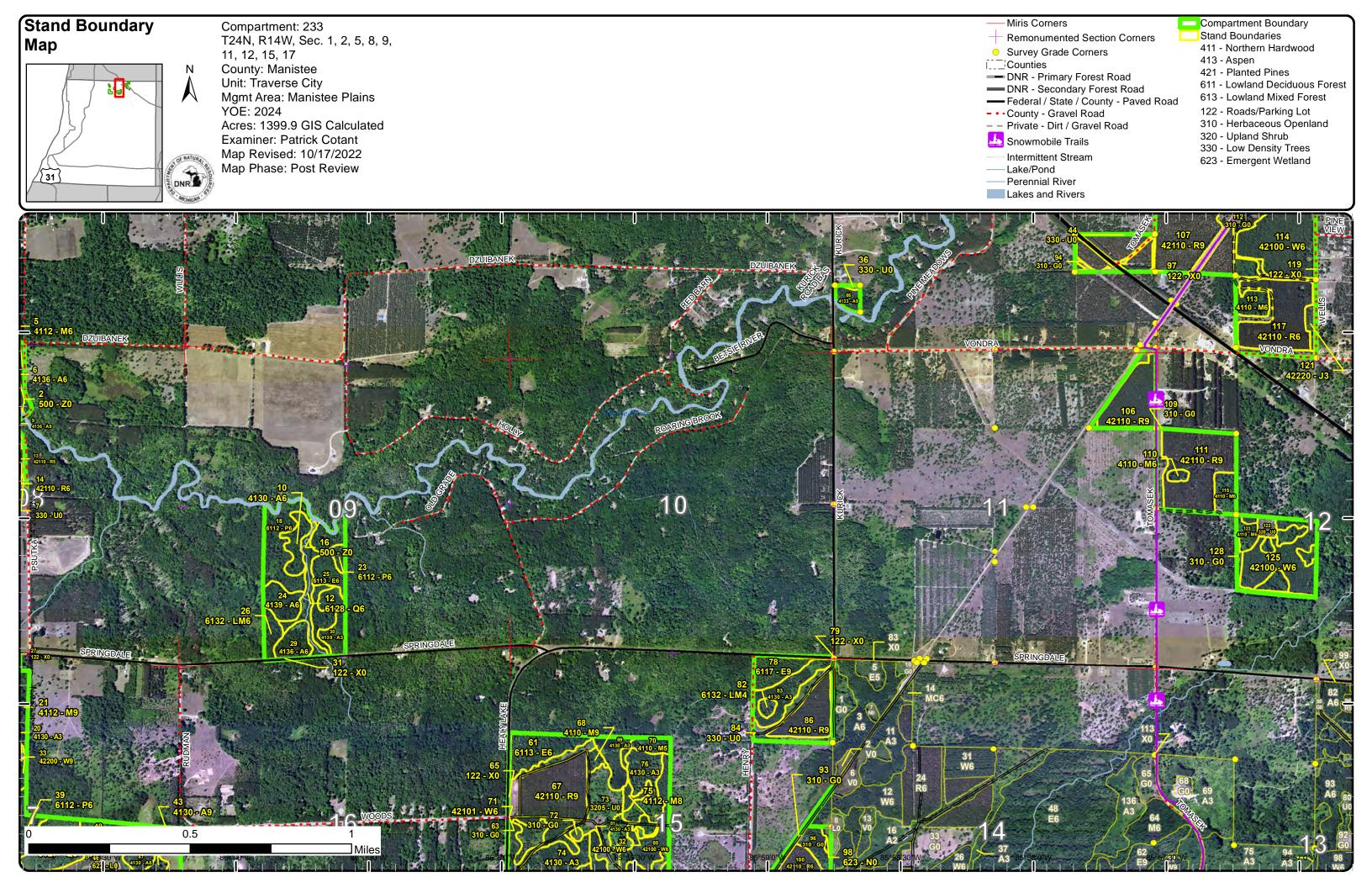


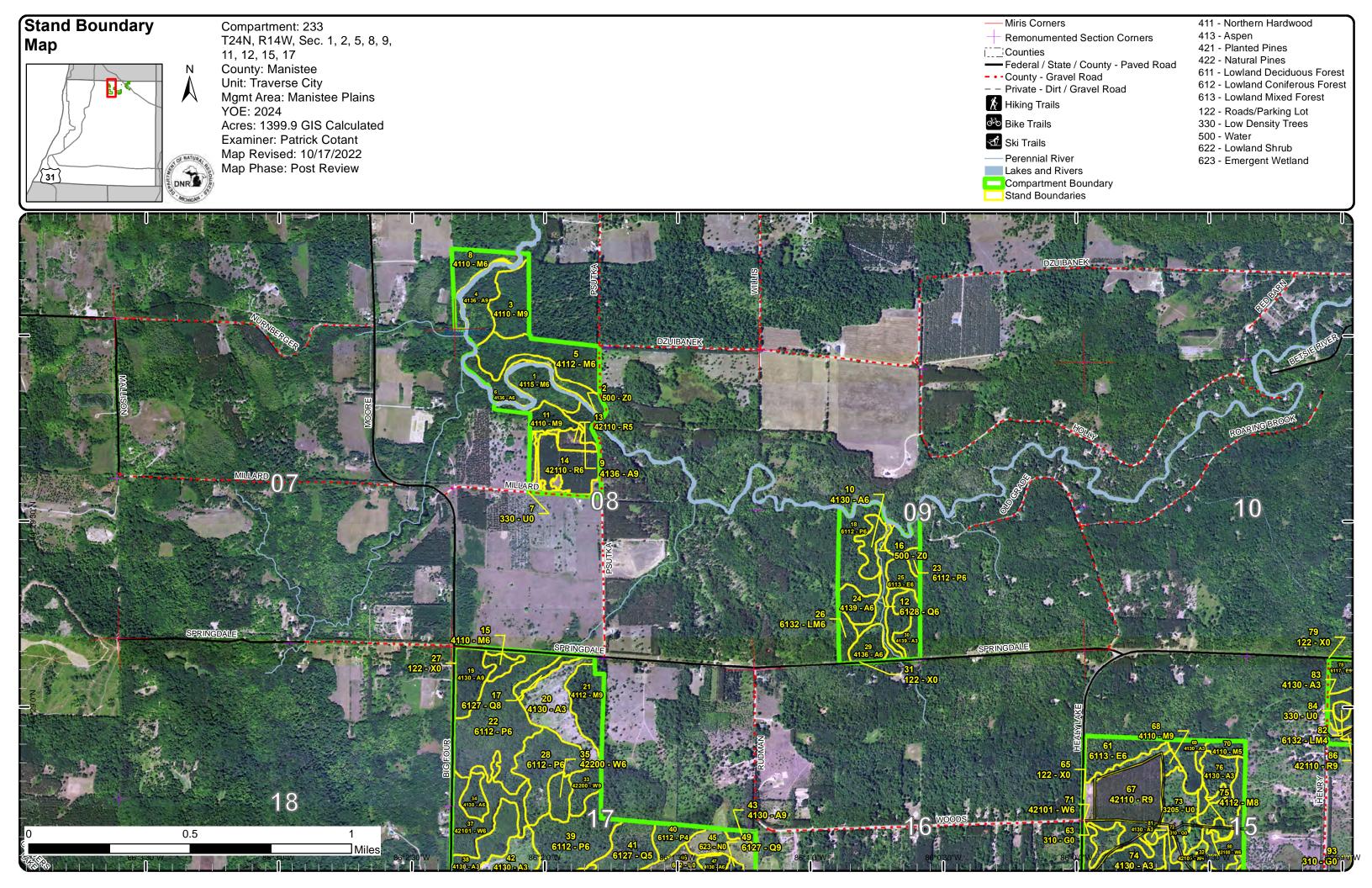


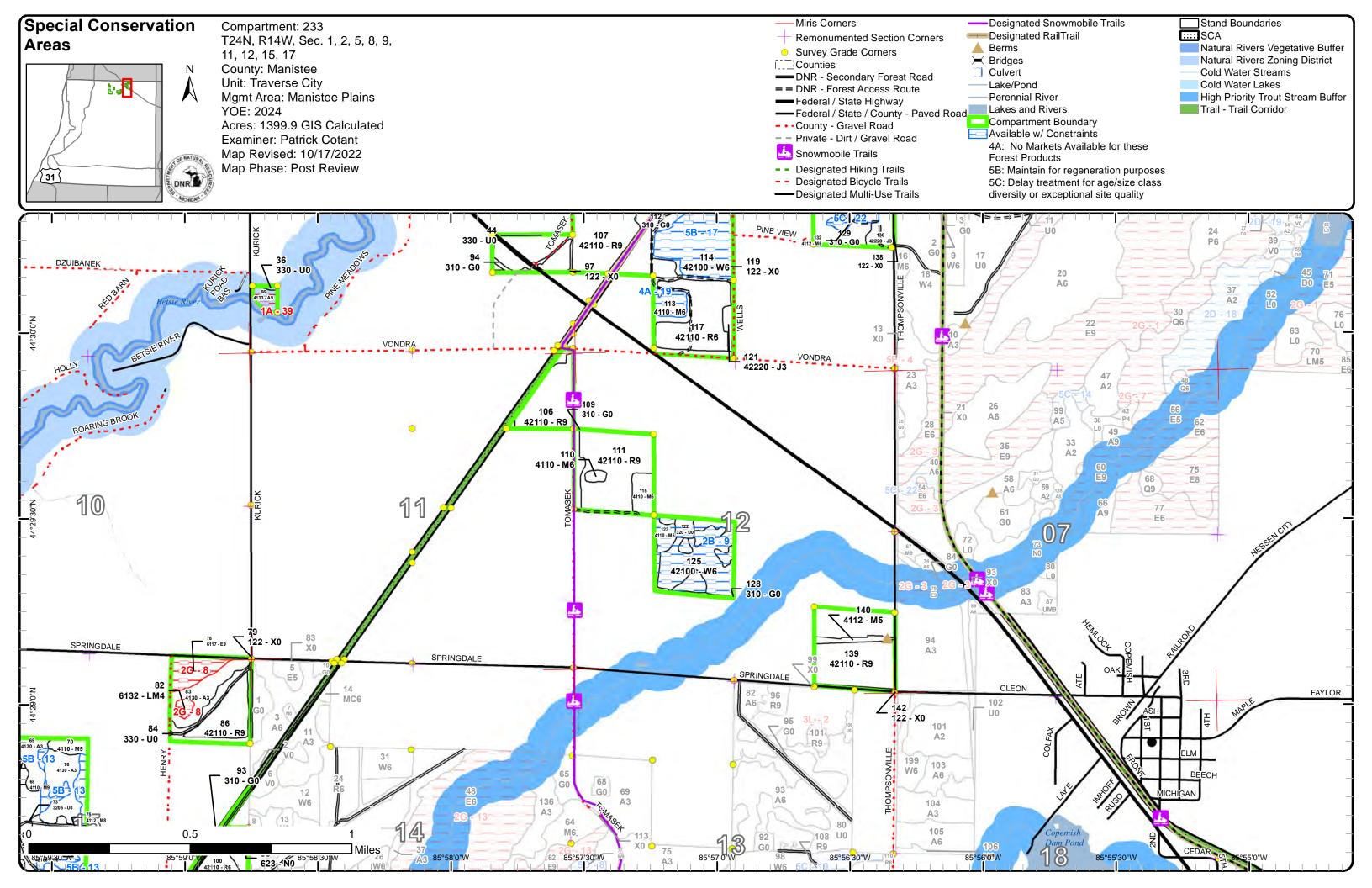


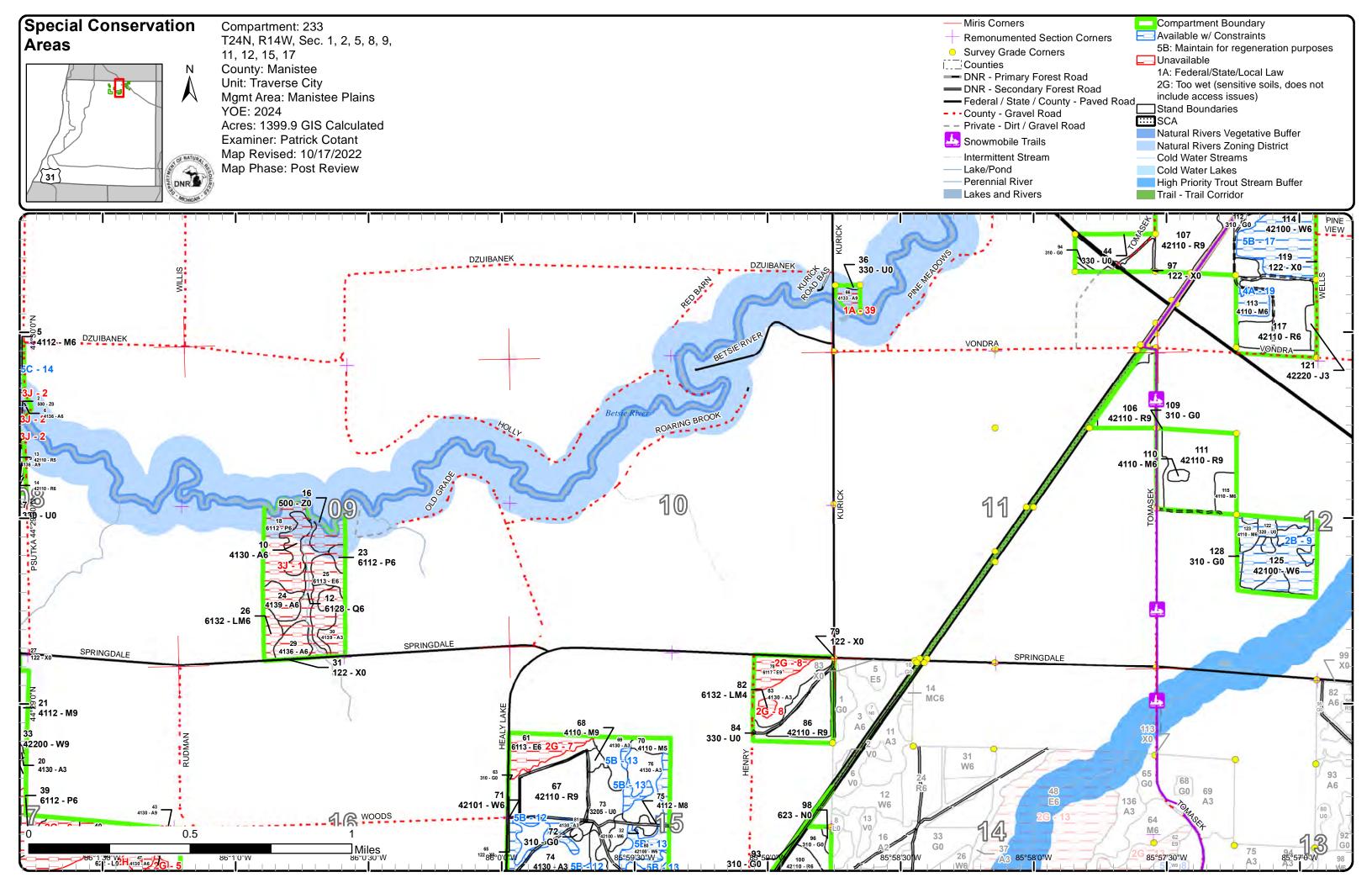


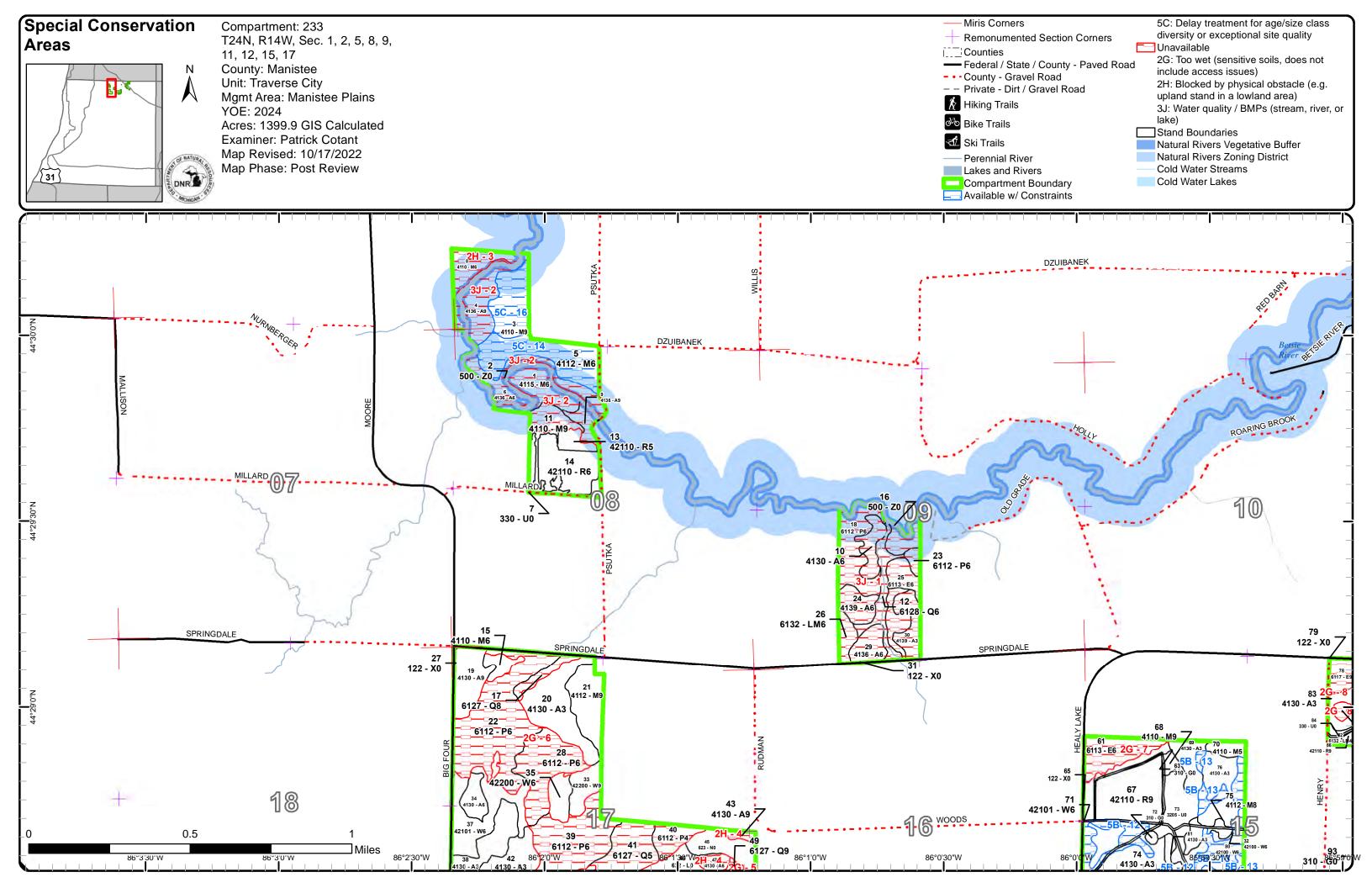












Traverse City Mgt. Unit

Patrick Cotant : Examiner

Age Class

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Aspen	0	54	87	26	0	0	5	63	15	33	0	0	0	0	0	0	0	0	282
Bare/Sparsely Vegetated	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Herbaceous Openland	80	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80
Jack Pine	0	0	9	0	0	0	6	0	0	0	0	0	0	0	0	0	0	0	15
Low-Density Trees	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	51
Lowland Aspen/Balsam Poplar	0	0	0	0	63	0	34	46	0	0	0	0	0	0	0	0	0	2	145
Lowland Conifers	0	0	0	0	0	0	0	15	8	0	0	0	0	0	0	0	0	10	33
Lowland Deciduous	0	0	0	0	0	0	0	0	10	0	0	23	0	0	0	0	0	20	53
Lowland Mixed Forest	0	0	0	0	0	0	0	4	2	0	0	0	0	0	0	0	0	0	6
Lowland Shrub	36	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	36
Marsh	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13
Natural Mixed Pines	0	0	0	0	0	19	0	0	0	0	0	0	0	0	0	0	0	0	19
Northern Hardwood	0	0	0	0	4	0	3	6	13	23	34	24	21	0	0	0	0	22	149
Planted Mixed Pines	0	0	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
Red Pine	0	0	0	18	0	0	170	55	55	35	0	0	0	0	0	0	0	0	333
Upland Shrub	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19
Urban	21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
Water	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6
White Pine	0	0	0	0	0	0	83	27	0	0	0	0	0	0	0	0	0	7	117
Total	227	54	117	44	67	19	301	216	103	91	34	47	21	0	0	0	0	61	1400



Report 2 – Treatment Summary

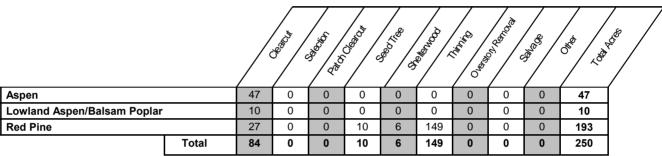
Traverse City Mgt. Unit Year of Entry: 2024

Acres of Harvest

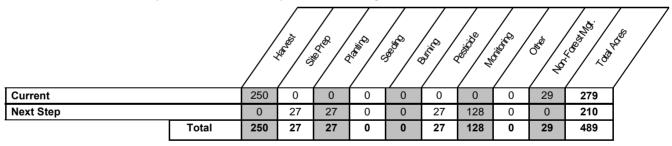
Compartment 233
Total Compartment Acres: 1,400

Commercial Harvest - 250 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



Traverse City Mgt. Unit

Report 3 -- Treatments

BA

Compartment: 233 Year of Entry: 2024

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Treatment Name

Acres

Stand CoverType

Size Density Stand Age Range **Treatment** Type

Treatment Method

Cover Type Objective

Age Structure Habitat Cut

Approved Treatments:

19 61233019-Cut 11.3 4130 - Aspen Sawtimber 111-Harvest Clearcut 413 - Aspen Even-Aged No Well 140

Prescription Final harvest stand, expand treatment along eastern edge where possible if conditions allow for operations in adjacent P-type. Retain some small pockets of red maple in NW corner of stand and along Big Four rd. Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen species, red maple, black cherry and beech.

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

61233034-Cut 7.6 4130 - Aspen Poletimber 55 81-110 Harvest Clearcut with 4133 - Aspen, Even-Aged No Well Retention Mixed Pine

Prescription Final harvest stand, retaining a few small pockets of 4-6 individual, good guality white pine trees (in areas where stand 37 is included in treatment area). Treatment area has been expanded outside of stand 34 boundary to harvest portions of stand 37 that appeared to have Specs: more aspen present with the goal of converting portions of 37 to aspen. This boundary can be expanded in slightly different areas and/or more acreage can be harvested for conversion if aspen is in high enough density.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments

Acceptable Aspen species, red maple, black cherry, white pine and beech.

Regen:

Other Comment: Site Condition

Proposed Start Date: 10/1 /2023

61233048-Cut 9.0 4130 - Aspen Poletimber 65 81-110 Clearcut with No Harvest 413 - Aspen Even-Aged Retention Well

Prescription Final harvest stand, retain all conifers. Treatment area avoids areas of stand that were wet or appeared to have been recently at time of inventory, however if it looks like additional acres of stand 48 are operable at time of sale set-up, expand treatment area to north and east. Specs:

There is potential that remainder of stand may be operable during dry summer or frozen winter conditions.

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable Aspen species, red maple, black cherry, beech and white pine.

Regen:

Other Comment: Site Condition

Traverse City Mat. Unit

Report 3 -- Treatments

Compartment: 233

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Year of Entry: 2024 **Cover Type** Age Habitat

Treatment Size Stand BA **Treatment Treatment** Acres Stand n Method Range Objective Structure Name CoverType Density Age Type Cut d 51 61233051-Cut 18.9 4130 - Aspen Poletimber 111-Harvest Clearcut 413 - Aspen Even-Aged Well

140

Prescription Final harvest stand in conjunction with portion of stand 58. The transition zone along northern edge of stand has been excluded from treatment area but be cognizant of lowland influence in this portion of treatment and avoid areas that are excessively wet. Retain all Specs:

merchantable conifers during sale operations.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen species, red maple, black cherry and beech along with scattered white and jack pine.

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

10.2 6112 - Lowland Poletimber Harvest Clearcut with 6130 - Fir. No 61233058-Cut 65 Even-Aged Aspen Medium Retention Aspen, Maple

Prescription Final harvest portion of stand identified by treatment area. If areas along edge of treatment area appear operable and are not excessively wet and/or have sensitive soils present then treatment area can be expanded to include additional portions of stand. Access will need to be Specs: established in same location as was used when stand 55 was harvested. Culvert and fill will be needed, along with a Manistee County RC

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen species, red maple, black cherry, beech, white pine, jack pine and balsam fir.

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

67 61233067-Cut 22.4 42110 - Planted Sawtimber 141-Harvest Crown Thinning 4211 - Planted 59 Even-Aged Nο Red Pine Well 170 Red Pine

Specs:

Prescription Thin red pine, removing approximately 1/3 of overall volume with focus being on defected, suppressed and/or otherwise poorly formed trees, and the remaining removal of trees for spacing. In addition, remove flagging/stressed trees around large dieback pocket in south central portion of stand. Consult with forest health to determine if more than a chain buffer is needed for removal in order to pre-salvage dying trees.

Next Step Treatments:

Acceptable Regen:

Other

Comment:

Site Condition

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a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habita Cut
86	61233086-C	ut 12.7	42110 - Planted Red Pine	Sawtimbe Well	r 58	141- 170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	No
Spec	cs: indiv	red pine, re iduals.	moving approximate	ely 1/3 of ov	erall vo	olume wit	h removal focuse	ed on forked, suppr	essed or otherwis	e poorly form	ed
	Step tments:										
Acce Reg	eptable en:										
Othe Com	<u>er</u> iment:										
Site	<u>Condition</u>										
Prop	osed Start Da	ate: 10/1 /2	023								
100	61233100-C	ut 21.8	42110 - Planted Red Pine	Poletimbe Well	r 61	171- 200	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	No
Pres Spec		red pine rer	moving approximate	ely 1/3 of ov	erall vo	lume with	n focus being on	forked, suppressed	or otherwise poo	orly formed inc	dividuals.
	Step tments:										
Acce Rege	eptable en:										
Othe											
Site	Condition										
	osed Start Da	ate: 10/1 /2	023								
104	61233104-N	F 28.5	330 - Low-Density Trees	Nonstocke	ed		NonForestMgt	Brush Cutting	3205 - Mixed Upland Shrub		No
Pres Spec	<u>cs:</u> (i.e.		to plant herbaceous r). Maintain as nee						ve species, but d		
	Step tments:										
Acce Reg	eptable en:										
Othe Com	<u>er</u> iment:										
Site	Condition										
Prop	osed Start Da	ate: 10/1 /2	023								
106	61233106-C	ut 16.6	42110 - Planted Red Pine	Sawtimbe Well	r 57	141- 170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	No
Pres Spec		red pine by ed trees.	removing approxim	ately 1/3 of	overall	volume,	with focus being	on removal of forke	ed, suppressed a	nd/or otherwis	se poorly
	Step tments:										
	eptable										
Othe											
	Condition										

Compartment: 233

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a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habitat Cut
107	61233107-C	ut 27.4	42110 - Planted Red Pine	Sawtimbe Well	r 59	111- 140	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	No
Spe	cs: snow succ	mobile trail ess of red p	and, retaining a few and to account for reterbine regeneration.	ntion and ae	sthetic	concerns	. Chipping sale	would be ideal and	l is recommended	to help ensu	re future
	<u>t Step</u> SiteF atments: Rege		hing; Pesticide, Ae	rial - Site Pi	ep; Pi	lanting, In	itial Plant; Mor	nitoring, Artificial Re	egen(1yr); Monito	oring, Artificial	
Reg Othe	en: er	pine at plar	ntation spacing, also	expect son	ne beed	ch and wh	ite pine through	out.			
	nment: Condition										
Prop	oosed Start Da	te: 10/1 /2	2023								
107	61233107- Cutx	6.0	42110 - Planted Red Pine	Sawtimbe Well	r 59	111- 140	Harvest	Seed Tree	4221 - Natural Red Pine	Two-Aged	No
Pres Spe	<u>cs:</u> adva		, retaining good qua eration that exists thand 107.								
	t Step Moni atments:	toring, Natu	ural Regen (Re-Inve	ntory)							
Acce Reg		pine, white	pine and beech alor	ng with scat	tered re	ed maple	and black cherry	y .			
Othe Com	<u>er</u> nment:										
Site	Condition										
Prop	oosed Start Da	<u>te:</u> 10/1 /2	2023								
111	61233111-C	ut 29.3	42110 - Planted Red Pine	Sawtimbe Well	r 69	141- 170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	No
Pres Spe		red pine, red dual trees.	emoving approximate	ely 1/3 of ov	erall vo	olume with	n focus being or	ı forked, suppresse	d and/or otherwis	e poorly forme	ed
	t Step atments:										
Acce Reg	eptable en:										
Othe Com	<u>er</u> nment:										
	Condition oosed Start Da	to: 10/1 /2	0023								
				0	. 50	474	Ulamarat	Ones This are	4044 Disasted		NI-
	61233116-C		42110 - Planted Red Pine more appropriate st	Sawtimbe Well		171- 200	Harvest	S	4211 - Planted Red Pine	Even-Aged	
Spe	cs: and/		e poorly formed trees							on lorkeu, St	դ Ի ԻՐ <u>Ը</u> 2 2 Ե Ր 0
Trea	t Step atments:										
Reg											
	nment:										
Site	Condition										

Traverse City Mgt. Unit

Report 3 -- Treatments

Compartment: 233 Year of Entry: 2024

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Treatment Stand Size Stand BA **Treatment Treatment Cover Type** Acres Age Habitat n CoverType Method Objective Structure Name Density Age Range Type Cut d 117 61233117-Cut 23.1 42110 - Planted Poletimber 171-Harvest Crown Thinning 4211 - Planted Even-Aged Red Pine Well Red Pine

200

Specs:

Prescription Thin red pine, removing approximately 1/3 of overall volume with focus being on forked, suppressed and/or otherwise poorly formed individual trees. In addition, remove all stressed/dying trees within and surrounding dieback pockets in SW and NE lobes of stand. Consult with forest health to determine buffer of these areas for pre-salvage purposes.

Next Step Treatments:

Acceptable

Regen: Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

42110 - Planted Sawtimber 141-Harvest Shelterwood 4319 - Mixed Two-Aged No 120 61233120-Cut 6 1 59 Red Pine Well 170 **Upland Forest**

Prescription Mark to leave 20-30 BA of good quality red pine throughout stand in an attempt to shelterwood the advanced regen present while also retaining a seed source for red pine regeneration to continue. Specs:

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable Red pine, norway spruce, black cherry, red maple, white pine and honeysuckle.

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2023

42110 - Planted 124 61233124-Cut Poletimber Crown Thinning 4211 - Planted 12.3 59 171-Harvest Even-Aged No Red Pine Well 200 Red Pine

Prescription Thin red pine to more appropriate stocking levels by removing approximately 1/3 of overall volume with focus being on forked, suppressed and/or otherwise poorly formed trees. In addition, remove stressed/dying trees within and around dieback pocket in south-central portion of Specs: stand. Consult with forest health on how much of a buffer of this pocket should be in place for pre-salvage purposes.

Next Step Treatments:

Acceptable Regen:

Other

Comment:

Site Condition

Traverse City Mgt. Unit Report 3 -- Treatments Compartment: 233 S Year of Entry: 2024 t а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age Habitat n Method Objective Structure Density Name CoverType Age Range Type Cut d 130 61233130-Cut 4.2 42110 - Planted Sawtimber 141-Harvest Seed Tree with 42211 - Natural Two-Aged Red Pine Well Retention Red Pine, 170 Mixed Deciduous Prescription Seed tree stand by retaining approximately 10-40 sq ft of good quality red pine throughout treatment area. Do not retain any red pine in and/or around dieback pocket in north along Thompsonville rd. Attempt to protect advanced regen present when possible during harvest Specs: operations. Next Step Monitoring, Natural Regen (Re-Inventory) **Treatments:** Acceptable Red pine, red maple, black cherry, beech, white pine and sugar maple. Regen: <u>Other</u> Comment:

Total Treatment Acreage Proposed: 278.6

Proposed Start Date: 10/1 /2023

Site Condition

Compartment: 233

Traverse City Mgt. Unit

Patrick Cotant : Examiner Year of Entry: 2024

Availability for Management Total Acres Acres Avail Acres **Dominant Site Conditions** With Condition Not Available Acres Available 4A 5B 5C 1A 2G 2H 3J Aspen Bare/Sparsely Vegetated Herbaceous Openland Jack Pine Low-Density Trees Lowland Aspen/Balsam Poplar **Lowland Conifers Lowland Deciduous Lowland Mixed Forest** Lowland Shrub Marsh **Natural Mixed Pines** Northern Hardwood Planted Mixed Pines **Red Pine** Upland Shrub Urban Water White Pine 1,400 **Total Forested Acres** 62% 23% Relative Percent 14%

^{*}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	
1	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	73	Unspecified	Unspecified	Unspecified	Unspecified	
	Comments:							

Area is a combination of lowland and upland, but contains many seeps, springs and creeks which form one main tributary to the Betsie River, and generally sensitive soils.

Traverse City Mgt. Unit

Patrick Cotant : Examiner

2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)			Unspecified	Unspecified	Unspecified
		lex is combination of lowland a soils throughout much of area.		and ground - contains many	springs, seeps and small	water courses both annual	l and perennial, and
3	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	10	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments: No vehicle access,	surrounded by PVT and the Be	etsie Riv	ver.			
4	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	5	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	6	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	139	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
		n complex is generally quite w				ner conditions, this area co	ntains heavy, sensitive

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7	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	12	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Stand area is wet v	vith some seasonal flow headin	g in a no	orthwesterly direction.			
8	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	9	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Lowland area, heav	vy muck soils and some standin	g water	throughout.			
9	Available	2B: Unknown if access through adjacent landowner(s) is possible	37	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: No legal access.						
10	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
11	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	20	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: There is potential for	or harvest in dry summer or froz	en winte	er conditions throughout p	ortions of this site condition	area.	
12	Available	5B: Maintain for regeneration purposes	16	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

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13	Available	5B: Maintain for regeneration purposes	19	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
14	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	23	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
15	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	6	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
16	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	14	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
17	Available	5B: Maintain for regeneration purposes	28	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
18	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						

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19	Available	4A: No Markets Available for these Forest Products	5	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Stand is too small a	and isolated for a harvest at this	time.	The stand can and should be o	combined with another	nearby stand for a sale.	
20	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	31	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
21	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	13	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
22	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	6	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
39	Unavailable	1A: Federal/State/Local Law	4	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments: Natural Rivers Act						

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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
Unspecified Comments	Concentrated Recreation Area	Rail-Trail Corridor	SCA	33

Traverse City Mgt. Unit Compartment: 233





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.

Conservati Area	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area						
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen condition stocked trout populations and those of other coldwater fish specific conditions for coldwater fishes may occur in Michigan lakes if the groundwater inflows, or are located in colder (northern) areas of Director's action and designated as trout resources by Fisheries	es to persist from year to year. Suitable by are relatively deep, have substantial the state. Such lakes are established by						
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 influences the aquatic ecosystem and vice-versa. Because of the streams and open water wetlands, riparian areas harbor a high d communities are ecologically and socially significant in their effect as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, liversity of plants and wildlife. Riparian cts on water quality and quantity, as well						
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from sp approved distance from the river centerlines. The Natural Rivers most Natural Rivers. The Vegetative Buffer ranges from 25 to 10	Zoning District is a 400 foot buffer for						



1 Ca							Stand Age B		Managed S	ite	General Comments		
Ca	4115 - Y.Bircl	h, Hemlock	NH P	oletimb	er Well	12.6	77	81-110	N/A		Upland with lowland pockets and areas throughout. grown over trail		
	anopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	leads to small homestead/foundation near River in central portion of stand. Sensitive soils throughout with many springs and seeps present		
F	Red Maple	15	Pole	6		I	Beech	Low	5 - 10 feet	Sapling	especially closest to river. Scattered large red oak present providing		
	Red Oak	2	Log	14		Re	d Maple	Low	5 - 10 feet	Sapling	good mast source, lots of wildlife activity. Featured hemlock in overstory		
Northe	ern White Cedar	5	Pole/Log	8		Н	emlock	Medium	10 - 20 feet	Sapling	and sub-canopy - it is intermediate in canopy but variable diameter warrants inclusion in both categories.		
	Hemlock	25	Pole/Log	8							- Nanano mousion in som outogonosi		
S	Sugar Maple	53	Pole/Sap/Log	8	77								
2	500 -	Water		Nonsto	cked	5.3			No		Betsie River		
3	4110 - Sugar M	laple Assoc	ciation S	awtimb	er Well	14.3	110	111-140	N/A		Stand treated with a selection cut last entry period. quality is fair with much of the residual having epicormic branching and some decay in		
Ca	anopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	processory, quality and stocking is better in Northern portions of stand		
S	Sugar Maple	75	Log/Pole	12	110	Iro	onwood	Medium	5 - 10 feet	Sapling	where sugar maple poles and smaller logs of decent quality are more		
В	lack Cherry	5	Log/Pole	12		I	Beech	High	5 - 10 feet	Sapling	numerous. ash canopy trees have completely died out of stand. lots of		
	Beech	5	Log/Pole	12		Sug	gar Maple	Low	< 5 feet	Sapling	cwd on ground throughout with much of the understory occupied by dense beech and ironwood. ba is at middle of 110-140 range. natural		
F	Red Maple	15	Log/Pole	12		Н	emlock	Low	10 - 20 feet	Sapling	river concerns, sensitive soils in places, seeps and springs along/near		
											stand edge.		
4	4136 - Aspen	<u> </u>		awtimb	er Well	13.2	89	111-140	N/A		Upland with lowland stand mainly within natural river buffer, some steep slopes with springs and seeps as you get closer to Betsie River. Variable		
	anopy Species		Size Class		Age		nopy Species	Density	Avg. Height	Size	sized aspen with poles and some large log sized trees present.		
	Red Maple	30	Log/Pole	10			emlock	Low	10 - 20 feet	Sapling			
	gtooth Aspen	50	Log/Pole	13	89	Re	ed Maple	Low	5 - 10 feet	Sapling			
	Hemlock	10	Pole/Log	8		I	Beech	Low	5 - 10 feet	Sapling			
Northe	ern White Cedar	10	Pole	8									
5 41	I12 - Maple, Beecl	h, Cherry A	Association P	oletimb	er Well	22.9	89	111-140	N/A		sugar maple dominated with other species present. walking trail passes		
Ca	anopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	through stand leading to river access. stand slopes generally toward rivel with some seeps and springs present in Southern portion of stand.		
	Red Oak	8	Log/XLog	17		Iro	onwood	Low	10 - 20 feet	Sapling	several large red oaks within the stand, these are somewhat uncommon		
F	Red Maple	20	Pole/Log	8		Н	emlock	Low	Variable	Pole	mainly near western edge of stand. Cared and average sized sugar		
	Hemlock	8	Pole/Log	8		Sug	gar Maple	Low	10 - 20 feet	Sapling			
	Beech	5	Pole	8				'		*	throughout stand are older with potential for multiple ages throughout stand. Recommend leaving stand to grow, potential for thinning portion		
S	Sugar Maple	59	Pole/Log	8	89								
					<u>_</u>						at some point in the future but topography, access and sensitive soils coupled with natural rivers restrictions limit these opportunities.		



Stand	d Level 4 Co	over Type	5	Size Der	sity	Acres	Stand Age B	A Range	Managed S	ite	General Comments	
6	4136 - Aspen			oletimbe	r Well	13.0	89	81-110	N/A		Mixed stand of aspen with red and sugar maple present along with hemlock and cedar. Stand occupies upland area sloping to lowland and	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	rivers edge - seeps and springs present closer to river.	
	Hemlock	10	Pole/Log/Sap	8		- I	Beech	Low	5 - 10 feet	Sapling		
	Sugar Maple	10	Pole/Sapling	7		Н	emlock	Low	10 - 20 feet	Sapling		
No	orthern White Cedar	10	Pole	8		Re	ed Maple	Low	10 - 20 feet	Sapling		
	Bigtooth Aspen	55	Pole/Log/Sap	8	89							
	Red Maple	15	Pole/Sap/Log	8								
7	330 - Low-D	Density Tre	es	Nonstoo	cked	5.3	0		No		originally was part of stand 14 but no red pine present in this area. scattered deciduous trees throughout along with trace red pine seedlings. Possible old farmstead in SE corner. Trail that bisects stand allows for good access to stand 13.	
8	4110 - Sugar M	laple Asso	ciation P	oletimbe	r Well	10.2	105	81-110	N/A		could not access stand and could not get a visual on enough of stand across river to make any accurate calls aside from ba range.	
9	4136 - Aspen	, Mixed Co	nifer S	awtimbe	r Well	4.1	89	81-110	N/A		Mix of upland and lowland - Many springs and seeps present however	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	with standing water in many areas that are generally more hummock grown over two-track traverses stand leading to old	
	Bigtooth Aspen	60	Log/Pole	10	89	Re	d Maple	Low	5 - 10 feet	Sapling	homestead/foundation in stand 1. Small pocket of planted cedar in	
	Sugar Maple	10	Pole/Sapling	6		Н	emlock	Low	10 - 20 feet	Sapling	southern lobe of stand.	
	Red Maple	10	Pole/Sapling	6		Ва	lsam Fir	Low	10 - 20 feet	Sapling		
No	orthern White Cedar	5	Pole	8				'	1	1		
	Hemlock	15	Pole/Log	8								
10	4130	- Aspen	Р	oletimbe	r Well	6.1	75	81-110	N/A		upland aspen is essentially an extension of stand 24. remainder of stand	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	us lowland with cedar, fir, hemlock, wp, red maple present. n/s creek is the same composition and should be its own stand through this parcel of	
	Red Maple	20	Pole/Log	8		Blad	ck Cherry	Low	Variable	Sapling	state.	
	Quaking Aspen	25	Pole/Log	8		Re	d Maple	Low	Variable	Sapling		
	Bigtooth Aspen	50	Pole/Log	8	75	Servicebe	erry (Juneberry)	Low	Variable	Sapling		
	Black Cherry	5	Pole/Log	8								
11	4110 - Sugar M	laple Asso	ciation S	awtimbe	r Well	6.2	115	81-110	N/A		small hardwood stand of larger trees on ridge and extending part way down steep slope towards Betsie River. dominated by sugar maple with	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	other deciduous species present throughout, most regen is heavily	
	Sugar Maple	85	Log/Pole	13	115	Iro	onwood	Low	Variable	Sapling	browsed with the exception of beech. ba is variable.	
	Red Maple	5	Log/Pole	13		-	Beech	Low	5 - 10 feet	Sapling		
	Black Cherry	3	Log	12		Sug	gar Maple	Low	Variable	Sapling		
	Basswood	5	Log	14							•	
	Beech	2	Log	15								



Stanc	l Level 4 C	Level 4 Cover Type			nsity	Acres	Stand Age	A Range	Managed S	Site	General Comments	
12		6128 - Lowland Coniferous, Mixed Deciduous			Poletimber Well		75	81-110	N/A		Creek, seep and drainage corridors, with flow in a northerly direction. Banks are steep with springs in many areas and soft, sensitive soils	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	throughout.	
	Red Maple	10	Pole/Log	8		Re	ed Maple	Low	Variable	Sapling		
	Hemlock	30	Pole/Log	9		Servicebe	erry (Juneberry)	Low	Variable	Sapling		
	Quaking Aspen	10	Pole/Log	8		Н	lemlock	Low	10 - 20 feet	Sapling		
No	rthern White Cedar	30	Pole/Log	8	75							
	Balsam Fir	20	Pole	8								
13	42110 - Pla	nted Red P	ine Po	oletimber	Mediur	m 3.6	59	111-140	N/A		small red pine stand, mediocre quality, several trees are bent	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	over/leaning, especially around area that was salvaged and is open now fair amount of natural red pine regen throughout understory along with	
	Red Pine	100	Pole	9	59	Ire	onwood	Low	5 - 10 feet	Sapling	beech, ironwood and trace maple seedlings. There is a small 1/4 acre	
						R	ed Pine	Medium	5 - 10 feet	Sapling	patch of planted cedar in the east part of this stand that is fully stocked,	
											same age as red pine. Stand had a first row thinning; then had salvag of heavy storm damage in 2013. Keep an eye out for bark beetle damage.	
14	42110 - Pla			Poletimb		17.6	27	1-50	N/A		red pine plantation comprised entirely of red pine growing well, in stra n/s rows. 5" average dbh but plenty of trees in the 2-4" range as well at the 6-7" range. height is pretty uniform with average heights being 18 interior trees are beginning self pruning, but for the most part trees are	
	Red Pine	% Cover	Size Class Pole/Sapling		Age 27							
											still quite limby and have 1 merchantable stick.	
15	4110 - Sugar N	/laple Assoc	ciation I	Poletimb	er Well	3.5	34	1-50	N/A		Black cherry and red maple regen, clumpy form but growing fairly well. nannyberry in understory, some scattered muscle wood along with been	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	and ironwood in places. Just transitioning to pole sized, still a fair	
	Black Cherry	80	Pole/Sapling	_	34	Na	nnyberry	Low	5 - 10 feet	Tall Shrub		
	Red Maple	20	Pole/Sapling	g 5			Beech	Low	5 - 10 feet	Sapling		
16	500	- Water		Nonsto	cked	0.5			No			
17	6127 - Lo	owland Pine	Sa	awtimber		m 3.5	120	51-80	N/A		Narrow stand where drainage of stand area to south is concentrated an seasonal flows move generally north, but also appear to flow south at	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	times, depending on season. There is an equalization culvert at north	
	Bigtooth Aspen	30	Pole/Log	8		Na	nnyberry	Low	5 - 10 feet	Tall Shrub		
	White Pine	60	Log/Pole	16	120							



Stand	d Level 4 C	over Type	:	Size De	nsity	Acres	Stand Age E	BA Range	Managed \$	Site	General Comments		
18	6112 - Lowland Aspen			Poletimber Well		15.6	61	81-110	N/A		Lowland aspen, red maple stand with some seasonal seeps and springs		
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	along with sensitive soils throughout. Cedar, hemlock and balsam fir evenly scattered throughout stand.		
	Hemlock	15	Pole/Log	8		Servicebe	erry (Juneberry) Low	Variable	Sapling	overny coalitation in oughout orana.		
No	orthern White Cedar	15	Pole/Log	8		Re	ed Maple	Low	Variable	Sapling			
	Bigtooth Aspen	10	Pole/Log	8				,		,	-		
	Balsam Fir	10	Pole/Sapling	7									
	Quaking Aspen	30	Pole/Log	8	61								
	Red Maple	20	Pole/Log	8									
19	4130	- Aspen	S	Sawtimb	er Well	11.3	62	111-140	N/A		good quality Aspen stand with red maple and cherry throughout.		
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	generally upland with transition zone at eastern edge along border with stand 22. should be operable throughout year but recommend winter or		
	Red Maple	10	Pole	8		Re	ed Maple	High	Variable	Sapling	dry summer conditions. will need access off Springdale or big 4 rds, with		
	Quaking Aspen	15	Pole/Log	9		Servicebe	erry (Juneberry) Low	5 - 10 feet	Tall Shruk	culvert and likely Manistee Co permit. recommend final harvesting stand		
	Bigtooth Aspen	70	Log/Pole	10	62	Bla	ck Cherry	Medium	10 - 20 feet	Sapling	attempt to expand boundary to the east where merchantable aspen is dominant in stand 22.		
	Black Cherry	5	Pole	8							- 30.1.1.1.1.1.3.1.1.3 ==-		
20	4130	- Aspen		Sapling Well		20.6	7	1-50	N/A		Stand is regenerating well, overstory cherry scattered throughout stand		
	Canopy Species	% Cover	Size Class	DBH	I Age						area along with some white pine and a few paper birch - birch beginning to deteriorate and fall creating some additional CWD. Cut in summer		
	Bigtooth Aspen	70	Sapling	1	7						of 2015 under tsale contract 069-14-01 by Flees Logging.		
	Red Maple	20	Sapling	1	7						, 33 3		
	Black Cherry	10	Pole/Log	8									
21	4112 - Maple, Beed	ch, Cherry A	Association S	Sawtimb	er Well	13.7	105	81-110	N/A		larger diameter hardwood stand dominated by red maple with beech and		
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	sugar maple making up a small percentage of canopy. fair quality, significant epicormic branching on many dominant stems. beech regen		
	Red Maple	90	Log	14	105		Beech	Full	10 - 20 feet	Sapling	dominates understory with scattered cherry, ironwood and maple. treate		
	Beech	5	Log/XLog	17		Re	ed Maple	Low	10 - 20 feet	Sapling	two entry periods ago, canopy gaps that were created are lower stocked		
	Sugar Maple	5	Log/Pole	10		Ir	onwood	Low	10 - 20 feet	Sapling	and contain mainly beech.		
22	6112 - Lo	wland Aspen		Poletimber Wel		42.3	34	51-80	N/A		generally lowland aspen stand with variable size and stocking. bigtooth		
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	mostly pole sized but there are pockets that are log sized. also some areas where stocking is lower than overall average. black ash is dead or		
	Bigtooth Aspen	60	Pole	6	34	Na	nnyberry	Medium	5 - 10 feet	Tall Shrub	dying. trace cedar throughout in small pockets. lowland indicator specie		
	Quaking Aspen	20	Pole/Sapling	5	34						throughout, some areas are hummocky with moss on logs and		
	Black Cherry	10	Sapling/Pole	4							hummocks. nannyberry quite dense in much of understory. looks like it could dry out in late summer, recommend attempting to dip into stand		
	Red Maple	10	Sapling/Pole	4							when stand 19 is set up. if operable portions of stand should be		
					_						harvested. old east west access from previous harvest runs through stand but is wet and grown over.		

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Stand	tand Level 4 Cover Type			Size Densi	ty	Acres	Stand Age E	BA Range	Managed S	Site	General Comments	
23	6112 - Lowland Aspen			Poletimber V	Well 2.0	2.0	80	1-50	N/A		wetland grass, ferns, marsh marigolds, lots of snags and cwd, flowing	
	Canopy Species	% Cover	Size Class	DBH A	je	Sub-Ca	nopy Species	Density	Avg. Height	Size	water through stand throughout much of year with small creek flowing west to main betsie trib.	
	Quaking Aspen	50	Pole	7 8	0	Ta	ıg Alder	Medium	5 - 10 feet	Tall Shrub		
	Red Maple	15	Pole	6		Bla	ack Ash	Medium	Variable	Sapling		
No	rthern White Cedar	10	Pole	8								
	Hemlock	10	Pole	8								
	Black Ash	15	Pole/Sapling	5								
24	4139 - Aspen,	Mixed Deci	duous F	Poletimber V	Vell	6.8	78	81-110	N/A		Aspen red maple stand with cherry throughout, along with trace cedar	
	Canopy Species	% Cover	Size Class	DBH Ag	je	Sub-Ca	nopy Species	Density	Avg. Height	Size	and firing canopy. generally upland but with lowland indicators in small pockets and some hummocky areas.	
	Red Maple	35	Pole/Log	9 7	8	Re	d Maple	Medium	Variable	Sapling	position and some numinously arous.	
	Bigtooth Aspen	50	Pole/Log	8 7	8	Ва	lsam Fir	Low	Variable	Sapling		
	Black Cherry	15	Pole	8	IJL	Blad	ck Cherry	Low	Variable	Sapling		
25	6113 - Lo	wland Maple	e F	Poletimber Well			78	81-110	N/A		mixed stand of red maple aspen and conifer component of hemlock and	
	Canopy Species	% Cover	Size Class	DBH Ag	je	Sub-Ca	nopy Species	Density	Avg. Height	Size	cedar. hummocky with standing water at time of inventory. soils are soft, more upland at Southern edge. trace yellow birch, sugar maple and	
	Red Maple	70	Pole/Log	8 7	8	Musclewo	ood/Hornbeam	Low	10 - 20 feet	Sapling	cherry.	
No	rthern White Cedar	4	Pole	7		Н	emlock	Low	Variable	Pole		
	Bigtooth Aspen	10	Log/Pole	10						•	-	
	Hemlock	16	Pole	8								
26	6132 - Mixed Lowla	and Forest v	with Cedar F	Poletimber V	Vell	4.2	65	51-80	N/A		generally lowland with upland incusions. springs and seeps present with	
	Canopy Species	% Cover	Size Class	DBH Ag	je	Sub-Ca	nopy Species	Density	Avg. Height	Size	some concentrated flows to small creeks. some large cedar present along with hemlock, balsam fir, aspen, red maple and some yellow birch.	
	Red Maple	10	Pole/Log	8		Н	emlock	Low	10 - 20 feet	Sapling	along mar nomices, saleam in, aspen, rea maple and come years in silen	
No	rthern White Cedar	29	Pole/Log	8 9	5	Ва	lsam Fir	Low	5 - 10 feet	Sapling		
	White Pine	5	Log/Pole	10		Northern	White Cedar	Low	5 - 10 feet	Sapling		
	Hemlock	5	Pole/Log	8								
	Balsam Fir	20	Pole	8								
	Quaking Aspen	31	Pole/Log	8 6	5							
27	122 - Road	d/Parking Lo	ot	Nonstocke	ed	3.8			No			
28	6112 - Lov	wland Aspe	n F	Poletimber Wel		21.1	34	Immature	N/A		Aspen stand with pretty uniform size, variability in stocking. trace white pine throughout, hummocky ground in portions of stand with lowland	
	Canopy Species	% Cover	Size Class	DBH A	je						indicator species present. seems to generally drain in a southerly	
	Bigtooth Aspen	20	Pole/Sapling								irection, with the southern area of the stand most influenced by standing	
	Quaking Aspen	50	Pole/Sapling	5 3	4						water throughout more of the year. typed as pole size but overall is small	
	Red Maple	30	Sapling/Pole	4							pole, large sapling.	

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Stand	tand Level 4 Cover Type			Size De	nsity	Acres	es Stand Age BA Range		Managed S	ite	General Comments	
29	4136 - Asper	n, Mixed Co	nifer F	Poletimb	er Well	11.6	67	81-110	N/A		mixed multi-part stand with Aspen dominant. upland generally but	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	lowland pockets present along with hummocky ground and some seeps springs and small creeks forming trib to betsie river that runs n/s throug	
	Black Cherry	5	Pole/Log	9		Ва	lsam Fir	Low	10 - 20 feet	Sapling	this parcel of state land. black cherry concentrated in eastern parcel of	
	Red Maple	20	Pole/Log	8		Re	d Maple	Low	10 - 20 feet	Sapling	stand.	
No	orthern White Cedar	10	Pole/Log	8		Е	Beech	Low	5 - 10 feet	Sapling	sensitive soils regardless of up/lowland categorization, recommend retaining stand for riparian benefits.	
	Hemlock	5	Pole/Log	8							Totalining starta for riparian portonic.	
	Balsam Fir	5	Pole	6								
	Bigtooth Aspen	55	Pole/Log	8	67							
30 4139 - Aspen, Mixed		Mixed Deci	duous	Sapling	y Well	7.6	17 I	mmature	N/A		Aspen with red maple and cherry throughout. scattered balsam fir as	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	well, left at time of harvest. hummocky in places, some ruts from harvest are still visible.	
	Red Maple	30	Sapling	2	17	Re	d Maple	Medium	Variable	Sapling	are still visible.	
	Quaking Aspen	40	Sapling	2	17	Servicebe	rry (Juneberry)	Low	Variable	Sapling		
	Bigtooth Aspen	10	Sapling	2	17	Blac	ck Cherry	Low	Variable	Sapling		
	Black Cherry	20	Sapling	3			-					
32				Poletimb		0.6 59 Sub-Canopy Species		171-200	N/A	<u> </u>	thinned white pine plantation with areas of dense understory consisting white pine, beech, ironwood and mixed hardwood species. ba is variab	
	Canopy Species	% Cover	Size Class	12	Age		nopy Species	Density	Avg. Height 5 - 10 feet	Size Sapling	with an average of 170+ overall.	
	Bigtooth Aspen White Pine	85	Log Pole/Log	9	59		Beech	High Medium	5 - 10 feet 5 - 10 feet	Sapling		
	Sugar Maple	5	Log	12	39		nwood	Low	5 - 10 feet	Sapling		
	Red Maple	5	Log	12		110	niwood	LOW	3 - 10 1001	Caping		
	'											
33	42200 - Natu			Sawtimb			105	81-110	N/A	•	good quality, large diameter white pine with variable sized red maple throughout along with aspen and trace paper birch hummocky ground	
	Canopy Species		Size Class		Age		nopy Species	Density	Avg. Height	Size	extensive moss coverage and lowland indicators of nannyberry and	
	Quaking Aspen	5	Pole/Log	8		t	Beech	Medium	5 - 10 feet	Sapling	blueberry in places. extended stand boundary south, density lessens significantly in this portion.	
	Red Maple White Pine	15 80	Pole/Sap/Log		405						significantly in this portion.	
	vvnite Pine	80	Log	14	105							
34		- Aspen		Poletimb			55	81-110	N/A		decent quality Aspen stand with developed understory of red maple and beech and conifer component of white pine and fir with trace white	
	Canopy Species		Size Class		Age		nopy Species	Density	Avg. Height	Size	spruce at edges. consider final harvesting stand, will need access built	
	Bigtooth Aspen	80	Pole/Log	9	55		Beech	Medium	5 - 10 feet	Sapling	off big 4 rd through stand 37.	
	Quaking Aspen	10	Pole	7			ite Pine	Low	5 - 10 feet	Sapling		
	Red Maple	10					L					
		10	Log/Pole	10			lsam Fir d Maple	Low	10 - 20 feet 10 - 20 feet	Sapling Sapling		

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Stand	d Level 4 C	over Type		Size De	nsity	Acres	Stand Age B	A Range	Managed \$	Site	General Comments	
35	42200 - Nat	Poletimber Well		5.8	65	111-140	N/A		white pine stand with Aspen scattered throughout along with some red maple, white pine are variable in size but average 8-9". hummocky			
	Canopy Species		Size Class		Age		nopy Species	Density	Avg. Height	Size	ground in much of stand with dense moss coverage. areas where	
	Quaking Aspen	5	Pole	6			Beech	Low	5 - 10 feet	Sapling	standing water persists and other pockets with bracken fern and trace	
	Red Maple	5	Pole/Log	8		Re	d Maple	Low	10 - 20 feet	Sapling	beech saplings.	
	White Pine	90	Pole/Log	8	65							
36	330 - Low-	Density Tre	es	Nonsto	cked	0.3	0 U	nspecified	No		Small opening along PVT line, consists mainly of little bluestem with some white pine and honeysuckle present.	
37	42101 - Planted Dec	White Pine	, Mixed	Poletimb	er Well	19.1	52	141-170	N/A		Decent quality white pine, pole sized in general with some log sized trees distributed throughout. Aspen is relatively evenly distributed throughout	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	stand, consider expanding stand 34 when that is treated with irregular shaped lobes extending into pockets of this stand that have good	
	Quaking Aspen	20	Pole	8		Re	d Maple	Low	Variable	Sapling	concentrations of aspen in order to convert. Retain portions of stand	
	Red Maple	10	Pole	8						1	another entry period at least to provide thermal cover and some diversity	
	White Pine	70	Pole/Log	8	52						in an area of compartment that is dominated by aspen and early successional deciduous species.	
				'	'						successional deciduous species.	
38	4130) - Aspen		Sapling Well		12.7 17			N/A		Aspen stand regenerating well, good number of stems per acre. Some	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	high water table influence in pockets, mainly concentrated in center of stand.	
	Bigtooth Aspen	80	Sapling	3	17		d Maple	Low	10 - 20 feet	Sapling	Staliu.	
	Quaking Aspen	20	Sapling	2	17	Blad	ck Cherry	Low	10 - 20 feet	Sapling		
	<u> </u>					Servicebe	rry (Juneberry)	Low	5 - 10 feet	Tall Shrub		
39	6112 - Lowland Aspen		en	Poletimb	er Well	27.3 55			N/A		Took an age on an average sized aspen and counted 54, difficult to	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	determine accuracy of count with faint rings, likely has different age classes of trees from periodic flooding, etc. Lowland in spots with upland	
	Quaking Aspen	60	Pole/Sap/Lo	g 8	55	Na	nnyberry	Low	5 - 10 feet	Tall Shrub	pockets and some hummocky ground throughout. At the time stand 43	
	Black Cherry	10	Pole	7							was set up this stand area was avoided as there was standing water in	
	White Pine	25	Pole/Log	8							much of stand during the spring and summer months.	
	Jack Pine	5	Pole/Sapling	g 6								
40	. 0 6112 - Lowlan		en l	Poletimb	er Poor	6.7	59	1-50	N/A		lowly stocked aspen stand with white pine scattered throughout along with some jack pine. trace balsam fir present, very hummocky with	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	nannyberry and tag alder throughout, along with extensive moss	
	Quaking Aspen	80	Pole/Sapling	g 6	59	Та	ıg Alder	Medium	5 - 10 feet	Tall Shrub	coverage. cored one aspen for age, stand is likely multi aged.	
	White Pine	15	Pole/Sapling	g 6		Na	nnyberry	Medium	5 - 10 feet	Tall Shrub		
	Jack Pine	5	Pole/Sapling	g 5								
41	6127 - Lo	owland Pine F		Poletimber Mediur		n 15.3	67	1-50	N/A		mixed stand of variable size jack pine and aspen. hummocky ground with	
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	moss coverage in many areas, some alder and other lowland shrubs present including blueberry, leather leaf and nannyberry. concentrated	
	Jack Pine	45	Pole/Sapling	_	67	Na	nnyberry	Medium	5 - 10 feet	Tall Shrub	pockets of jp are 4-10" dbh with Aspen ranging from 2-7". canopy closure	
	Quaking Aspen	40	Sapling/Pole	e 3							varies but averages 25%. cored 8" jp at 66 years old, potentially multi aged.	
				6								



Stand	d Level 4 C	Level 4 Cover Type			Size Density		Stand Age E	A Range	Managed Site		General Comments		
42	Canopy Species Quaking Aspen Bigtooth Aspen Black Cherry White Pine	- Aspen % Cover 5 80 10 5	Size Class Sapling Sapling Sapling Sapling/Pole	1 1 2	y Well Age 8	19.7	8	mmature	N/A		Stand is regenerating very well with aspen throughout along with black cherry and white pine. Stand was final harvested in 2015 under tsale contract 069-15-01.		
43	4130	- Aspen	;	Sawtimb	er Well	1.6	75	51-80	N/A		Small pocket of isolated aspen, doesn't appear to have legal vehicle		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	access for state aside from traversing bog to the south by foot.		
	Red Maple	5	Pole	7		Re	ed Maple	Medium	5 - 10 feet	Sapling			
	Bigtooth Aspen	95	Log/Pole	10	75	Bla	ck Cherry	Medium	5 - 10 feet	Sapling			
44	330 - Low-I	Density Tree	es	Nonsto	ocked	0.5			No				
45	623 - Emer	gent Wetlar	nd	Nonsto	ocked	12.2			No				
46	622 - Lov	vland Shrub		Nonsto	ocked	25.7			No				
47	4130	- Aspen	ı	Poletimb	er Well	3.1	65	51-80	N/A		Isolated upland island of aspen surrounded by bog and lowland stands.		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size			
	Quaking Aspen	40	Pole/Log	8		Servicebe	erry (Juneberry)	Low	5 - 10 feet	Sapling			
	Bigtooth Aspen	40	Pole/Log	9	65	Bla	ck Cherry	Medium	10 - 20 feet	Sapling			
	Black Cherry	15	Pole	7									
	Red Maple	5	Pole	7									
48	4130 - Aspen			Poletimber Well			65	81-110	N/A		variable upland/lowland stand of Aspen, other species distributed evenly throughout. more lowland as you move towards eastern edge of stand.		
	Canopy Species		Size Class		l Age		nopy Species	Density	Avg. Height	Size	potential for harvest closer to big 4 rd. if so final harvest leaving co		
	Black Cherry	5	Pole	8			erry (Juneberry)		5 - 10 feet	Tall Shrub	would need access off big 4. if treatment were to occur avoid wetter areas and areas that are more hummocky.		
	Red Maple	5	Pole	8			wood (spp.)	Low	5 - 10 feet	Tall Shrub	areas and areas that are more numinously.		
	Bigtooth Aspen	20	Pole	8			ed Maple	Low	Variable	Sapling			
	Quaking Aspen	70	Pole/Log	8	65	Ва	alsam Fir	Low	10 - 20 feet	Sapling			
49	6127 - Lowland Pine		,	Sawtimber Well		6.4	105	51-80	N/A		Q-type stand with larger white pine present along with evenly distributed red maple and aspen. Wet in spots, hummocky ground.		
	Canopy Species		Size Class		l Age								
	Red Maple	5	Pole	7									
	Quaking Aspen	5	Pole	7									
	White Pine	90	Log/Pole	12	105								



Stand	· · · · · · · · · · · · · · · · · · ·		Size De	ensity	Acres	Stand Age	BA Range	Managed S	Site	General Comments	
50	42260 - Natural P			Saplin		18.9	41	1-50	N/A		small diameter, 2-6" dbh, stunted growth throughout of aspen, jack pine and white pine. hummocky ground in spots, likely standing water in areas
	Canopy Species		Size Class		l Age						throughout spring. ground cover of bracken, moss, winter berry and
	Quaking Aspen	40	Sapling/Pole		41						pockets of blueberryand leather leaf.
	White Pine	20	Sapling/Pole								
	Jack Pine	40	Sapling/Pole	4							
51	4130	- Aspen		Poletimb	er Wel	l 18.9	65	111-140	N/A		decent quality Aspen stand, large pole/small log in size. typed as pole but could be either, understory is medium stocked with cherry and red maple
	Canopy Species		Size Class		l Age		anopy Specie		Avg. Height	Size	with scattered witch hazel. recommend final harvesting stand - access
	Red Maple	5	Pole	8			ed Maple	Medium	10 - 20 feet	Sapling	will be somewhat challenging but doable, recommend same access point
	Quaking Aspen	40	Pole/Log	9	65		ck Cherry	Medium	10 - 20 feet	Sapling	off glovers lake rd as was used for stand 55. will likely need culvert and permit from Manistee Co. at time of harvest, the operable portion of stand
	Bigtooth Aspen	40	Log/Pole	10	65	Servicebe	erry (Juneberr	y) Low	5 - 10 feet	Tall Shrub	58 should also be included in sale. dry summer or frozen winter
	Black Cherry	15	Pole/Log	8							conditions needed, buffer bog area to the north an appropriate distance.
52	6113 - Lo	wland Map	le F	Poletimb	er Wel	l 22.8	102	81-110	N/A		hummocky, mossy ground throughout with some standing water. tree tips
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	anopy Specie	s Density	Avg. Height	Size	ups reveal very shallow roots, mucky soil and high water table.
	Quaking Aspen	5	Pole	6		BI	lack Ash	Medium	Variable	Sapling	
	Black Ash	5	Pole	7		Re	ed Maple	High	Variable	Sapling	
	Red Maple	90	Pole/Log	9	102						
53	42110 - Pla	anted Red F	Pine F	Poletimb		l 0.8	59	171-200	N/A		decent quality red pine stand, lightly stocked understory. ba is in the 200
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	anopy Specie	s Density	Avg. Height	Size	range on average - some defect present, recommend thinning to remove 1/3 of stand volume. small 1/3 acre die back pocket in south center
	Red Pine	100	Pole/Log	9	59	Bla	ck Cherry	Low	10 - 20 feet	Sapling	portion for stand, this area should be removed with a small pre salvage
							Beech	Low	5 - 10 feet	Sapling	buffer around perimeter. checked in fall 2021 by forest health and no HRD was found. follow up treatment could be to final harvest this
						W	hite Pine	Low	5 - 10 feet	Sapling	stand with 131 to the east and replant whole area.
55	4130	- Aspen		Saplin	g Well	23.4	17	Immature	N/A		Aspen growing fairly well, dense stocking. cherry and red maple
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	throughout. 3-4" average dbh, large sapling, small pole size.
	Quaking Aspen	40	Sapling/Pole	3	17	Bla	ck Cherry	Medium	10 - 20 feet	Sapling	
	Black Cherry	15	Pole	7	56	Servicebe	erry (Juneberr	y) Low	5 - 10 feet	Tall Shrub	
	Bigtooth Aspen	40	Sapling/Pole	4	17						
	Red Maple	5	Sapling	1	17						
56	622 - Lo	wland Shru	b	Nonst	ocked	2.3			No		
58	6112 - Lo	wland Aspe	en Po	letimbe	r Mediu	ım 30.0	65		N/A		lowland/upland stand, majority of western 1/3 seems more lowland with
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	anopy Specie	s Density	Avg. Height	Size	leather leaf and blueberry, and less aspen present. trace jack pine and balsam fir. eastern 2/3 with the exception of finger is more upland with
	Black Cherry	5	Pole/Sapling			Bla	ck Cherry	Low	5 - 10 feet	Sapling	lowland areas, hummocky ground but seems operable. considering
	White Pine	5	Pole	8			hite Pine	Low	5 - 10 feet	Sapling	access will be through this stand to stand 51, recommend a final harvest of this stand area where operable, leaving all conifers regardless of size.
	Quaking Aspen	85	Pole	8	65	Servicebe	erry (Juneberr	y) Low	5 - 10 feet	Tall Shrub	hummocky ground, avoid wet edges. access will be off glovers lake rd.
	Bigtooth Aspen	5	Pole	8		Qual	kina Aspen	Low	5 - 10 feet	Sapling	, ,

5 - 10 feet

Sapling

Low

Quaking Aspen

Bigtooth Aspen

5

Pole



Stand	d Level 4 Co	over Type	s	ize De	nsity	Acres	Stand Age E	BA Range	Managed S	ite	General Comments
59	4130	- Aspen	:	Sapling	g Well	13.8	6	1-50	N/A		regenerating very well following harvest. harvested in spring/summer
	Canopy Species	% Cover	Size Class	DBH	l Age						2017 under tsale contract 026-16-01 by Caseys Excavating. Scattered red maple, black cherry and white pine were left as residual throughout
	Quaking Aspen	65	Sapling	1	6						stand.Big tooth is located mostly along east edge of stand, fair
	Black Cherry	10	Pole/Sapling	7							amount of downed aspen, but less than 7" so not captured in CWD sample, not a stand of interest unless needed for age class distribution,
	Bigtooth Aspen	15	Sapling	1	6						sample, not a stand of interest unless needed for age class distribution,
	Red Maple	5	Sapling/Pole	4							
	White Pine	5	Pole/Log	8							
60	310 - Herbac	eous Open	land	Nonsto	ocked	2.2			No		
61	6113 - Lov	vland Maple	e Po	oletimb	er Well	12.4	105	81-110	N/A		witch hazel and quaking aspen along south edge of stand where it begins
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	to rise from lowland towards adjacent non-forested stand. Traces of white pine and paper birch throughout.
	Quaking Aspen	10	Sapling/Pole	6			emlock	Low	Variable	Pole	white pine and paper birch throughout.
	Black Cherry	10	Pole/Log	8		Re	d Maple	Medium	Variable	Sapling	
	Hemlock	10	Pole/Log	8							•
	Red Maple	70	Pole/Sap/Log	8	105						
62	42110 - Plar	nted Red P	ine Po	oletimb	er Well	3.7	60	171-200	N/A		Small acreage, has not been row thinned as of yet. Recommend first
	Canopy Species	% Cover	Size Class	DBH	l Age						thinning - Could possibly add to sale when aspen to the NW is set up.
	Red Pine	100	Pole/Log	9	60						
63	310 - Herbac	eous Open	land	Nonsto	ocked	5.7					
64	122 - Road	d/Parking Lo	ot	Nonsto	ocked	1.7	0		No		Road and ROW.
65	122 - Road	d/Parking Lo	ot	Nonsto	ocked	1.7			No		
66	4133 - Aspe	n, Mixed P	ine Sa		er Well	3.1	80	111-140	N/A		small stand of aspen, some mixed hardwoods and conifers on south facing slope to Betsie River. aspen are generally large as are white pine
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	some spring/seeps in SW corner of stand flowing to river, provides
	Bigtooth Aspen	50	Log/Pole	12	80	Wh	nite Pine	Low	5 - 10 feet	Sapling	access to river, no vehicular access. apparently aquired by Fisheries
	Basswood	15	Log	13		Honeys	suckle (spp.)	Low	5 - 10 feet	Tall Shrub	sometime ago for possible access site.
	Hemlock	10	Pole/Log	9		I	Beech	Low	5 - 10 feet	Sapling	
	Sugar Maple	5	Log/Pole	10		Н	emlock	Low	10 - 20 feet	Sapling	
	White Pine	20	Log/Pole	12							

Stand	Level 4 C	over Type		Size Density	Acres	Stand Age B	A Range	Managed S	Site	General Comments
67	42110 - Pla	nted Red P	ine	Sawtimber Well	22.4	59	141-170	N/A		good quality stand with decent stocking - average ba is ~170, maybe
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	anopy Species	Density	Avg. Height	Size	slightly higher but used the 140-170 range. some defect present, recommend a thinning at this time to remove approximately 1/3 of overall
	Red Pine	100	Log/Pole	10 59	W	hite Pine	Medium	5 - 10 feet	Sapling	volume. large die back pocket in south central portion of stand. this
										pocket was looked at by forest health staff and found to not be HRD. remove flagging trees around perimeter of pocket and about a chain buffer to pre salvage die back prior to next treatment.
68	4110 - Sugar N	Maple Assoc	ciation	Sawtimber Well	2.0	92	51-80	N/A		remnant patch of hardwood along old railroad grade, low quality with low, variable stocking.
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	anopy Species	Density	Avg. Height	Size	variable stocking.
	Basswood	2	Log	14	Wi	itch Hazel	Medium	10 - 20 feet	Tall Shrub	
	Red Maple	2	Pole	8	lı	ronwood	Medium	Variable	Sapling	
	Black Cherry	46	Log/Pole	10 92						
	Ironwood	15	Sapling/Pole	e 4						
	Sugar Maple	35	Log/Pole	12						
69	4130	- Aspen		Sapling Well	7.0	27		N/A		Variable stocking in areas of stand, otherwise decent growth on aspen
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	anopy Species	Density	Avg. Height	Size	resulting from harvest. Black cherry and red maple are present throughout with BC representing a significant % of canopy in areas of
	Red Maple	5	Sapling	3		Beech	Low	5 - 10 feet	Sapling	stand.
	Bigtooth Aspen	60	Sapling/Pole	e 4 27						
	Black Cherry	35	Sapling	3						
70	4110 - Sugar N	/laple Assoc	ciation Po	oletimber Mediu	m 3.5	92	141-170	N/A		scattered large sugar maple and a couple large basswood, with decent
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	anopy Species	Density	Avg. Height	Size	quality sugar maple poles and larger saplings throughout remainder of stand. trace cherry at stand edge.
	Basswood	2	Log	14	Su	gar Maple	Medium	Variable	Sapling	Stand. trace cherry at stand edge.
	Sugar Maple	94	Pole/Log	9 92	lı	ronwood	Low	10 - 20 feet	Sapling	
	Ironwood	4	Pole/Sapling	g 5	Wi	itch Hazel	Low	10 - 20 feet	Tall Shrub	
71	42101 - Planted Dec	White Pine iduous	, Mixed	Poletimber Well	16.2	59	201+	N/A		row thinned, stocking is quite high with most ba measurements being 200+. understory in removed rows is quite dense in many areas,
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	anopy Species	Density	Avg. Height	Size	dominated by white pine, beech and some pockets of cherry. scattered overstory cherry, red maple and aspen present throughout stand.
	Red Maple	10	Pole/Log	8	W	hite Pine	High	< 5 feet	Sapling	Toversiony onemy, rea maple and aspen present unoughout stalla.
	Quaking Aspen	5	Pole/Log	8		Beech	Medium	5 - 10 feet	Sapling	
	White Pine	75	Pole/Log	9 59						-
72	310 - Herbac	eous Open	land	Nonstocked	0.8			No		
73	3205 - Mixed	d Upland Sh	nrub	Nonstocked	16.5			No		



Stand	d Level 4 C	over Type		Size De	nsity	Acres Stand Age	BA Range	Managed S	ite	General Comments
74	4130	- Aspen		Sapling		23.8 18	Immature	N/A		regenerating aspen with scattered white pine retained from harvest. ¬ aspenand other deciduous species filling in nicely, areas of stand are
	Canopy Species	% Cover	Size Class	DBF	Age	Sub-Canopy Specie	s Density	Avg. Height	Size	very dense providing excellent cover for wildlife.
	White Pine	5	Pole/Log	8	53	Witch Hazel	Low	5 - 10 feet	Tall Shrub	
	Quaking Aspen	65	Sapling	1	18					
	Black Cherry	10	Sapling	1	18					
	Red Maple	20	Pole/Log	8						
75	4112 - Maple, Beec						51-80	N/A		multi-stemmed poor quality stand of sugar and red maple with trace cherry, beech and white pine present in overstory. lower stocking,
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Specie	s Density	Avg. Height	Size	providing some nice vertical structure at opening edge.
	Red Maple	40	Pole/Log	9		White Pine	Low	10 - 20 feet	Sapling	
	Sugar Maple	60	Log/Pole	10	92	Ironwood	Medium	10 - 20 feet	Sapling	
76	4130	- Aspen		Sapling	y Well	19.5 18	Immature	N/A		Aspen regen with scattered residual white line left from harvest. white
	Canopy Species	% Cover	Size Class	DBH	Age					pine are 8-11" dbh. Aspen is regenerating well, thick understory in spots of sugar maple and white pine.
	White Pine	2	Pole/Log	9	59					or ougus mapro and misso pinos
	Bigtooth Aspen	83	Sapling	3	18					
	Red Maple	15	Sapling	2	18					
77	4112 - Maple, Beed	h, Cherry A	Association Po	oletimbe	· Madiu	m 1.1 92	51-80	N/A		Multi-stemmed, generally low quality hardwood with ironwood understory
• •						11 1.1 92	31-00	IN/A		
	Canopy Species	% Cover	Size Class		Age	Sub-Canopy Specie		Avg. Height	Size	that is relatively dense. Stand retained when surround white pine/aspen harvest took place.
	Canopy Species Sugar Maple	% Cover				Sub-Canopy Specie			Size Sapling	that is relatively dense. Stand retained when surround white pine/aspen
			Size Class	DBF	Age	Sub-Canopy Specie	s Density	Avg. Height	1	that is relatively dense. Stand retained when surround white pine/aspen
78	Sugar Maple Red Maple 6117 - Lowland	60 40	Size Class Pole/Log Pole/Log	DB H	92	Sub-Canopy Specie	s Density Medium	Avg. Height 10 - 20 feet	Sapling	that is relatively dense. Stand retained when surround white pine/aspen harvest took place. Looks to be an active stick nest in center of stand, lots of coarse woody, larger hemlock sub-canopy provide good vertical structure, some very
	Sugar Maple Red Maple 6117 - Lowland	60 40 Deciduous,	Size Class Pole/Log Pole/Log	Bawtimb	92	Sub-Canopy Specie Ironwood White Pine	Medium Low 171-200	Avg. Height 10 - 20 feet 10 - 20 feet	Sapling	that is relatively dense. Stand retained when surround white pine/aspen harvest took place. Looks to be an active stick nest in center of stand, lots of coarse woody, larger hemlock sub-canopy provide good vertical structure, some very nice quality larger hemlock. hummocky ground, wet in places - stand
	Sugar Maple Red Maple 6117 - Lowland Con	60 40 Deciduous,	Size Class Pole/Log Pole/Log Mixed	Bawtimb	92 er Well	Sub-Canopy Specie Ironwood White Pine 7.7 105	Medium Low 171-200	Avg. Height 10 - 20 feet 10 - 20 feet N/A	Sapling Sapling	that is relatively dense. Stand retained when surround white pine/aspen harvest took place. Looks to be an active stick nest in center of stand, lots of coarse woody, larger hemlock sub-canopy provide good vertical structure, some very
	Sugar Maple Red Maple 6117 - Lowland Con Canopy Species	60 40 Deciduous, iferous	Size Class Pole/Log Pole/Log Mixed Size Class	DBH 8 8 8 Sawtimb	92 er Well	Sub-Canopy Specie Ironwood White Pine 7.7 105 Sub-Canopy Specie	Medium Low 171-200 Density	Avg. Height 10 - 20 feet 10 - 20 feet N/A Avg. Height	Sapling Sapling Size	that is relatively dense. Stand retained when surround white pine/aspen harvest took place. Looks to be an active stick nest in center of stand, lots of coarse woody, larger hemlock sub-canopy provide good vertical structure, some very nice quality larger hemlock. hummocky ground, wet in places - stand
	Sugar Maple Red Maple 6117 - Lowland Con Canopy Species Bigtooth Aspen	60 40 Deciduous, iferous % Cover 5	Size Class Pole/Log Pole/Log Mixed Size Class Log	DBH 8 8 Sawtimb DBH 14	92 er Well	Sub-Canopy Specie Ironwood White Pine 7.7 105 Sub-Canopy Specie White Pine	Medium Low 171-200 S Density Low	Avg. Height 10 - 20 feet 10 - 20 feet N/A Avg. Height 5 - 10 feet	Sapling Sapling Size Sapling	that is relatively dense. Stand retained when surround white pine/aspen harvest took place. Looks to be an active stick nest in center of stand, lots of coarse woody, larger hemlock sub-canopy provide good vertical structure, some very nice quality larger hemlock. hummocky ground, wet in places - stand
	Sugar Maple Red Maple 6117 - Lowland Con Canopy Species Bigtooth Aspen White Pine	60 40 Deciduous, iferous % Cover 5 5	Size Class Pole/Log Pole/Log Mixed Size Class Log Log	DBH 8 8 8 8 Sawtimb DBH 14 18	92 er Well	Sub-Canopy Specie Ironwood White Pine 7.7 105 Sub-Canopy Specie White Pine Deciduous Saplings	Medium Low 171-200 S Density Low Low	Avg. Height 10 - 20 feet 10 - 20 feet N/A Avg. Height 5 - 10 feet Variable	Sapling Sapling Size Sapling Sapling	that is relatively dense. Stand retained when surround white pine/aspen harvest took place. Looks to be an active stick nest in center of stand, lots of coarse woody, larger hemlock sub-canopy provide good vertical structure, some very nice quality larger hemlock. hummocky ground, wet in places - stand
	Sugar Maple Red Maple 6117 - Lowland Con Canopy Species Bigtooth Aspen White Pine Hemlock	60 40 Deciduous, iferous **Cover* 5 5 35	Size Class Pole/Log Pole/Log Mixed Size Class Log Log Log/Pole	DBH 8 8 8 Sawtimb DBH 14 18 14	er Well	Sub-Canopy Specie Ironwood White Pine 7.7 105 Sub-Canopy Specie White Pine Deciduous Saplings	Medium Low 171-200 S Density Low Low	Avg. Height 10 - 20 feet 10 - 20 feet N/A Avg. Height 5 - 10 feet Variable	Sapling Sapling Size Sapling Sapling	that is relatively dense. Stand retained when surround white pine/aspen harvest took place. Looks to be an active stick nest in center of stand, lots of coarse woody, larger hemlock sub-canopy provide good vertical structure, some very nice quality larger hemlock. hummocky ground, wet in places - stand
	Sugar Maple Red Maple 6117 - Lowland Con Canopy Species Bigtooth Aspen White Pine Hemlock Black Cherry Red Maple	60 40 Deciduous, iferous % Cover 5 5 35 5	Size Class Pole/Log Pole/Log Mixed Size Class Log Log Log/Pole Pole/Log Pole/Log	B	er Well	Sub-Canopy Specie Ironwood White Pine 7.7 105 Sub-Canopy Specie White Pine Deciduous Saplings	Medium Low 171-200 S Density Low Low	Avg. Height 10 - 20 feet 10 - 20 feet N/A Avg. Height 5 - 10 feet Variable	Sapling Sapling Size Sapling Sapling	that is relatively dense. Stand retained when surround white pine/aspen harvest took place. Looks to be an active stick nest in center of stand, lots of coarse woody, larger hemlock sub-canopy provide good vertical structure, some very nice quality larger hemlock. hummocky ground, wet in places - stand
78	Sugar Maple Red Maple 6117 - Lowland Con Canopy Species Bigtooth Aspen White Pine Hemlock Black Cherry Red Maple	60 40 Deciduous, iferous % Cover 5 35 40 d/Parking Li	Size Class Pole/Log Pole/Log Mixed Size Class Log Log Log Pole/Log Pole/Log Pole/Log	DBH 8 8 8 Sawtimb DBH 14 18 14 8 12	er Well 105	Sub-Canopy Specie Ironwood White Pine 7.7 105 Sub-Canopy Specie White Pine Deciduous Saplings Hemlock	Medium Low 171-200 S Density Low Low	Avg. Height 10 - 20 feet 10 - 20 feet N/A Avg. Height 5 - 10 feet Variable Variable	Sapling Sapling Size Sapling Sapling	Looks to be an active stick nest in center of stand, lots of coarse woody, larger hemlock sub-canopy provide good vertical structure, some very nice quality larger hemlock. hummocky ground, wet in places - stand includes some transition ground from lowland to upland. thinned white pine plantation with areas of dense understory consisting of the place in the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with a plant
78	Sugar Maple Red Maple 6117 - Lowland Con Canopy Species Bigtooth Aspen White Pine Hemlock Black Cherry Red Maple 122 - Road	60 40 Deciduous, iferous % Cover 5 5 35 5 40 d/Parking Letted White F	Size Class Pole/Log Pole/Log Mixed Size Class Log Log Log Pole/Log Pole/Log Pole/Log	BBH	er Well 105	Sub-Canopy Specie Ironwood White Pine 7.7 105 Sub-Canopy Specie White Pine Deciduous Saplings Hemlock 1.5	S Density Medium Low 171-200 S Density Low Low Medium Medium	Avg. Height 10 - 20 feet 10 - 20 feet N/A Avg. Height 5 - 10 feet Variable Variable No	Sapling Sapling Size Sapling Sapling	that is relatively dense. Stand retained when surround white pine/aspen harvest took place. Looks to be an active stick nest in center of stand, lots of coarse woody, larger hemlock sub-canopy provide good vertical structure, some very nice quality larger hemlock. hummocky ground, wet in places - stand includes some transition ground from lowland to upland. thinned white pine plantation with areas of dense understory consisting of white pine, beech, ironwood and mixed hardwood species. ba is variable
78	Sugar Maple Red Maple 6117 - Lowland Con Canopy Species Bigtooth Aspen White Pine Hemlock Black Cherry Red Maple 122 - Road	60 40 Deciduous, iferous % Cover 5 5 35 5 40 d/Parking Letted White F	Size Class Pole/Log Pole/Log Mixed Size Class Log Log Log/Pole Pole/Log Pole/Log Ot	BBH	er Well 105 ocked	Sub-Canopy Specie Ironwood White Pine 7.7 105 Sub-Canopy Specie White Pine Deciduous Saplings Hemlock 1.5	S Density Medium Low 171-200 S Density Low Low Medium Medium	Avg. Height 10 - 20 feet 10 - 20 feet N/A Avg. Height 5 - 10 feet Variable Variable No	Sapling Sapling Size Sapling Sapling Sapling	Looks to be an active stick nest in center of stand, lots of coarse woody, larger hemlock sub-canopy provide good vertical structure, some very nice quality larger hemlock. hummocky ground, wet in places - stand includes some transition ground from lowland to upland. thinned white pine plantation with areas of dense understory consisting of the place in the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with areas of dense understory consisting of the plantation with a plant
78	Sugar Maple Red Maple 6117 - Lowland Con Canopy Species Bigtooth Aspen White Pine Hemlock Black Cherry Red Maple 122 - Road 42100 - Plan Canopy Species	60 40 Deciduous, iferous % Cover 5 5 35 40 d/Parking Litted White F	Size Class Pole/Log Pole/Log Mixed Size Class Log Log Log/Pole Pole/Log Pole/Log Size Class Size Class	BB	er Well 105 ocked Age	Sub-Canopy Specie Ironwood White Pine 7.7 105 Sub-Canopy Specie White Pine Deciduous Saplings Hemlock 1.5 19.3 59 Sub-Canopy Specie	Medium Low 171-200 S Density Low Low Medium 171-200 Medium	Avg. Height 10 - 20 feet 10 - 20 feet N/A Avg. Height 5 - 10 feet Variable Variable No N/A Avg. Height	Sapling Sapling Size Sapling Sapling Sapling	that is relatively dense. Stand retained when surround white pine/aspen harvest took place. Looks to be an active stick nest in center of stand, lots of coarse woody, larger hemlock sub-canopy provide good vertical structure, some very nice quality larger hemlock. hummocky ground, wet in places - stand includes some transition ground from lowland to upland. thinned white pine plantation with areas of dense understory consisting of white pine, beech, ironwood and mixed hardwood species. ba is variable
78	Sugar Maple Red Maple 6117 - Lowland Con Canopy Species Bigtooth Aspen White Pine Hemlock Black Cherry Red Maple 122 - Road 42100 - Plan Canopy Species White Pine	60 40 Deciduous, iferous **Cover* 5 5 35 40 d/Parking Letted White F **Cover* 85	Size Class Pole/Log Pole/Log Mixed Size Class Log Log Log/Pole Pole/Log Pole/Log Size Class Size Class Pole/Log	Sawtimb Sawtimb	er Well 105 ocked Age	Sub-Canopy Specie Ironwood White Pine 7.7 105 Sub-Canopy Specie White Pine Deciduous Saplings Hemlock 1.5 19.3 59 Sub-Canopy Specie White Pine	S Density Medium Low 171-200 S Density Low Low Medium Medium 171-200 S Density High	Avg. Height 10 - 20 feet 10 - 20 feet N/A Avg. Height 5 - 10 feet Variable Variable No N/A Avg. Height 5 - 10 feet	Sapling Size Sapling Sapling Sapling Sapling Sapling Sapling	that is relatively dense. Stand retained when surround white pine/aspen harvest took place. Looks to be an active stick nest in center of stand, lots of coarse woody, larger hemlock sub-canopy provide good vertical structure, some very nice quality larger hemlock. hummocky ground, wet in places - stand includes some transition ground from lowland to upland. thinned white pine plantation with areas of dense understory consisting of white pine, beech, ironwood and mixed hardwood species. ba is variable



Stand	d Level 4 Co	over Type	S	ize De	nsity	Acres	Stand Age I	BA Range	Managed S	Site	General Comments
81	4130	- Aspen	9	Sapling	y Well	8.1	22	Immature	N/A		stand of decent aspen regen, some stocking king variability in spots
	Canopy Species	% Cover	Size Class	DBH	Age						along with some size variability, overall stand is in the sapling to small pole size range and growing fairly well.
	Black Cherry	5	Sapling	1							pole size range and growing rainy well.
	Quaking Aspen	5	Sapling/Pole	3							
	Bigtooth Aspen	90	Sapling/Pole	3	22						
82	6132 - Mixed Lowla	and Forest	with Cedar Po	letimb	er Poor	1.6	75		N/A		Stand almost non-forested, lowland shrub, but enough trees around
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	perimeter to make it forested. Pocket of heavy shrubs in center, wet throughout much of stand area.
	Yellow Birch	10	Pole	8		Dogv	vood (spp.)	Medium	10 - 20 feet	Tall Shrub	
No	orthern White Cedar	25	Pole	7			Alder	Medium	10 - 20 feet	Tall Shrub	
	Hemlock	25	Pole/Log	8							_
	Black Ash	5	Sapling/Pole	6							
	Red Maple	35	Pole/Sap/Log	8	75						
83	4130	- Aspen	;	Saplino	y Well	10.4	25	1-50	N/A		aspen regen growing well with a few residual white pine scattered
	Canopy Species	% Cover	Size Class	DBH	Age						throughout stand. some lower, wet ground along western edge of stand.
	Red Maple	5	Sapling	2							
	Bigtooth Aspen	90	Sapling/Pole	4	25						
	Black Cherry	5	Sapling	2							
84	330 - Low-I	Density Tre	ees	Nonsto	ocked	8.5			No		
85	622 - Low	land Shrub)	Nonst	ocked	2.7			No		
86	42110 - Plai	nted Red P	rine Sa	awtimb	er Well	12.7	58	141-170	N/A		red pine plantation of good quality. some defect present, recommend thinning stand to remove remaining defect and get to appropriate
	Canopy Species	% Cover	Size Class		Age		nopy Species	Density	Avg. Height	Size	stocking levels. current ba averages ~170. small pocket of aspen near
	Red Pine	100	Log/Pole	10	58	WI	hite Pine	Low	< 5 feet	Sapling	south edge, few black cherry scattered throughout plantation.
				_		Bla	ck Cherry	Low	5 - 10 feet	Sapling	
87		- Aspen			Medium		68	1-50	N/A		old grade runs through stand, small area of aspen regen. (1/4 acre) sma
	Canopy Species		Size Class		Age		nopy Species		Avg. Height	Size	not fit well with adjacent stands, likely intended as retention when aspen
	Quaking Aspen	30	Pole	8			ooth Aspen	Low	5 - 10 feet	Sapling	stands were harvested.
	Bigtooth Aspen	40	Pole/Sapling	8	68	Cho	ke Cherry	Low	5 - 10 feet	Tall Shrub	
	Red Maple	30	Pole/Log	8							



Stand	Level 4 Cover Type			Size Density	nsity	Acres	Stand Age E	BA Range	Managed S	ite	General Comments
88	42140 - Plan			Sapling		20.7	18	Immature	N/A		red pine looks to be hanging in and growing well, but jack pine competition is significant. pockets of cherry and red maple as well.
	Canopy Species Red Pine	% Cover	Size Class Sapling	2	Age 18						Stand was planted to rad pine in 2006. Degeneration survey done in
	Jack Pine	45	Sapling	2	10						Stand was planted to red pine in 2006. Regeneration survey done in 2010 and noted that "Red pine is doing very well, putting on good
	Red Maple	5	Sapling	2							growth. Lots of JP in pockets."
	Black Cherry	5	Sapling	2							
89	4110 - Sugar N			Sawtimbe	ar Well	13.3	105	81-110	N/A		Stand harvested under tsale contract 61-067-14. responding well to mo
09	Canopy Species		Size Class		Age		nopy Species		Avg. Height	Size	recent thinning, good quality overall and not much top dieback to spea
	Sugar Maple	75	Log/Pole	13	105		onwood	High	5 - 10 feet	Sapling	of. desirable regeneration is minimal. ba hovers in the 90-100 range.
	Red Maple	10	Pole/Log	8	100		gar Maple	Low	5 - 10 feet	Sapling	
	Black Cherry	15	Log/Pole	12			lemlock	Low	10 - 20 feet	Sapling	
90	310 - Herbac			Nonsto	cked	1.9			10 20 1001	- Gapinig	State Springdale well 15-15HD.
91	42110 - Pla	nted Red P	ine	Sawtimbe	er Well	20.5	72	111-140	N/A		red pine stand thinned last entry period, growing well and of good qual
91			Size Class		Age					Size	$_{ m 1}$ stocking is still somewhat low to warrant another entry but possibly the
	Canopy Species Red Pine	100	Log	13	72		nopy Species hite Pine	Density Low	Avg. Height 5 - 10 feet	Sapling	next yoe a final shelterwood harvest could take place.
	Neu Fille	100	Log	13	12		ed Pine	Low	5 - 10 feet	Sapling	
							onwood	Low	5 - 10 feet	Sapling	
							Beech	High	10 - 20 feet	Sapling	
							Deecii	riigii	10 - 20 1661	Saping	
92	122 - Road	d/Parking L	ot	Nonsto	cked	3.4			No		
93	310 - Herbac	eous Open	land	Nonsto	cked	7.5			No		
94	310 - Herbac	eous Open	land	Nonsto	cked	1.4			No		
95	4119 - Mixed No	orthern Hard	dwoods	Poletimb	er Well	3.5	95	51-80	N/A		Small acreage stand of hardwood species along old rr grade.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	
	Black Cherry	5	Pole/Log	8	-		onwood	Medium	Variable	Sapling	
	Ironwood	20	Sapling/Pol	e 4							
	Red Maple	10	Pole/Log	8							
	Quaking Aspen	5	Pole	6							
	Sugar Maple	60	Pole/Sap/Lo	og 8	95						
96	310 - Herbac	eous Open	land	Nonsto	cked	5.5			No		



Stand	71		Size Density	Acre	es Stand Age	BA Range	Managed S	Site	General Comments	
97	122 - Roa	d/Parking L	ot	Nonstocked	2.6	1		No		
98	623 - Emer	rgent Wetla	nd	Nonstocked	1.1			No		
99	330 - Low-	Density Tre	es	Nonstocked	4.1			No		
100	42110 - Pla	nted Red P	ine	Poletimber W	ell 21.8	3 61	171-200	N/A		good quality, uniformly stocked red pine stand with very minimal
	Canopy Species	% Cover	Size Class	DBH Age	Sub-	Canopy Species	Density	Avg. Height	Size	understory. ba averages 170-180. trace red and white pine saplings present in some areas. in southeast portion of stand there are trace
	Red Pine	100	Pole/Log	9 61		Beech	Low	5 - 10 feet	Sapling	aspen and cherry in canopy, in this area beech and white pine are
						White Pine	Low	10 - 20 feet	Sapling	concentrated in understory. recommend thinning stand removing 1/3 of
										Joverall volume with focus being on defected trees and other individuals to reach desired stocking.
										Next YOE might be a good opportunity to restart this stand, adding stand 104 to the south as part of a larger plantation.
101	4110 - Sugar N	Maple Asso	ciation	Poletimber W	ell 2.7	51	1-50	N/A		Not sure on age, carried forward from previous inventory. Stand origin
	Canopy Species	% Cover	Size Class	DBH Age	Sub-	Canopy Species	Density	Avg. Height	Size	seems to be sugar maple and cherry encroaching on disturbed, open area along rr grade.
	Sugar Maple	75	Pole/Sapling	g 5 51		Sugar Maple	Low	10 - 20 feet	Sapling	area along it grade.
	Black Cherry	25	Pole/Log	8 77				I		
104	330 - Low-	Density Tre	es	Nonstocked	28.	5		No		spotty pole size black cherry and a few small areas of aspen regeneration, this area was clearcut before state aquired the property several yeears ago
106	42110 - Pla	nted Red P	ine	Sawtimber Wo	ell 16.0	6 57	141-170	N/A		good quality red pine stand, uniformly stocked with very sparse
	Canopy Species	% Cover	Size Class	DBH Age	Sub-	Canopy Species	Density	Avg. Height	Size	understory. ba averages is ~170, consider thinning stand by removing 1/3 of overall volume.
	Red Pine	100	Log/Pole	10 57		Beech	Low	5 - 10 feet	Sapling	of overall volume.
107	42110 - Pla	nted Red P	ine	Sawtimber We	ell 47.	7 59	111-140	N/A		stand responding well to recent thinning, not quite at stocking levels to
	Canopy Species	% Cover	Size Class	DBH Age	Sub-	Canopy Species	Density	Avg. Height	Size	thin again. die back pocket in south has expanded quite a bit with dying or recently dead standing trees throughout. White pine and red pine
	Red Pine	95	Log/Pole	10 59		Beech	Medium	5 - 10 feet	Sapling	regen levels are pretty significant in SE triangular portion of stand.
	Black Cherry	5	Pole	7		Red Pine	Low	5 - 10 feet	Sapling	
	-					White Pine	Low	10 - 20 feet	Sapling	Stand treated in winter/spring of 2015-2016 by Dan Bundy FP under tsale contract 610491401.
109	310 - Herbac	ceous Open	land	Nonstocked	6.1			No		



Stand	d Level 4 C	over Type	;	Size Der	sity	Acres S	Stand Age B	A Range	Managed S	Site	General Comments
110	4110 - Sugar N	Maple Assoc	ciation P	oletimbe	r Well	1.3	75	51-80	N/A		small hardwood stand with black cherry and sugar maple. think ironwood
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Can	opy Species	Density	Avg. Height	Size	understory and intermediate canopy. was called uneven aged at time of inventory so age is an estimate.
	Ironwood	5	Pole/Sapling	6		Iron	wood	Medium	Variable	Sapling	, a manay a aga a maamaa,
	Black Cherry	45	Pole/Log	8		Maple	e (spp.)	Medium	Variable	Sapling	
	Sugar Maple	50	Pole/Log	8	75	Black	Cherry	Low	Variable	Sapling	
111	42110 - Pla	nted Red P	ine S	awtimbe	r Well	29.3	69	141-170	N/A		good quality red pine stand with relatively open understory. some red
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Can	opy Species	Density	Avg. Height	Size	pine and beech regen along with pockets of ironwood near hardwood inclusions, some jack pine regen near where jp strip was removed, ba
	Red Pine	100	Log/Pole	10	69	Whit	e Pine	Low	5 - 10 feet	Sapling	averages ~160 with some slightly higher pockets as well as areas with a
						Ве	eech	Low	< 5 feet	Sapling	bit lighter stocking. consider thinning one more time then cutting and
						Jacl	k Pine	Low	5 - 10 feet	Sapling	replanting.
						Iron	wood	Low	< 5 feet	Sapling	
						Red	l Pine	Medium	5 - 10 feet	Sapling	
112	310 - Herbac	eous Open	land	Nonstoo	ked	29.1			No		
113				oletimbe		7.8		81-110	N/A		1
	Canopy Species		Size Class	DBH	Age		opy Species	Density	Avg. Height	Size	
	Ironwood	5	Sapling/Pole	4		Iron	wood	Medium	Variable	Sapling	
	American Elm	2	Pole	8							
	Beech	2	Log	12	0.5						
	Sugar Maple	79	Pole/Log	8	95						
	Black Cherry Red Maple	10	Pole/Log	8							
114	Red Maple			Q							
	42100 - Plan		Pole/Log Pine P	8 oletimbe	er Well	27.8	59	171-200	N/A		White pine of fair quality, typical of plantation origin. Dense white pine
		ted White F	Pine P	oletimbe						Size	White pine of fair quality, typical of plantation origin. Dense white pine seedling/understory component has advanced to sapling size with
	Canopy Species	ted White F	Pine P	oletimbe DBH		Sub-Can	opy Species	Density	Avg. Height	Size Tall Shrub	seedling/understory component has advanced to sapling size with heights ranging from 5-10' and of decent quality. Could treat with
	Canopy Species Black Cherry	ted White F	Pine P Size Class Log/Pole	oletimbe DBH	Age	Sub-Cand Honeysu	opy Species ckle (spp.)	Density Low	Avg. Height 5 - 10 feet	Tall Shrub	seedling/understory component has advanced to sapling size with heights ranging from 5-10' and of decent quality. Could treat with shelterwood harvest to release advanced regen, realizing the risk that much of regen would likely be damaged during sale operations and
	Canopy Species	ted White F	Pine P	oletimbe DBH		Sub-Cane Honeysu Whit	opy Species	Density	Avg. Height	Tall Shrub Sapling	seedling/understory component has advanced to sapling size with heights ranging from 5-10' and of decent quality. Could treat with shelterwood harvest to release advanced regen, realizing the risk that much of regen would likely be damaged during sale operations and weevil damage will likely affect quality of regeneration as it advances.
	Canopy Species Black Cherry	ted White F	Pine P Size Class Log/Pole	oletimbe DBH	Age	Sub-Cane Honeysu Whit	opy Species ckle (spp.) e Pine	Low Full	Avg. Height 5 - 10 feet 5 - 10 feet	Tall Shrub	seedling/understory component has advanced to sapling size with heights ranging from 5-10' and of decent quality. Could treat with shelterwood harvest to release advanced regen, realizing the risk that much of regen would likely be damaged during sale operations and
115	Canopy Species Black Cherry White Pine	white F Cover 2 98	Pine P Size Class Log/Pole Pole/Log	oletimbe DBH	Age 59	Sub-Cane Honeysu Whit	opy Species ckle (spp.) e Pine	Low Full	Avg. Height 5 - 10 feet 5 - 10 feet	Tall Shrub Sapling	seedling/understory component has advanced to sapling size with heights ranging from 5-10' and of decent quality. Could treat with shelterwood harvest to release advanced regen, realizing the risk that much of regen would likely be damaged during sale operations and weevil damage will likely affect quality of regeneration as it advances. Could also retain but understory will continue to be a difficult stand dynamic to deal with. Small hardwood stand, decent quality sugar maple throughout. Variable
	Canopy Species Black Cherry White Pine	% Cover 2 98 Maple Associated	Pine P Size Class Log/Pole Pole/Log	oletimbe DBH	Age 59	Sub-Cane Honeysu Whit Be	ppy Species ckle (spp.) e Pine eech	Low Full Low	Avg. Height 5 - 10 feet 5 - 10 feet 5 - 10 feet	Tall Shrub Sapling	seedling/understory component has advanced to sapling size with heights ranging from 5-10' and of decent quality. Could treat with shelterwood harvest to release advanced regen, realizing the risk that much of regen would likely be damaged during sale operations and weevil damage will likely affect quality of regeneration as it advances. Could also retain but understory will continue to be a difficult stand dynamic to deal with. Small hardwood stand, decent quality sugar maple throughout. Variable sized ironwood component is significant. Could thin when adjacent red
	Canopy Species Black Cherry White Pine 4110 - Sugar M	% Cover 2 98 Maple Associated	Pine P Size Class Log/Pole Pole/Log	oletimbe DBH 10 9	Age 59	Sub-Cand Honeysu White Be	ppy Species ckle (spp.) e Pine eech	Density Low Full Low 81-110	Avg. Height 5 - 10 feet 5 - 10 feet 5 - 10 feet N/A	Tall Shrub Sapling Sapling	seedling/understory component has advanced to sapling size with heights ranging from 5-10' and of decent quality. Could treat with shelterwood harvest to release advanced regen, realizing the risk that much of regen would likely be damaged during sale operations and weevil damage will likely affect quality of regeneration as it advances. Could also retain but understory will continue to be a difficult stand dynamic to deal with. Small hardwood stand, decent quality sugar maple throughout. Variable
	Canopy Species Black Cherry White Pine 4110 - Sugar M	ted White F % Cover 2 98 Maple Assoc	Pine P Size Class Log/Pole Pole/Log ciation P Size Class	oletimbe DBH 10 9 oletimbe	Age 59	Sub-Cand Honeysu Whit Be 5.4 Sub-Cand	ppy Species ckle (spp.) e Pine eech 91 ppy Species	Density Low Full Low 81-110 Density	Avg. Height 5 - 10 feet 5 - 10 feet 5 - 10 feet N/A Avg. Height	Tall Shrub Sapling Sapling Size	seedling/understory component has advanced to sapling size with heights ranging from 5-10' and of decent quality. Could treat with shelterwood harvest to release advanced regen, realizing the risk that much of regen would likely be damaged during sale operations and weevil damage will likely affect quality of regeneration as it advances. Could also retain but understory will continue to be a difficult stand dynamic to deal with. Small hardwood stand, decent quality sugar maple throughout. Variable sized ironwood component is significant. Could thin when adjacent red
	Canopy Species Black Cherry White Pine 4110 - Sugar M Canopy Species Ironwood	Maple Assoc % Cover 5	Pine P Size Class Log/Pole Pole/Log Siation P Size Class Sapling/Pole	oletimbe DBH 10 9 9 Oletimbe	Age 59	Sub-Cand Honeysu Whit Be 5.4 Sub-Cand	ppy Species ckle (spp.) e Pine eech 91 ppy Species wood	Density Low Full Low 81-110 Density Medium	Avg. Height 5 - 10 feet 5 - 10 feet 5 - 10 feet N/A Avg. Height 10 - 20 feet	Sapling Sapling Sapling Sapling	seedling/understory component has advanced to sapling size with heights ranging from 5-10' and of decent quality. Could treat with shelterwood harvest to release advanced regen, realizing the risk that much of regen would likely be damaged during sale operations and weevil damage will likely affect quality of regeneration as it advances. Could also retain but understory will continue to be a difficult stand dynamic to deal with. Small hardwood stand, decent quality sugar maple throughout. Variable sized ironwood component is significant. Could thin when adjacent red



Compartment: 233 Traverse City Mgt. Unit Year of Entry: 2024 Stand Size Density **Managed Site General Comments Level 4 Cover Type** Acres Stand Age BA Range 42110 - Planted Red Pine Sawtimber Well 11.2 59 171-200 N/A Decent quality red pine stand, dense white pine regen in much of 116 understory in south and eastern portions of stand, remaining understory **Canopy Species** % Cover Size Class **DBH Age Sub-Canopy Species** Density Avg. Height Size is lightly stocked with some areas of dense honeysuckle. Sugar maple Black Cherry 10 White Pine 5 - 10 feet 5 Log/Pole High Sapling regen of good quality along eastern edge of stand near road. Some variability in stocking and quality in SW stand area - overall BA averages Red Pine 95 59 Loa/Pole 10 Black Cherry Low 5 - 10 feet Sapling ~190 sq ft, recommend thinning stand now and see how advanced regen Honeysuckle (spp.) Low < 5 feet Tall Shrub responds. Consider replanting stand area next YOE in combination with Beech 5 - 10 feet Sapling Low other nearby plantations, depending on regen survival. Remove slightly more than 1/3 of overall volume with focus being on forked, defected and otherwise poorly formed trees. 42110 - Planted Red Pine 117 Poletimber Well 23.1 59 171-200 N/A **Canopy Species** % Cover Size Class **DBH Age Sub-Canopy Species** Density Avg. Height Size Red Pine 100 Pole/Log 9 59 White Pine < 5 feet Low Sapling Black Cherry 5 - 10 feet Low Sapling Ironwood Low < 5 feet Sapling 330 - Low-Density Trees Nonstocked 1.0 No 118 2.7 No 119 122 - Road/Parking Lot Nonstocked 120 42110 - Planted Red Pine Sawtimber Well 6.1 59 141-170 N/A Fair quality, small acreage red pine stand however a large pocket of mortality exists in northern portion of stand and some mortality and **Canopy Species** % Cover Size Class **DBH Age Sub-Canopy Species** Density Avg. Height Size stressed trees present in SW area of stand. Norway spruce, common Red Pine 100 59 5 - 10 feet Log/Pole 10 Beech Sapling Low juniper and scotch pine all present in trace amounts. Could steer stand towards a more open, natural feel and allow whatever regen is present to 5 - 10 feet Sapling Ironwood Low hopefully advance and fill in. Not a candidate to replant due to small size Tall Shrub Honeysuckle (spp.) Medium < 5 feet but with presence of red pine in understory it will likely remain a Choke Cherry Low 5 - 10 feet Tall Shrub component in the future. Red Pine Low < 5 feet Sapling Stand was harvested under tsale contract 039-14-01 in summer of 2016 by Dan Bundy Logging. 42220 - Natural Jack Pine Sapling Well 2.0 16 N/A Jack pine naturally regenerating with red maple and trace other 121 **Immature** deciduous species throughout. % Cover Size Class **DBH Age Canopy Species** Jack Pine 85 3 Sapling 16 15 Red Maple Sapling/Pole

122

320 - Upland Shrub

Nonstocked

2.3

t 7 - Stands Compartment: 233 Year of Entry: 2024



Stand	Level 4 Cover Type 4110 - Sugar Maple Association			Size Der	nsity	Acres Stand A	ge BA Range	Managed \$	Site	General Comments
123	4110 - Sugar N	Maple Assoc	ciation	Poletimbe	er Well	11.0 95	111-140	N/A		Multi-part hardwood stand with fragments of adjacent white pine included in stand area and canopy component. Sugar maple is variable sized with
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Spe	ecies Density	Avg. Height	Size	some decent quality trees throughout. Black cherry is clumpy with some
	Sugar Maple	70	Pole/Log	9	95	Beech	Low	5 - 10 feet	Sapling	good quality stems present. No legal access to this 40 acre parcel of
	Red Maple	10	Pole/Log	8		White Pine	Low	5 - 10 feet	Sapling	state land, consider disposal?
	Black Cherry	10	Log/Pole	10		Ironwood	Medium	10 - 20 feet	Sapling	
	White Pine	10	Pole	8			·			
124	42110 - Pla	nted Red P	ine	Poletimbe	er Well	12.3 59	171-200	N/A		decent quality red pine stand, lightly stocked understory. ba is in the 200
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Spe	ecies Density	Avg. Height	Size	range on average - some defect present, recommend thinning to remove 1/3 of stand volume. small 1/3 acre die back pocket in south center
	Red Pine	100	Pole/Log	9	59	Beech	Low	5 - 10 feet	Sapling	portion for stand, this area should be removed with a small pre salvage
						Black Cherry	Low	10 - 20 feet	Sapling	buffer around perimeter. checked in fall 2021 by forest health and no
						White Pine	Low	5 - 10 feet	Sapling	HRD was found. follow up treatment could be to final harvest this stand with 131 to the east and replant whole area.
125	42100 - Plar	nted White F	Pine	Poletimbe	er Well	21.6 61	171-200	N/A		wp plantation has not been thinned due to access issues. fair quality with hardwoods mixed in in spots and so e variability in stocking, size class is
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Spe	ecies Density	Avg. Height	Size	pole/log with stand moving towards log size.
	White Pine	90	Pole/Log	9	61	Sugar Maple	Low	5 - 10 feet	Sapling	positing man stand morning terrained log election
	Sugar Maple	5	Pole/Log	8		Black Cherry	Low	5 - 10 feet	Sapling	
	Black Cherry	5	Log/Pole	12		Beech	Medium	10 - 20 feet	Sapling	
						Ironwood	Medium	10 - 20 feet	Sapling	
128	310 - Herbac	eous Open	land	Nonsto	cked	2.5		No		
129	310 - Herbac	eous Open	land	Nonsto	cked	11.7		No		
130	42110 - Pla	nted Red P	ine	Sawtimbe	er Well	35.1 81	141-170	N/A		stand responding well to recent treatment, good quality overall. small
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Spe	ecies Density	Avg. Height	Size	pocket of die back along thompsonville rd, all concentrated east of powerline row. consider thinning bulk of stand one more time, and final
	Black Cherry	2	Log/Pole			Beech	Low	< 5 feet	Sapling	harvesting area east if powerline with the exception of 10-30 ba of red
	Red Pine	98	Log/Pole	13	81	Red Pine	Low	5 - 10 feet	Sapling	pine south from die back area. this would remove the dieback area and
						Jack Pine	Low	5 - 10 feet	Sapling	allow some of the advanced regen of red pine and cherry to grow.
		1.00 T. 1.00 T						ı		Stand was harvested in spring of 2016 by Dan Bundy Logging under tsa contract 039-14-01.
131	42110 - Pla	42110 - Planted Red Pine				12.8 59	171-200	N/A		fair quality red pine stand with hardwood component scattered throughout
	Canopy Species					Sub-Canopy Spe	ecies Density	Avg. Height	Size	and concentrated in pockets. overall ba is slightly variable but averages 170-180. hardwood understory is much more concentrated in western 1
	Red Maple	5	Pole/Log			Beech	Medium	5 - 10 feet	Sapling	of stand, could consider thinning eastern portion and maybe shelterwoo
	<u> </u>	2	Log/Pole			Ironwood	Medium	5 - 10 feet	Sapling	harvesting western area to release regen. typed stand as poke sized,
	Sugar Maple	_							. 3	I winds on the course of matting to consult be almost
		7				Honeysuckle (sr	pp.) Medium	< 5 feet	Tall Shrub	right on the cusp of getting to overall log sized.
	Sugar Maple Black Cherry Red Pine		Pole/Log	9	59	Honeysuckle (sp Sugar Maple		< 5 feet 5 - 10 feet	Tall Shrub Sapling	right on the cusp of getting to overall log sized.



Stand	Level 4 C	over Type		Size Density	Acres	Stand Age	BA Range	Managed S	Site	General Comments
132	4112 - Maple, Beed	ch, Cherry A	Association	Poletimber Well	5.9	69	111-140	N/A		traces of elm, some good quality sugar maple stems, concentrated in areas while red maple is slightly more dominant throughout stand.
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	anopy Species	s Density	Avg. Height	Size	understory is dominated by ironwood for the most part put there are
	Sugar Maple	35	Pole/Log	8	Ma	ple (spp.)	Medium	10 - 20 feet	Sapling	some pockets of maple regen. could consider marking to thin and include
	Red Maple	35	Pole/Log	9 69	li .	ronwood	Medium	10 - 20 feet	Sapling	with nearby red pine?
	Ironwood	15	Sapling/Pol							
	Black Cherry	15	Pole/Log	8						
133	622 - Lov	wland Shrub)	Nonstocked	5.0			No		
134	310 - Herbac	eous Open	land	Nonstocked	2.8			No		
135	330 - Low-	Density Tre	es	Nonstocked	2.8		Unspecified	No		portion of stand in east is more open, added northern strip of low density trees this entry period.
136	42220 - Nat	tural Jack P	ine	Sapling Well	6.9	16	1-50	N/A		jack pine regenerated well with some red pine saplings present
	Canopy Species	% Cover	Size Class	DBH Age						throughout, creating fully stocked jack pine stand with scattered overstory
	Jack Pine	85	Sapling	2 16						red Pine retained from harvest.
	Red Pine		Sapling/Pole/L							
137	122 - Roa	d/Parking L	ot	Nonstocked	1.0			No		
138	122 - Roa	d/Parking L	ot	Nonstocked	0.7			No		
139	42110 - Pla	nted Red P	ine	Sawtimber Well	34.8	73	111-140	N/A		Responding fairly well to most recent thinning, some mortality and some
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	stressed trees near die back pockets. Higher water table in SE corner of stand, this area can seasonally flood which may be leading to dieback in
	Red Pine	100	Log/Pole	11 73		led Pine	Low	< 5 feet	Sapling	this portion of stand. Wet pocket in northern piece of stand, aspen and
					J	ack Pine	Medium	5 - 10 feet	Sapling	deciduous species around perimeter.
						Beech	Low	5 - 10 feet	Sapling	Stand treated in winter/spring of 2015-2016 by Dan Bundy FP under tsale
										contract 610491401. several pockets of mortality; suspect bark beetle.
140	4112 - Maple, Beed	ch, Cherry A	Association P	oletimber Mediun	n 2.6	95	51-80	N/A		bermed two track on old rr bed, mixed hardwood filling in. if surrounding red pine is restarted this stand should be retained to provide some visual
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	anopy Species	s Density	Avg. Height	Size	red pine is restarted this stand should be retained to provide some visual relief.
	Red Maple	25	Pole/Log	8	Ма	ple (spp.)	Low	10 - 20 feet	Sapling	
	Sugar Maple	55	Pole/Log	8 95	Cho	oke Cherry	Low	10 - 20 feet	Tall Shrub	
	Black Cherry	20	Pole/Log	8						
142	122 - Roa	d/Parking L	ot	Nonstocked	1.8			No		

Compartment:	233
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Stan	Level 4 Cover Type			Size Density		Acres Stand Age BA Range		Managed Site		General Comments	
143	6126 - Lowl	and Jack P	ine Pol	etimber	Medium	5.8	51	51-80	N/A		natural jack pine stand with aspen distributed evenly throughout. mossy,
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	humkocky soils in understory, with nannyberry throughout along with bracken, blueberry and some leather leaf.
	Quaking Aspen	15	Sapling/Pole	4		Na	innyberry	Medium	5 - 10 feet	Tall Shrub	
	Jack Pine	85	Pole/Sapling	6	51						-
144	790 - Other Bare/	Sparsely Vo	egetated	Nonstoo	ked	1.3	0		No		Well site, previously not mapped and was included with stand 59.
145	310 - Herbac	eous Open	land	Nonsto	ked	2.4	0		No		Road r.o.w and small opening adjacent to oil and gas facility.