

## **Compartment Review Presentation**

**Grayling Forest Management Unit** 

Compartment 72297
Entry Year 2021
Acreage: 2,086
County Crawford

Management Area: Kirtland's Warbler

Revision Date: 2019-07-03

Stand Examiner: Scott McClarren

**Legal Description:** 

T25N R2W Sections 4, 9, 10, 15, 16, 21

South Branch Township

## **Identified Planning Goals:**

To maintain forest health, productivity, sustainability, species diversification, and structural diversity throughout the compartment while providing for multiple use and visual management. In addition, to maintain a healthy habitat for the endangered species Dendroica kirtlandii (Kirtland's warbler), taking into account warbler management plan directives, species diversity, and visual management.

### Soil and topography:

The compartment is dominated by flat outwash plains on Grayling Sand, with Graycalm-Grayling soils on adjacent rolling hills. Organic soils are concentrated along the Thayer Creek floodplain.

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

The lands adjacent to the compartment are a mix of State, Federal and private ownership, including a golf course development. The compartment is part of the Pere Cheney Kirtland's Warbler Management Unit.

## **Unique Natural Features:**

In addition to Kirtland's warbler habitat, Thayer Creek is part of a designated Natural Rivers system. Kirtland's warbler and dry prairie plants associated with pine barrens have been found within the compartment. In addition, there is the potential for rare insect species to be found within the pine barrens types, and for rare reptiles to occur along the riparian corridors.

### Archeological, Historical, and Cultural Features:

Seven archaeological sites are recorded within this compartment.

## **Special Management Designations or Considerations:**

The compartment is part of the Pere Cheney Kirtland's Warbler Management Unit, a High Conservation Value Area (HCVA). In addition, the Thayer Creek corridor is within another HCVA.

### **Watershed and Fisheries Considerations:**

This compartment is in the Au Sable River watershed, and contains a portion of Thayer Creek, and an unnamed tributary to Thayer creek. Thayer Creek is a designated trout stream. Prescribed management activities are appropriate for the protection of these waterbodies.

#### Wildlife Habitat Considerations:

Habitat management for the Kirtland's warbler not only benefits that species, but also provides habitat for other opening-dependent songbirds, and white-tailed deer. The compartment's aspen and lowland type interface provide habitat for grouse and woodcock.

#### Mineral Resource and Development Concerns and/or Restrictions

Active sand/gravel pits are located approximately three miles to the southwest, and there should be good potential for sand & gravel within the compartment. There has been no oil & gas production, past or present, within one mile of the compartment. The small Hickey Creek field is located roughly two miles to the southeast. The field is undergoing secondary recovery operations for the Richfield. State mineral rights in the compartment were leased in the recent past by Marathon, but the company has since abandoned its development plans in the state. Potential for future oil & gas development within the compartment is considered low at this time. There is no known metallic mineral potential in this part of the state.

#### **Vehicle Access:**

County roads include Haymarsh Creek Trail, Chase Bridge, South Branch, Pere Cheney, Durant Castle and East Seven Mile Roads. The compartment is readily accessible via county roads and state trail roads.

## **Survey Needs:**

None

## **Recreational Facilities and Opportunities:**

The compartment provides dispersed recreational opportunities in the form of birding and hunting. It does not contain any designated recreational trails or facilities.

#### **Fire Protection:**

The compartment's blocks of jack pine, in rotation for Kirtland's warbler habitat, are broken up by improved road corridors. Access to the upland areas is good on existing two-tracks. The nearest water source is Thayer Creek.

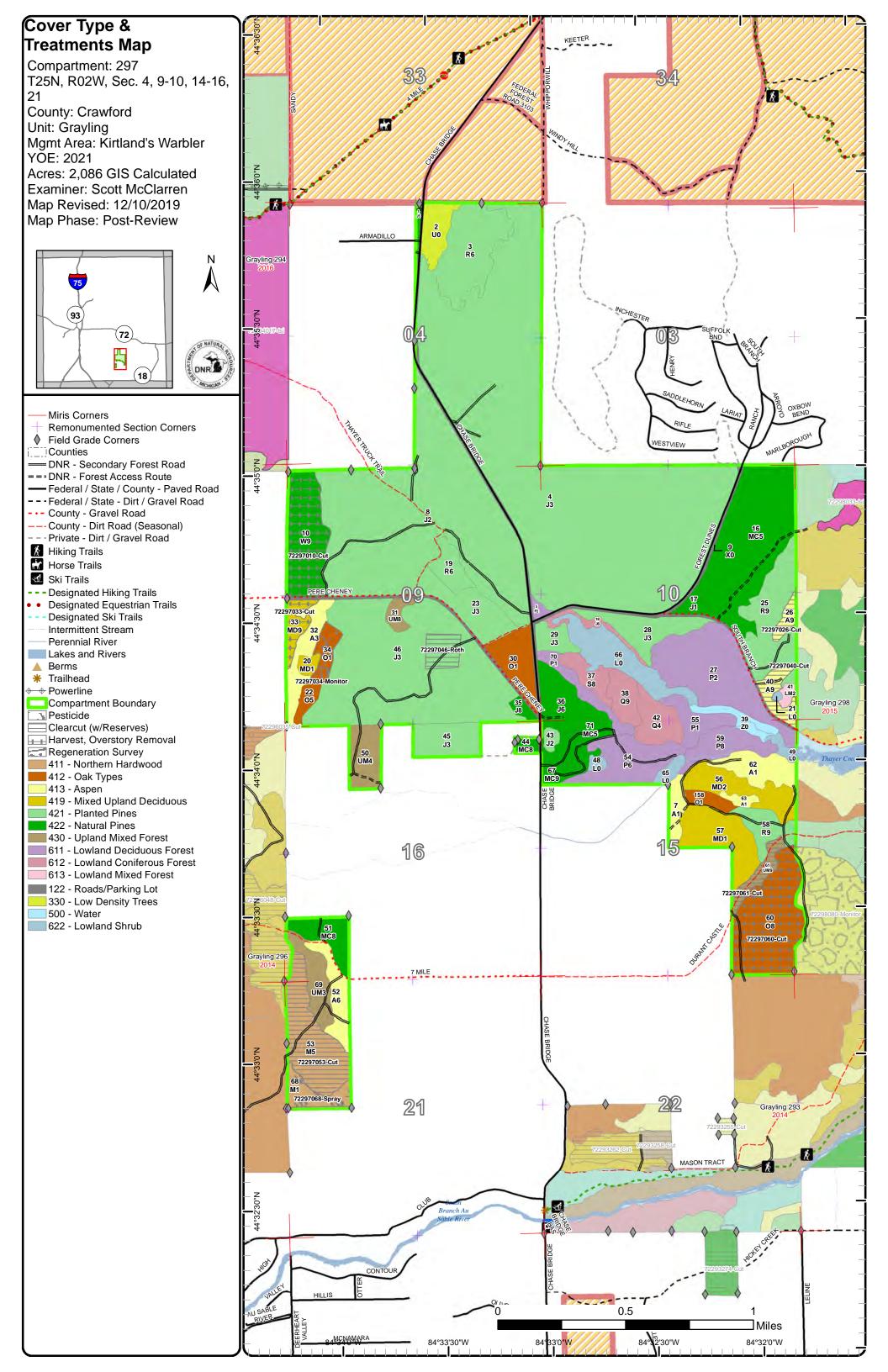
## **Additional Compartment Information:**

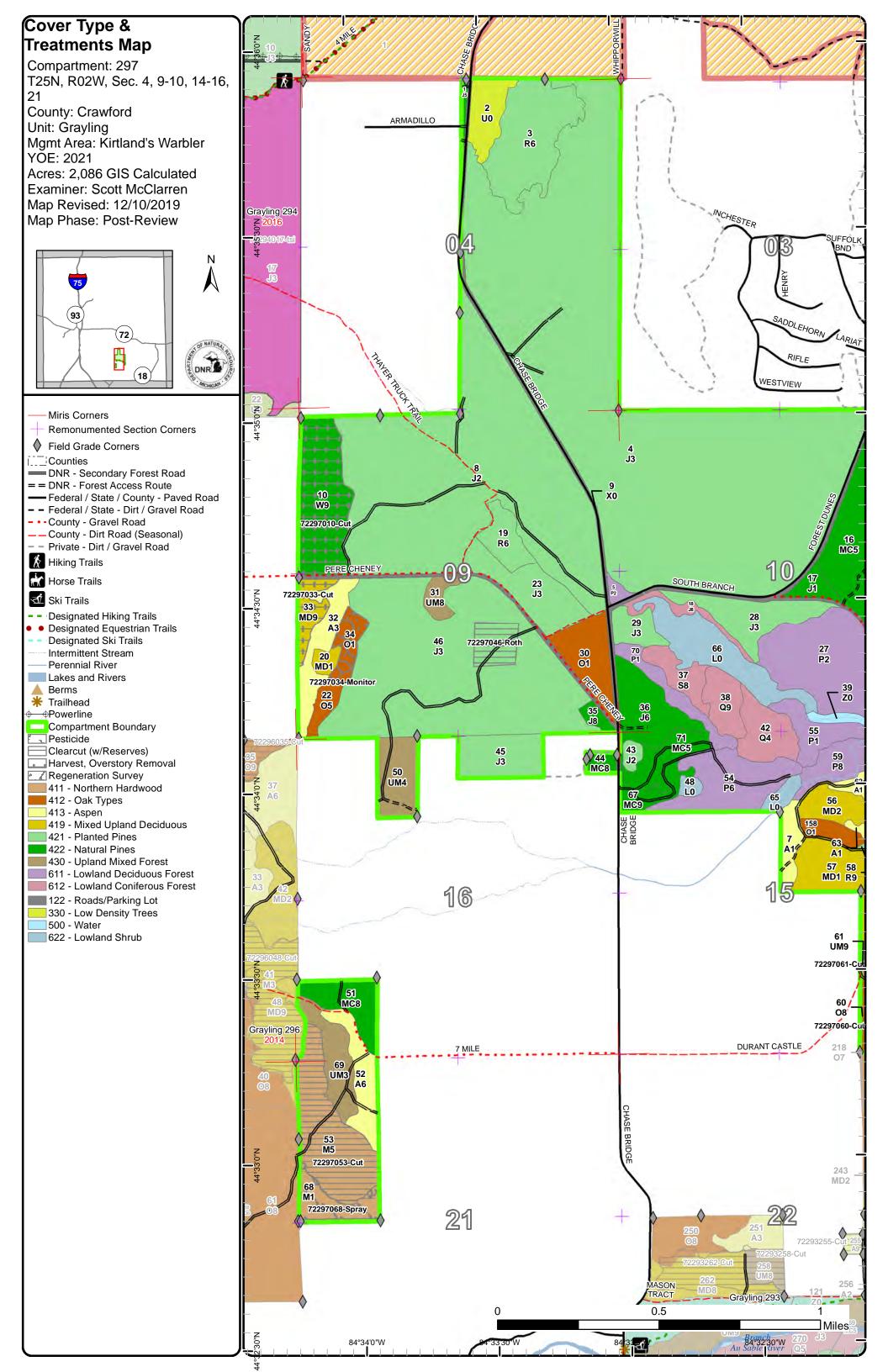
The following reports from the Inventory are attached:

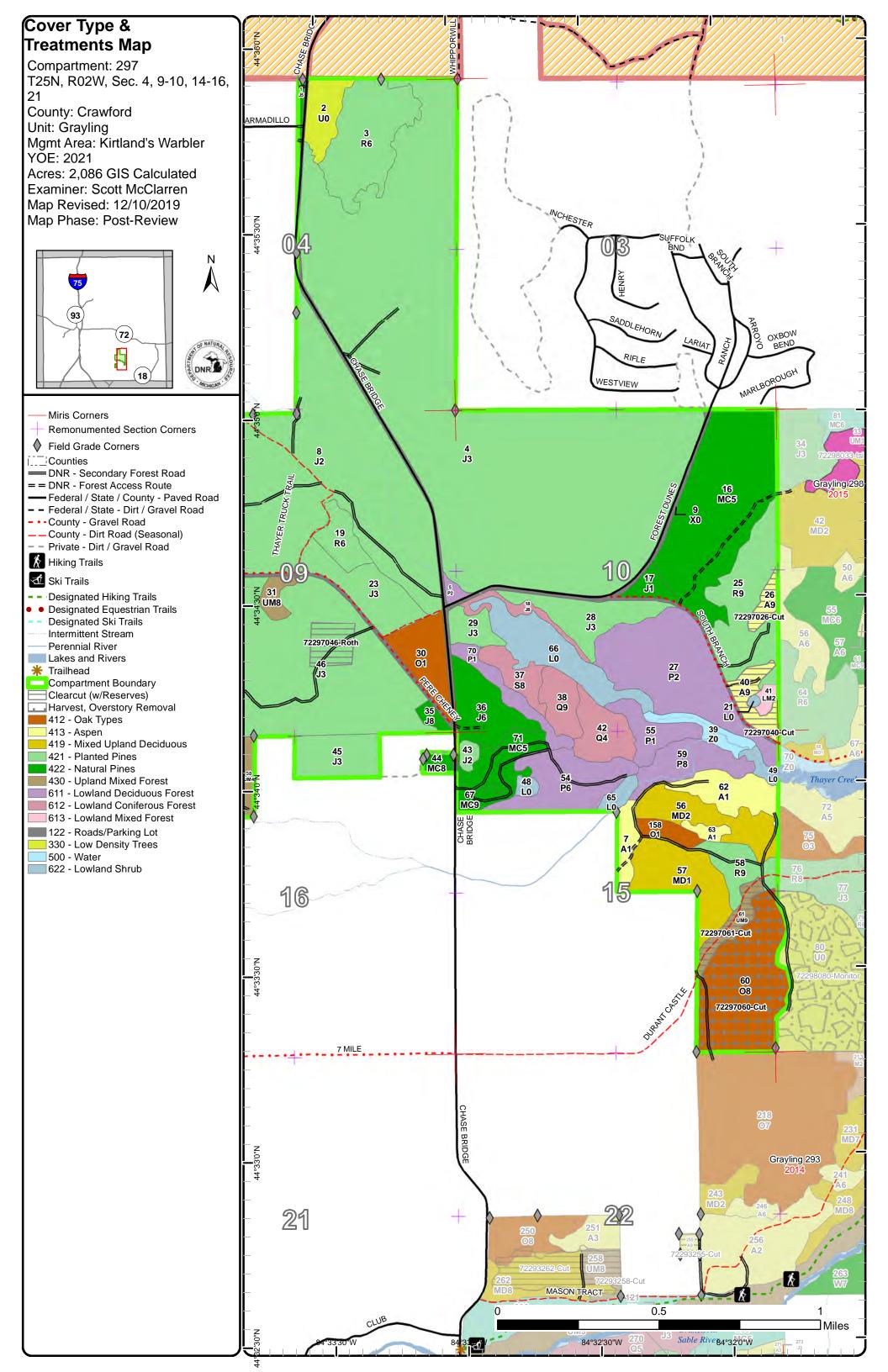
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

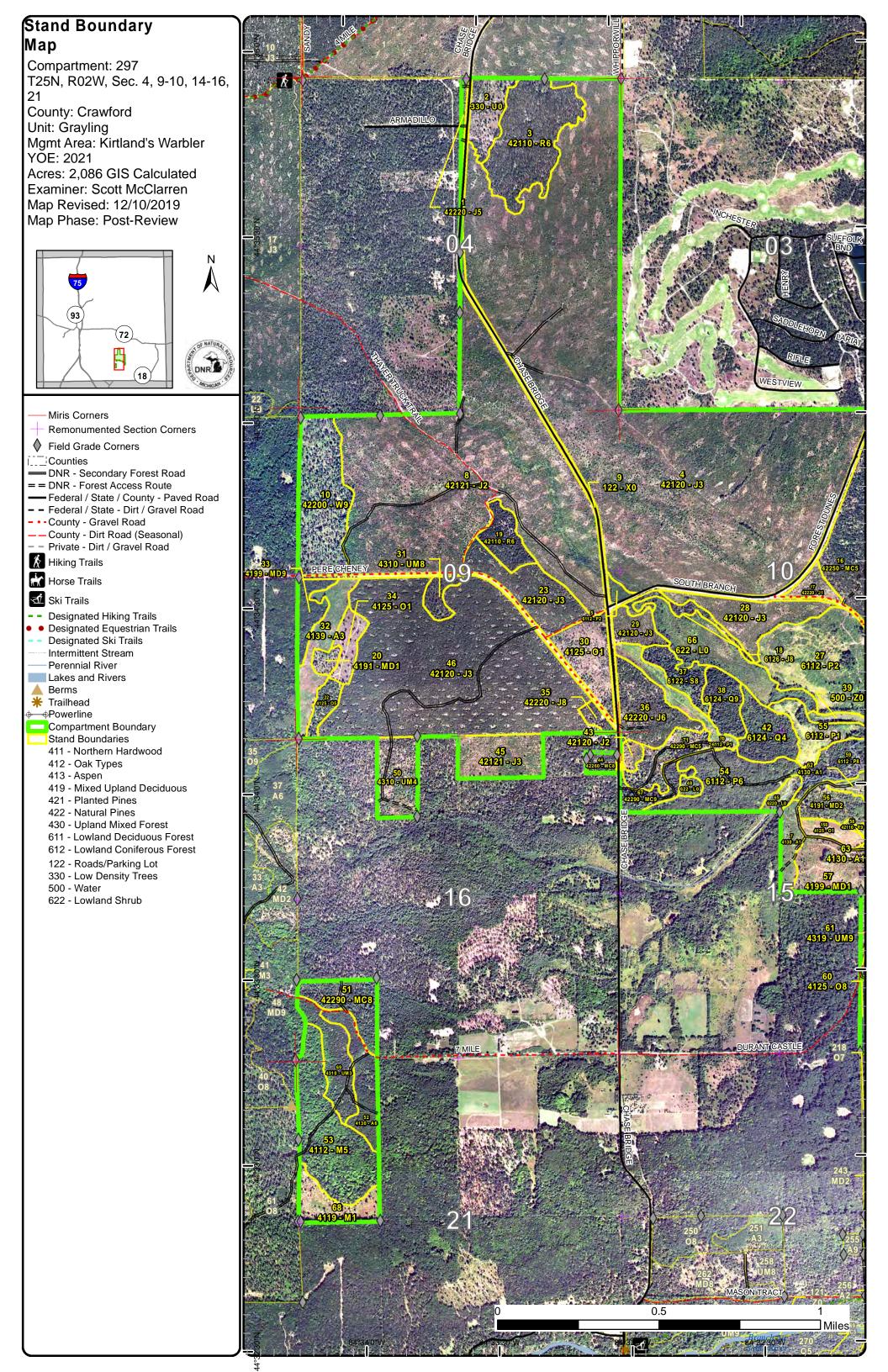
The following information is displayed, where pertinent, on the attached compartment maps:

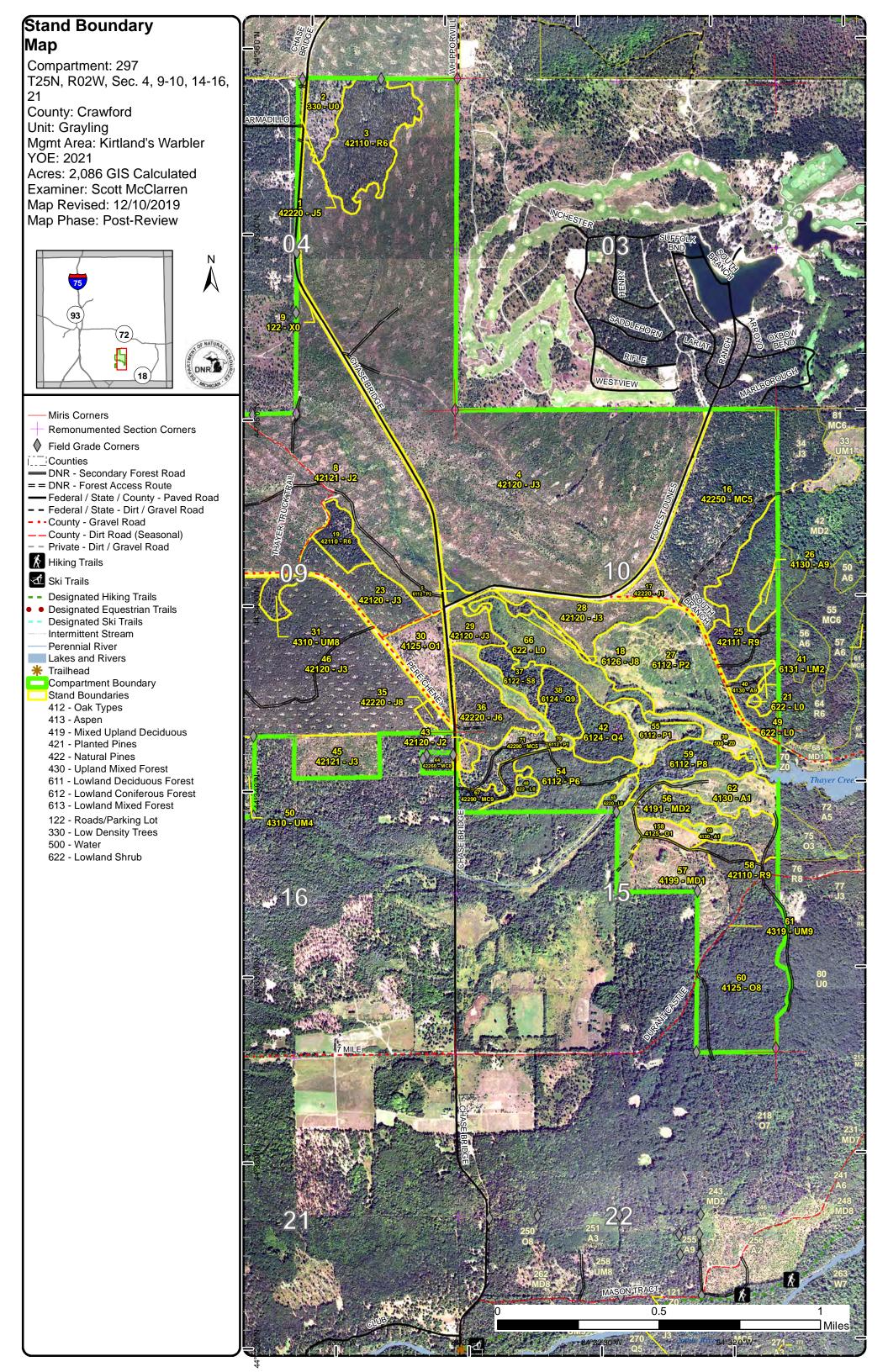
Base feature information, stand boundaries, cover types, and numbers Proposed treatments
Site condition boundaries
Details on the road access system

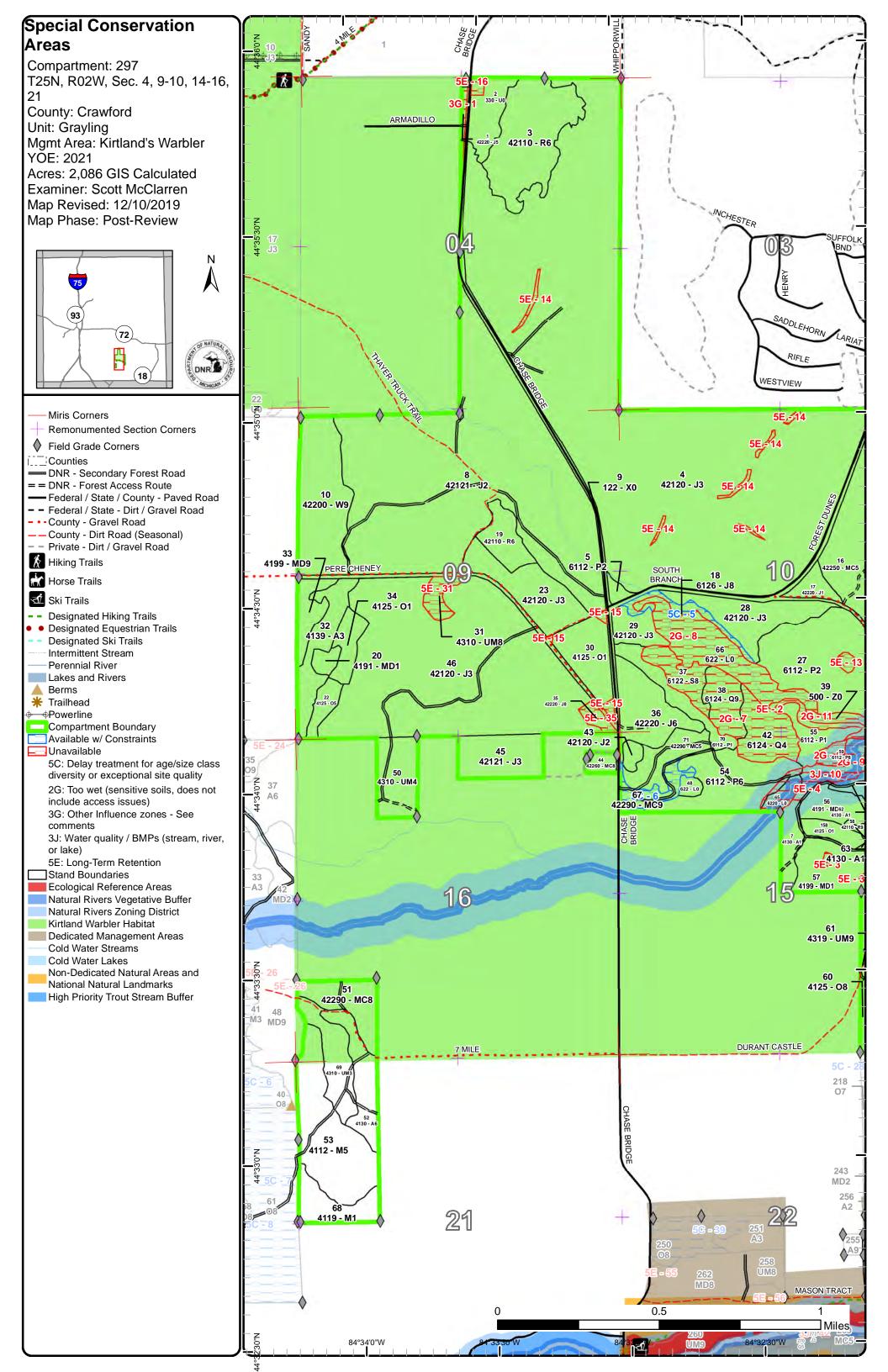


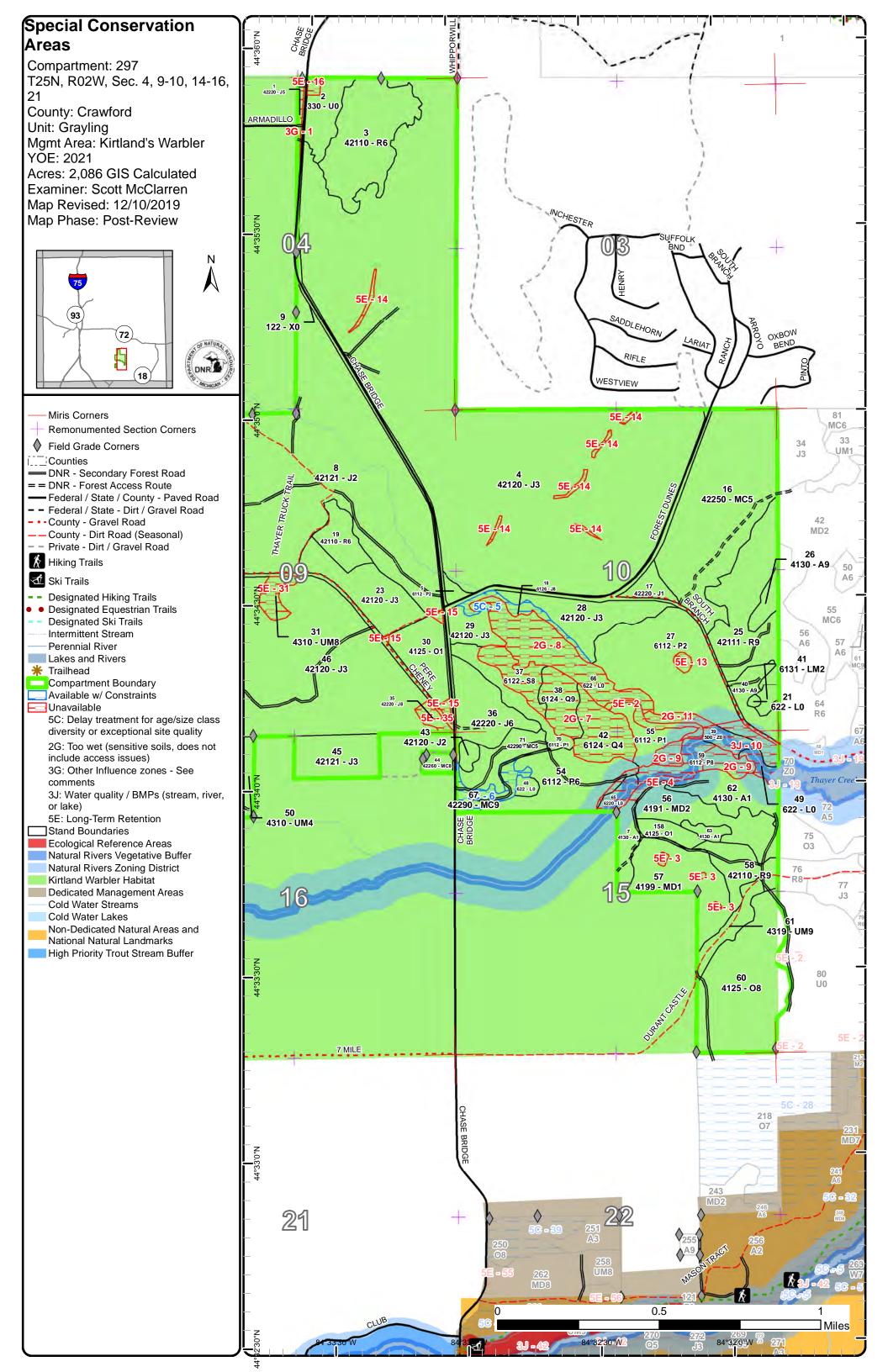












**Grayling Mgt. Unit** 

Compartment 297 Year of Entry 2021

Scott McClarren : Examiner



## Age Class

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Aspen	0	52	0	18	0	0	6	11	0	0	0	0	0	0	0	0	0	0	87
Jack Pine	0	0	810	6	221	0	26	7	0	2	4	0	0	0	0	0	0	0	1076
Low-Density Trees	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Lowland Aspen/Balsam Poplar	0	96	3	35	0	0	0	21	0	0	0	0	0	0	0	0	0	0	154
Lowland Conifers	0	0	0	0	0	33	0	0	0	0	0	0	0	0	0	0	0	0	33
Lowland Mixed Forest	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Lowland Shrub	45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
Lowland Spruce/Fir	0	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	12
Mixed Upland Deciduous	0	38	27	0	0	0	0	0	0	0	10	0	0	0	0	0	0	0	75
Natural Mixed Pines	0	0	0	0	0	96	33	4	0	0	0	0	0	10	0	0	0	0	143
Northern Hardwood	0	15	0	0	0	0	0	47	0	0	0	0	0	0	0	0	0	0	62
Oak	0	38	0	0	6	0	0	0	0	0	66	0	0	0	0	0	0	0	110
Red Pine	0	0	0	0	0	13	46	48	16	0	0	0	0	0	0	0	0	0	123
Upland Mixed Forest	0	0	0	19	0	20	0	6	10	0	0	0	0	0	0	0	0	0	55
Urban	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	42
Water	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
White Pine	0	0	0	0	0	0	0	0	0	0	0	0	0	45	0	0	0	0	45
Total	112	239	840	81	227	162	111	144	38	2	80	0	0	55	0	0	0	0	2090



## **Report 2 – Treatment Summary**

Grayling Mgt. Unit Year of Entry: 2021

## **Acres of Harvest**

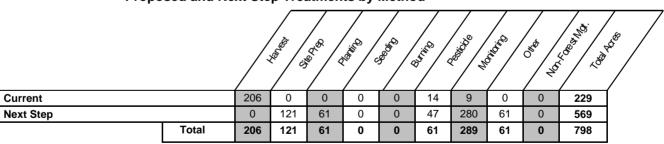
Compartment 297
Total Compartment Acres: 2,086

Commercial Harvest - 194 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 11

## **Cover Type by Harvest Method**

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Aspen		17	0	0	0	0	0	0	0	0	17	ĺ
Jack Pine		11	0	0	0	0	0	0	0	0	11	
Mixed Upland Deciduous		0	0	0	0	0	0	10	0	0	10	
Northern Hardwood		47	0	0	0	0	0	0	0	0	47	
Oak		0	0	0	0	0	0	66	0	0	66	
Upland Mixed Forest		10	0	0	0	0	0	0	0	0	10	
White Pine		0	0	0	0	0	0	45	0	0	45	
	Total	85	0	0	0	0	0	121	0	0	206	

## **Proposed and Next Step Treatments by Method**



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Compartment: 297 Year of Entry: 2021



**Treatment** Stand Size Stand BA **Treatment Treatment** Cover Type **Acres** Age Habitat Method Name CoverType Density Age Range Type Objective Structure Cut

**Approved Treatments:** 

0 72297010-Cut 44.7 42200 - Natural Sawtimber 123 51-80 Harvest Overstory 4191 - Mixed Even-Aged No White Pine Well Removal Upland

Deciduous with Conifer

Prescription Remove all merch stems accept for white pine greater than 20". Follow standard retention guidelines. Protect advanced regen. Add oak wilt

Specs: restrictions.

Next Step Monitoring, Natural Regen (Re-Inventory)

**Treatments:** 

Acceptable Red maple (up to 50%), oak, aspen and pine (25-35% pine).

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2020

**26 72297026-Cut** 5.5 4130 - Aspen Sawtimber 57 81-110 Harvest Clearcut 413 - Aspen Even-Aged No

Well

<u>Prescription</u> Clearcut without retention due to size. Add drumming log spec for grouse.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

**Treatments:** 

Acceptable Aspen is desired. Oak, maple and pine will also be acceptable.

Regen:

Other Harvest with stand 40. Delayed treatment to harvest with stand 56 of Comp 298.

Comment:

Site Condition

Proposed Start Date: 10/1 /2024

**33 72297033-Cut** 10.1 4199 - Other Mixed Sawtimber 99 111- Harvest Overstory 4310 - Pine, Even-Aged No

Upland Deciduous Well 140 Removal Oak Mix

Prescription Remove all merchantable stems except leave all red pine and oak greater than 20" DBH. Protect advanced white pine regen. Add oak wilt

Specs: specs. Protect HAL Site with long-term retention.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable White pine and oak are the desired species (60%). Maple and aspen are also expected and acceptable.

Regen:

Other Protect HAL site with 30 foot buffer. OFS point.

Comment:

Site Condition

Proposed Start Date: 10/1 /2020

Proposed Start Date: 10/1 /2020

Regen:
Other
Comment:
Site Condition

Grayling Mgt. Unit Report 3 -- Treatments Compartment: 297 S Year of Entry: 2021 t а **Treatment** Stand Size Stand BA **Treatment Treatment** Cover Type Acres Age Habitat n Name CoverType Density Age Range Type Method Objective Structure Cut d 60 72297060-Cut 66.0 4125 - Black, N. Pin Sawtimber 81-110 Harvest Overstory 4319 - Mixed Even-Aged No **Upland Forest** Oak Medium Removal Prescription Overstory removal except leave all white pine greater than 20". Put a retention island in southwest corner where legacy trees are more concentrated. Add shrub protection spec to protect witch hazel and hawthorn where possible. Add den tree spec for large cavity snags being Specs: utilized by wildlife. Add oak wilt spec. Protect avanced regen. Monitoring, Natural Regen (Re-Inventory) Next Step Treatments: Acceptable White pine is the desired species (40-50%). Oak, aspen, and maple are all expected and acceptable species for the remainder of the stand. Regen: Other Comment: Site Condition Proposed Start Date: 10/1 /2020 9.9 Sawtimber 78 81-110 Harvest Clearcut 4199 - Other Even-Aged No 72297061-Cut 4319 - Mixed **Upland Forest** Well Mixed Upland Deciduous Prescription Remove all merchantable stems except for white oak. Add oak wilt specs. Specs: Next Step Monitoring, Natural Regen (Re-Inventory) **Treatments:** Acceptable Oak is the desired species (25-35%). Aspen, maple, and pine are all expected and acceptable as well. A low to moderately stocked stand is Regen: expected. **Other** Comment: Site Condition Proposed Start Date: 10/1 /2020 72297068-**ERROR** 4211 - Planted 137 4119 - Mixed

Sapling Immatu Pesticide No 68 Even-Aged Spray Northern Hardwoods Poor Red Pine

Prescription Stand failed to meet cover type objective. Site prep and plant red pine with stand 53.

Specs:

SitePrep, Roller Chopping; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial

Regen(3yr); Other, Pre-Commercial Thinning - Hand **Treatments:** 

Acceptable Planted red pine meeting well stocked stand density.

Regen:

Comment:

Other Percent to Treat = 100%

Site Condition

Proposed Start Date: 10/1 /2021

**Total Treatment** 228.5 Acreage Proposed:

Compartment: 297

**Grayling Mgt. Unit** 

7%

Scott McClarren : Examiner Year of Entry: 2021

Availa	ability for	Managemer	nt						
Total	Acres	Acres Avail	Acres	De	omina	nt Site	e Cond	ditions	5
Acres	Available	With Condition	Not Available		5C	2G	3G	3J	5E
88	88	0	0	Aspen					
1074	1058	7	10	Jack Pine	7		2		8
16	14	0	1	Low-Density Trees					1
153	120	0	34	Lowland Aspen/Balsam Poplar		10		15	9
32	0	0	32	Lowland Conifers		32			
3	3	0	0	Lowland Mixed Forest					
45	3	0	42	Lowland Shrub		33		9	0
12	0	0	12	Lowland Spruce/Fir		12			
75	74	0	1	Mixed Upland Deciduous					1
142	132	10	0	Natural Mixed Pines	10				
62	62	0	0	Northern Hardwood					
110	108	0	2	Oak					2
122	122	0	0	Red Pine					
55	49	0	6	Upland Mixed Forest					6
42	42	0	0	Urban					
9	0	0	9	Water		4		6	0
45	45	0	0	White Pine					
2,086	1,920	16	149	Total Forested Acres	16	91	2	29	27

Relative Percent

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

Site Dominant Site No. Cond Availability			Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition	
1 Unavailable	3G: Other Influence zones - See comments	2	Unspecified	Unspecified	Unspecified	Unspecified	

#### Comments:

92%

1%

Narrow sliver of state land on W edge Chase Br. Rd. Driveways cross to adjacent pvt residences. Two chains across at widest end, narrowing down to zero over its 1/4-mile length. Impractical to harvest, given the aforementioned. Overmature JP poles have been dying out. NPO & JP saps below. Note: at N end, ~10' wide strip of the JP type south of the powerline is on USFS property. Pere Cheney KW Management Unit. HCVA, therefore stand condition code 8 applied.

# Report 4 – Site Conditions

**Grayling Mgt. Unit** 

Scott McClarren : Examiner

		5	Unspecified	Unspecified	Unspecified	Unspecified
comments:						
Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
comments:						
Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
comments:						
Available	5C: Delay treatment for	7	Unspecified	Unspecified	Unspecified	Unspecified
	exceptional site quality					
comments:						
Available	5C: Delay treatment for	10	Unspecified	Unspecified	Unspecified	Unspecified
	exceptional site quality					
comments:						
Unavailable	2G: Too wet (sensitive	44	Unspecified	Unspecified	Unspecified	Unspecified
	access issues)					
comments:						
	Unavailable omments:  Unavailable omments:  Available omments:  Available  Unavailable	Unavailable 5E: Long-Term Retention omments:  Unavailable 5E: Long-Term Retention omments:  Available 5C: Delay treatment for age/size class diversity or exceptional site quality omments:  Available 5C: Delay treatment for age/size class diversity or exceptional site quality omments:  Unavailable 2G: Too wet (sensitive soils, does not include access issues)	Unavailable 5E: Long-Term Retention 1  Omments:  Unavailable 5E: Long-Term Retention 3  Omments:  Available 5C: Delay treatment for age/size class diversity or exceptional site quality  Omments:  Available 5C: Delay treatment for age/size class diversity or exceptional site quality  Omments:  Unavailable 2C: Delay treatment for age/size class diversity or exceptional site quality  Omments:  Unavailable 2G: Too wet (sensitive soils, does not include access issues)	Unavailable 5E: Long-Term Retention 1 Unspecified  Omments:  Unavailable 5E: Long-Term Retention 3 Unspecified  Omments:  Available 5C: Delay treatment for age/size class diversity or exceptional site quality  Omments:  Available 5C: Delay treatment for age/size class diversity or exceptional site quality  Omments:  Unspecified  Unspecified  Unspecified  Unspecified  Unspecified  Unspecified  Unspecified  Omments:	Unavailable 5E: Long-Term Retention 1 Unspecified Unspecified  Omments:  Unavailable 5E: Long-Term Retention 3 Unspecified Unspecified  Omments:  Available 5C: Delay treatment for age/size class diversity or exceptional site quality  Omments:  Available 5C: Delay treatment for age/size class diversity or exceptional site quality  Omments:  Unavailable 2G: Too wet (sensitive soils, does not include access issues)  Unspecified Unspecifi	Unavailable 5E: Long-Term Retention 1 Unspecified Unspecified Unspecified  Unavailable 5E: Long-Term Retention 3 Unspecified Unspecified Unspecified  Omments:  Available 5C: Delay treatment for age/size class diversity or exceptional site quality  Omments:  Available 5C: Delay treatment for age/size class diversity or exceptional site quality  Omments:  Unspecified Unspecifie

# Report 4 – Site Conditions

Grayling Mgt. Unit Scott McClarren : Examiner

8	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	34	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
9	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	10	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
10	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	29	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Thayer Creek, Natu	ural River Tributary buffer for Au	ısable F	River.			
11	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	4	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
13	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Long-term retention	n, S. Branch Road Aspen (72-00	08-11).				
14	Unavailable	5E: Long-Term Retention	4	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Long-term retention	n (vortex strips), South Branch h	KW Blo	ck (#72-028-01)			

# Report 4 – Site Conditions

Compartment: 297

Grayling Mgt. Unit

Scott McClarren : Examiner Year of Entry: 2021

15	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified						
	Comments: Long-term retention associated with Triangle Jack (#72-012-11).												
16	Unavailable	5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified						
(	Comments:												
31	Unavailable	5E: Long-Term Retention	6	Unspecified	Unspecified	Unspecified	Unspecified						
	Unavailable Comments: .ong-term retention	<u> </u>	6	Unspecified	Unspecified	Unspecified	Unspecified						
	Comments:	<u> </u>	4	Unspecified	Unspecified	Unspecified Unspecified	Unspecified  Unspecified						

12/10/2019 11:31:55 AM - Page 4 of 4 TONELLOM1

Mgt. Unit

Compartment: #Type! Year of Entry:

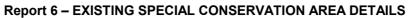


## Report 5 – PROPOSED SPECIAL CONSERVATION AREA\* (SCA) DETAILS

\* This is a partial list of SCAs for this compartment. Not included are those areas identified under other Department initiatives (Natural Rivers, Deer Wintering Areas, etc.). Those will be identified in separate, future map and report products.

SCA Name	SCA Category	Detail Type	Recommendation	Acres
Comments				

Grayling Mgt. Unit Compartment: 297
Year of Entry 2021





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

Conservation	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen cond stocked trout populations and those of other coldwater fish speci year to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such streams designated as trout resources by Fisheries Order 210.	es (e.g., slimy sculpin) to persist from se conditions due to substantial
SCA	Non-Dedicated Natural Areas and National Natural Landmarks	This category is comprised of those Natural, Wilderness and Wilproposed for legal dedication, but for which legal dedication by legal nomination process is defined by Part 351, Wilderness and Nature Environmental Protection Act, 1994 PA 451. The program is admirequire the submittal of a Natural Areas Nomination Packet to the proposed sites in various stages of review. Final dedication of not Areas is accomplished through legislative action.	egislature has not occurred. The ral Areas, of the Natural Resources and ninistered by the DNR. Nominations a DNR. This is an active program, with
HCVA	Dedicated Management Areas	Such areas are dedicated by the DNR Director for specific mana rules, as governed by Part 5, Department of Natural Resources, 324.504). Section 38 of the Administrative Procedures Act (MCL the promulgation of rules. This is an active program, with one pro DNR.	of the NREPA (MCL 324.502(2) and 24.238) provides for public requests for
HCVA	Designated Critical Habitat	Critical habitat areas are established via a consultative and coop U.S. Fish and Wildlife service for the recovery of threatened and 365, Endangered Species Protection, of the Natural Resources at PA 451, and the Federal Endangered Species Act of 1973. This species plans in various stages of review. As of now only two ex Plover Habitat.	endangered species, as governed by Part and Environmental Protection Act, 1994 is an active program, with proposed
HCVA	Legally dedicated Natural Areas, Wilderness or Wild Areas	The nomination process is defined by Part 351, Wilderness and and Environmental Protection Act, 1994 PA 451. The program is require the submittal of a Natural Areas Nomination Packet to the proposed sites in various stages of review. Final dedication of no Areas is accomplished through legislative action.	administered by the DNR. Nominations e DNR. This is an active program, with
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 and Vegetative Buffers for each Natural River see the table locat folder.	Zoning District is a 400 foot buffer for 00 feet. To view specific Zoning Districts



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Managed Si	te	General Comments
1 Bla	42220 - Natural Jack Pine  Canopy Species	8 80	2.4	80	51-80	N/A		See old comments-Old comments- (OPIC - FMD: Narrow sliver of state land on W edge Chase Br. Rd. Driveways cross to adjacent pvt residences. Two chains across at widest end, narrowing down to zero over its 1/4-mile length. Impractical to harvest, given the aforementioned. Overmature JP poles have been dying out. NPO & JP saps below. Note: at N end, ~10' wide strip of the JP type south of the powerline is on USFS property. Pere Cheney KW Management Unit. HCVA, therefore stand condition code 8 applied.)
2	330 - Low-Density Trees	Nonstocked	15.6		Immature	4122 - Oak,	Pine	Stand is non stocked due to heavy deer browse on oak regen. Some jack pine seedlings present, but not enough to meet minimum stocking. It oak recruits then stand should advance to poorly or moderately stocked. No white pine observed in leave trees (see comments below).
								Old comments- (OPIC - FMD: Variable stand, 3+ ages classes of JP: pockets of JP saps, poles in 40's & 60's; slow-growing, oldest poles/small saw dying out. Poor-quality NPO scattered throughout. Also patchy oak regen 2-5' tall. Averages out to med-stocking, short JP, but there are pockets of 4-5 stick J6. Cut the JP 6" DBH and up, leave all oak, RP, WP. Goal is nat regen (JP & oak), with less than medium stocking acceptable. Pere Cheney KW Management Unit. HCVA, therefore stand condition code 8 applied. Averaged current ages with previous YOE's.)
3	42110 - Planted Red Pine  Canopy Species % Cover Size Class  Red Pine 98 Pole	Poletimber Well  B DBH Age  7 60	47.9	60	111-140	N/A		Pretty homogenous red pine plantation. Some areas with a few jack pine poles mixed in. Small immature jack pine pocket in north. A few of the take rows get a little narrowOld comments- Stand treatment was mixed up when transferred from IFMAP to MIFI. Stand was thinned under 72-037-11-01 Betty and the Pines. OPIC - FMD: RP plantation, most stems moved into the pole class, a minority just into the saw class, sub-merch stems likely to weed out. Self-pruning to 20-25% crown depth. Dom- & co-dom stems 7-9" DBH and 4-5 sticks tall. Growth in last ten years slow, ~ 1mm/yr. Ready for 3rd-row thin, decent row integrity. Take all JP in adjacent rows also at same time (not much alive). Cut adjacent stand 2 at same time. Pere Cheney KW Management Unit. HCVA, therefore stand condition code 8 applied.
4	42120 - Planted Jack Pine  Canopy Species	Sapling Well  B DBH Age  2 2 14	498.3	14	Immature	N/A		See old comments-Old comments- (OPIC - FMD: Pere Cheney KW Management Unit. HCVA, therefore stand condition code 8 applied. Cut in 2003 (720280101), with J6 vortices left. Trenched and planted to 2-0 JP in May 2005 (FTP W72-492), opposing wave pattern. JP 2-4' tall, occasional skips and gaps in rows, but overall good survivorship & stocking, no pocket mortality except to SW on low ground where there is heavy deciduous regen competition. Steep, short hills not planted. Oak stump sprouts throughout, cherry brush, scattered small JP poles. Used previous SI. See locked comments)
5	6112 - Lowland Aspen  Canopy Species % Cover Size Class	Sapling Medium  B DBH Age	2.5 Sub-Ca	16 Inopy Specie	Immature s Density	N/A Avg. Height	Size	See old comments-Old comments- (OPIC - FMD: Cut in 2003 (720280101), part of larger KW cutting block. On low ground tying into drainage to southeast. TA & cherry regen with lowland brush. Pere
	Quaking Aspen75SaplingBlack Cherry20Sapling	2 16		Alder	Medium		Tall Shrub	



Stand	d Level 4 C	over Type		Size	Den	sity	Acres	Stand Age	BA Range	е	Managed S	ite	General Comments
7	4130 Canopy Species Quaking Aspen	- Aspen % Cover	Size Class Sapling			Poor <b>Age</b> 6	9.6	6	Immature	e	N/A		Dense A3 following harvest with a minor oak component. Old comments- (OPIC - FMD: Stand harvested under contract 72-050-11-01. Old Comment: TA on shallow gradient down to Thayer Creek floodplain. BF large sap/small pole component increases as get closer to the creek. Hypoxylon present; top die-back occuring. Cut to regenerate the aspen. Apply dead & down creation spec. Focus retention along Thayer Creek (Natural River - HCVA - stand condition code 8), note set-back & EMR potential. Few SCWP leave; WP is not seedling in agressively.)
8	42121 - Planted Dec	Jack Pine	, Mixed	Saplin	ıg M	edium	250.6	14	Immature	Э	N/A		Intermittent stream was planted through. Looks like its dry most of the year, but some alder found along edges of it (change in veg slightly
	Canopy Species	% Cover	Size Class	D	вн	Age							visible from IR imagery). Aspen and maple in the south east corner of stand and along the west edge. Old comments- (OPIC - FMD: Pere
Bla	ck/Red (Hybrid) Oak	20	Sapling	4	2								Cheney KW Management Unit. HCVA, therefore stand condition code 8
	Jack Pine	70	Sapling	2	2	14							applied. Cut 2003 (720290101), planted to JP in opposing wave pattern in May '05 (FTP W72-493). JP 2-4' tall, good overall stocking and survivorship, with occassional skips/gaps in rows. Pocket mortality is limited to where there was heavy deciduous regen competion. Short, steep hills unplanted. Oak stump sprouts throughout. Lowest ground (valley to SE) dominated by cherry & aspen. West edge near stand 10 has RM & aspen sprouts. Hill climb erosion near S1/4 corner of sec 4. Used previous SI. See locked comments)
9	122 - Road	d/Parking L	ot	Non	stoc	ked	41.9				No		OPIC - FMD: County road corridors (Chase Bridge, Pere Cheney, Ranch and South Branch Roads).
10	42200 - Nati	ural White I	Pine	Sawtir	mbe	r Well	44.7	123	51-80		N/A		White pine regen is medium coverage in most places. Red maple
	Canopy Species	% Cover	Size Class	D	вн	Age	Sub-Ca	nopy Speci	es Dens	ity	Avg. Height	Size	throughout with pockets of aspen. Oak is present, but heavily browsed.  BA is higher than prescribed due to pine component and is much higher
	White Oak	16	Log/Pole/XL	.og 1	3		Wh	nite Pine	Medi	um	Variable	Sapling	on east side of stand where there was mostly white pine in parent stand.
	White Pine	64	Log/Pole/XL	-		123		d Maple	Hig	h	Variable	Sapling	Legacy pines scattered through stand. Old comments- (Post-harvest update: Was shelterwood cut in 2015 (72-015-12-01) 2"+ except RP, WP
	Red Pine	15	Log/Pole/XL	.og 1	3			oth Aspen	Lov	V	10 - 20 feet	Sapling	& green-marked oak (total residual 30 sq. ft.). Note that the stand
								d (Hybrid) C			< 5 feet	Sapling	canopy updates were just estimates based on the treatment report. Old
								hite Oak	Lov		< 5 feet	Sapling	comments: OPIC - FMD: Decent-quality site for oak (PArVHa/ParVVb), yet there is upper-crown dieback/thinning occurring in the nice-form dom
						L	vvit	ch Hazel	Lov	V	5 - 10 feet	Tall Shrul	& co-dom oak. Suppressed oak poles are dropping out. Occasional BTA & RM saw, but mostly RM in pole clumps. Super-canopy WP & RP, W1-W2 underneath. Manage for a mixed oak/pine type. Leave all WP & RP, cut all RM & aspen, and mark-to-leave oak up to 30 BA total residual (including pine). Don't mark oak to leave within/adjacent to aspen pockets. Small wildfire this spring underburned along SE edge. Borders large KW block. Age matched previous, but updated SI (previous 48).)



Stand	Level 4 Co	ver Type	;	Size Density	Acres	Stand Age	BA Range	Managed S	Site	General Comments	
16	Canopy Species Jack Pine	65	Size Class Pole/Sapling	etimber Mediur  DBH Age 5 40	m 95.6	40	1-50	N/A		Jack pine slit 50/50 between pole and sap size timber. Stand age was averaged. Pole size jack pine around 48 years old, and saps at 28 years old. 2 track that splits stand is impassable with conventional vehicle. Oak component gets heavier in north half.	
Blad	ck/Red (Hybrid) Oak	30	Sapling/Pole	4						Old comments- (OPIC - FMD: Cut in '91 (720189101), all merch stems. JP saps and oak sprouts along with residual from the cut (1-2 stick JP, oak and occasional RP). U/G inclusions with cherry. Averaged to J2 by including the oak saps. Nice mix of JP & healthy oak regen. Pere Cheney KW Management Unit. HCVA, therefore stand condition code 8 applied. Used previous SI)	
17	42220 - Natu	ıral Jack P	ine	Sapling Poor	6.2	28	Immature	N/A		See old comments-Old comments- (OPIC - FMD: Cut in '91	
	Canopy Species	% Cover	Size Class	DBH Age						(720189101), all merch stems. JP saps and oak sprouts scattered across U/G. Averaged to J1 by including all spp saps. Pere Cheney KW	
	Jack Pine	91	Sapling	3 28						Management Unit. HCVA, therefore stand condition code 8 applied. Used stand 16's SI)	
18	6126 - Lowla	ınd Jack P	ine Sa	wtimber Mediun	n 6.6	65	81-110	N/A		Southeast side of stand dominated by balsam fir. Changed age from 58 to 65. Aspen is all in the northwest but, still dominated by jack	
	Canopy Species		Size Class	DBH Age		nopy Species		Avg. Height	Size	pineOld comments- (OPIC - FMD: Narrow strip of JP & TA on mostly	
	Jack Pine	74	Log/Pole	10 65		d (Hybrid) Oa		Variable	Sapling	lower ground, left as buffer along drainage when adjacent uplands were	
	Balsam Fir	12	Pole	7		ick Pine	Low	Variable	Sapling	cut. Most of the older JP is in the snag class; the TA is breaking up. Some L in understory, blue flag iris. Pere Cheney KW Management Unit.	
	Quaking Aspen	10	Pole/Log	9	Blad	ck Cherry	Medium	Variable	Sapling	HCVA, therefore stand condition code 8 applied. See locked comments.)	
19	42110 - Plan			oletimber Well	12.7	44	111-140	N/A		Hilly red pine plantation. Pockets where jack pine dominates and suppressed red pine saps in understory. Opening in the north has very	
	Canopy Species		Size Class	DBH Age		nopy Species		Avg. Height	Size	little ba. Red pine on south side has much higher ba. Ranges from 80-	
	Jack Pine	30	Pole/Log	8	Black/Re	d (Hybrid) Oa	k Low	< 5 feet	Sapling	180 in spots.	
	Red Pine	68	Pole/Log/Sap	7 44						Old comments- (OPIC - FMD: Marginal RP plantation, only makes full stocking level with JP & NPO BA contributions. JP mostly the same size & age class as the RP, filling in where the RP didn't take, except for ~10 BA of overstory overmature JP that was planted around. NPO & overmature JP both have top dieback. Surrounded on two sides by young KW plantation. Pere Cheney KW Management Unit. HCVA, therefore stand condition code 8 applied. Used previous SI.)	
20	4191 - Mixed Upla Coi	nd Decidu	ous with	Sapling Poor	3.7	5	1-50	N/A		Mostly maple and oak regenerated under the red pine.	
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	Old comments- (Was shelterwood harvested by August 2014 (#15-12), cutting 2"+ DBH except green-marked (cruised residual of 30 sq. ft. RP-O	
	Red Pine	20	Log	16 65	Wit	ch Hazel	Low	5 - 10 feet	Tall Shrub	left as designated retention). When making stand updates from the	
Blad	ck/Red (Hybrid) Oak	35	Sapling	1	WI	hite Oak	Low	< 5 feet	Sapling	ing treatment report, did not attempt to split out the percentages in other	
	Red Maple	36	Sapling	1 5				I.		species; just threw it all in the RP, to be updated at re-inventory.)	
21	622 - Low	land Shrub	)	Nonstocked	0.8			No		OPIC - FMD: Small L type rimmed by stand 41. Salix, spirea, with small lens of open water/grasses.	



Stand	Level 4 Co	over Type	•	Size De	nsity	Acres	Stand Age	BA Range	Managed S	ite	General Comments
22	4125 - Blac	k, N. Pin O	ak Pol	letimber	Medium	6.4	38	51-80	N/A		Some residuals left after last harvest. See old comments.Old
	Canopy Species	% Cover	Size Class	DBH	Age						comments- (OPIC - FMD: Cut under same USFS sale as adjacent stand 46, but not planted. Set age to sale date (1981) and used stand 33's oak
	Red Pine	10	Log	15							SI (on same soil series). Resid and regen following cut include short,
	Jack Pine	15	Pole/Log	8							limby RP saw scattered over large sap/small pole oak, JP & RM. Oak in
Blac	k/Red (Hybrid) Oak	70	Pole	7	38						form of stump sprouts but also single stems not great genetics, but young & healthy nice. Pocket RP saw to S end.)
23	42120 - Plar	nted Jack F	Pine	Sapling	Well	27.9	35	1-50	N/A		Very close to being pole size (next yoe probably).Old comments-
	Canopy Species	% Cover	Size Class	DBH	Age						(OPIC - FMD: JP planted in opposing wave pattern when still under USFS ownership. Most stems still not merch, 2-5" DBH, oak stump
Blac	k/Red (Hybrid) Oak	7	Sapling/Pole	4							sprouts. Along NE edge: inclusion of naturally-regenerated JP on short,
	Jack Pine	93	Sapling/Pole	4	35						steep sideslope. Pere Cheney KW Management Unit. HCVA, therefore
											stand condition code 8 applied. Old notes indicate planted in 1984. Used previous SI.)
25	42111 - Planted Deci	Red Pine, iduous	Mixed S	Sawtimbe	er Well	46.0	55	111-140	N/A		Rows are very windy and have never been thinned. See old comments-
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	Old comments- (OPIC - FMD: RP plantation with highly variable stocking due to how it was planted around varying densities of residual NPO, RP,
	Red Pine	75	Log/Pole/XLog	g 10	55	Re	ed Maple	Medium	>20 feet	Sapling	RM, aspen & JP. Some JP appears to have been interplanted also, but
Blac	k/Red (Hybrid) Oak	13	Log	15		Ва	alsam Fir	Trace	Variable	Sapling	has largely died out. Pockets of TA poles. Terrible health/quality NPO.
						WI	hite Pine	Trace	>20 feet	Sapling	Stand has areas of decent RP stocking, primarily along the west side and in the SW, but those areas grade into suppressed/largely failed areas
											that had heavy deciduous competition. No planting records; was USFS property. Cores indicate that the north part of the stand was planted ~5 years before the south part. Set stand age to older RP component. Pere Cheney KW Management Unit. HCVA, therefore stand condition code 8 applied.)
26	4130	- Aspen	S	Sawtimbe	er Well	5.5	57	81-110	N/A		A lot of the oak is dying off. Quite a bit of maple in understory.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	Old comments- (OPIC - FMD: Aspen with RM poles and regen, scattered
	Bigtooth Aspen	88	Log/Pole	10	57	WI	hite Pine	Trace	Variable	Sapling	NPO and RP (more at margins). Bulk of type is within adjacent compt
	Red Maple	7	Pole/Log	8		Wit	tch Hazel	Trace	5 - 10 feet	Tall Shrub	298 stand 106. Manage along with that stand during compt 298's next YOE (2015). Used stand 106's SI. Pere Cheney KW Management Unit.
						Re	ed Maple	Medium	>20 feet	Sapling	HCVA, therefore stand condition code 8 applied)



MICHIGAN	General Comments	ite	Managed S	A Range	tand Age B	Acres S	e Density	Siz	over Type	d Level 4 Co	Stand
	Stand is moderately stocked. Skid trails, landing, and west		N/A	mmature	6 I	68.1	ing Medium	n Sap	vland Aspe	6112 - Low	27
	are pretty open. White and red pine residuals add some ni structure.Old comments- (OPIC - FMD: TA moving into the		Avg. Height	Density	py Species	Sub-Canc	DBH Age	Size Class	% Cover	Canopy Species	
ne Thayer	on ground close to the water table. Lowest ground near th	Tall Shrub	5 - 10 feet	Low	der	Al	1 6	Sapling	87	Quaking Aspen	(
ne SE, seeding son? fern, Dirca pressed aspen spen stems. 2" DBH & up. e drainage side s an average ack for Thayer HCVA. DBH & up	Creek floodplain experiences a seasonally high water table dense balsam fir. A strip of fading SC WP & RP toward the invery little. Rich herbaceous layer, sensitive and cinnaming palustris. Woodcock. Individual stem mortality as the suppersonant of the part of the part of the supersonant of the su										
	See old comments- Old comments- (OPIC - FMD: Pere Cl		N/A	mmature	14 I	25.3	pling Well	ine Sa	nted Jack P	42120 - Plan	28
	Management Unit. HCVA, therefore stand condition code 8 in 2003 (720280101). Trenched and planted to 2-0 JP in M						DBH Age	Size Class	% Cover	Canopy Species	
l skips and	W72-492), opposing wave pattern. JP 2-4' tall, occasional						2 14	Sapling	86	Jack Pine	
	gaps in rows. Areas with dense cherry and oak sprout reg						2	Sapling	10	ack/Red (Hybrid) Oak	Blac
	on lower ground grading down toward the drainage. Two-a of U/G at the far west end, cut but not planted. Used stand locked comments.)										
	Cherry is heavier in north half; see old comments.Old com		N/A	mmature	14 I	9.6	pling Well	ine Sa	nted Jack P	42120 - Plan	29
	(OPIC - FMD: Cut in 2002 (720300101), planted to JP in M C72-500), but not in opposing wave pattern. JP 2-5' tall, g						DBH Age	Size Class	% Cover	Canopy Species	
	stocking. Cherry brush. Half-acre inclusion of G with brus						3 14	Sapling	90	Jack Pine	
	corner. Used previous SI. See locked comments.)						3	Sapling	10	Black Cherry	



Stand Level 4 C	over Type		Size Der	nsity	Acres Stand Age I	BA Range	Managed \$	Site	General Comments
<b>30</b> 4125 - Blac	k, N. Pin O	ak	Sapling	Poor	21.4 6	Immature	N/A		Oak and jack pine seem to be filling in. Heavy browse, but a lot of oak is
Canopy Species	% Cover	Size Class	DBH	Age					getting over 6 feet now. Most of the jack pine regen is 1-3 feet now. Most of residuals have died. Some sub merch oak and jack pine protected
Jack Pine	7	Sapling	1						during harvest are getting pole sized. Some gaps with lower density
Black/Red (Hybrid) Oak	88	Sapling	1	6					trees, but overall the stand looks poor to moderately stocked now. I
									anticipate more of the oak getting out of browse height by next YOE. Jack pine should take up a more significant portion of the canopy next YOE as well. Stand looks like O1 now, but should be O2 in 10 years.
									Old comments- (OPIC - FMD: Stand harvested under contract 72-012-11-01. Less than 5 BA of oak and pine were left as residual. Old Comment: Overmature JP stand that has been working its way onto the ground. Terrible health NPO doing the same. Pockets of nice oak saps, some JP saps, but not O2 overall. Stand occupies triangle of higher ground bounded by Pere Cheney, Chase Br. Rds and a powerline. Some vigorous small oak poles. Salvage cut the merch JP, and oak greater than 8" DBH. Leave any RP/WP and delineate three 0.2-acre retention islands in each corner. The regen goal is a mix of oak & pine. If the follow-up regen survey finds that the combination of oak & pine regen is inadequate, then plant JP. Old notes indicate that a sale was awarded in 1981 but no cut was accomplished (USFS property at the time). Pere Cheney KW Management Unit. HCVA, therefore stand condition code 8 applied. Used previous SI.)
	ne, Oak Mix		awtimber			81-110	N/A		Stand is designated as long-term retention. Jack pine dominates canopy now but, will likely convert to oak pine in the next 10-20 years. Significant
Canopy Species		Size Class	DBH	Age	Sub-Canopy Species		Avg. Height	Size	mortality occuring with jack pine and larger oaks. Good recruitment of
Red Pine	10	Pole/Log	9		White Oak	Medium	Variable	Sapling	understory in mortality pockets. Changed jack pine age from 73 to 63.Old comments- (OPIC - FMD: Pere Cheney KW Management Unit.
Black/Red (Hybrid) Oak		Log	14		Black/Red (Hybrid) Oak		Variable	Sapling	HCVA, therefore stand condition code 8 applied. JP planted around
Jack Pine	45	Pole/Log	8	63	White Pine	Low	Variable	Sapling	scattered older resid JP, RP & NPO. Some younger oak poles. O1-O2
					Red Pine	Low	Variable	Sapling	in large saps, scattered RP regen. RP concentratied along Pere Cheney
									Rd. Used previous SI. This stand and stand 35 were left for visual by the USFS when the rest of the type (stand 46) was cut and planted. Leave these two stands to maintain the ecological and visual values associated with in-stand retention.)
<b>32</b> 4139 - Aspen,	Mixed Deci	duous	Sapling	Well	19.3 5	Immature	N/A		Nice A3 stand. Roughly 3 acres towards the middle of stand is heavily
Canopy Species	% Cover	Size Class	DBH	Age	Sub-Canopy Species	Density	Avg. Height	Size	browsed oak and 25-50% canopy cover. Lots of witch hazel sprouts as well.Old comments- (A-RM-O stand was final harvested 2"+ DBH by
Bigtooth Aspen	50	Sapling	1	5	Witch Hazel	Medium	5 - 10 feet	Tall Shrub	August 2014 (#15-12). Passed to aspen M.O. at time of closing
Red Maple	35	Sapling	1						inspection. There is RM-O regen present, but when making stand
Black/Red (Hybrid) Oak	12	Sapling	1						updates from the treatment report, did not attempt to split out the percentages in those species; just threw it all in the aspen, to be updated at re-inventory.)

Grayling Mgt. Unit



Stanc	Level 4 Co	over Type		Size	Den	sity	Acres	Stand Age E	BA Range	Managed S	Site	General Comments
33	4199 - Other Mixe	d Upland D	eciduous	Sawt	imbe	r Well	10.1	99	111-140	N/A		Decent quality red and white oak with a good sub-canopy of white pine in
	Canopy Species	% Cover	Size Class		рвн	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	medium to high density throughout. X-log size oak and red pine scattered through stand. Stand is located on an east facing slope.
	Red Maple	29	Pole		7		Wh	nite Pine	Medium	>20 feet	Sapling	
	White Oak	35	Log/Pole/XLo	og	11	99	WI	nite Oak	Low	< 5 feet	Sapling	Old comments- (OPIC - FMD: Wolfy RO & WO (many WL dream homes)
	Bigtooth Aspen	12	Pole/Log		9		Wit	ch Hazel	Low	5 - 10 feet	Tall Shrub	with smaller oak saw, suppressed oak poles, a scattereing of BTA, some SCRP and planted RP (old mostly-barren plow furrows to S), RM pole
	Red Oak	22	Log/Pole/XLo	og	14							clumps. Grades into adjacent A & R types to E. Leave until next YOE to
												balance adjacent harvests proposed this YOE (stands 10, 20, 32 & 34). Used previous SI.)
34	4125 - Blac					Poor	9.4	5	1-50	N/A		Poorly stocked oak due to heavy browse. If some more of the oak recruits, stand could get to O2 next yoe. White oak regen is decent, but
	Canopy Species		Size Class			Age						most of it is 1-2' tall and can't be counted as acceptable regen yet.
Bla	ck/Red (Hybrid) Oak	78	Sapling		1	5						
												Old comments- (Overstory removal harvest was completed August 2014 (#15-12), cutting all stems except green-marked (RP & JP were marked to leave in clumps to meet 5% crown closure for retention).)
35	42220 - Nati					Mediur		96	81-110	N/A		Quite a bit of jack pine mortality starting. Would anticipate stand converting to more oak/red pine next yoe. Old comments- (OPIC -
	Canopy Species		Size Class		DBH			nopy Species		Avg. Height	Size	FMD: Pere Cheney KW Management Unit. HCVA, therefore stand
	Jack Pine	60	Log/Pole		10	96		ed Pine	Low	>20 feet	Sapling	condition code 8 applied. Mixed JP, RP, NPO stand. Oldest JP
	Red Pine	25	Pole/Log		8			nite Pine	Trace	10 - 20 feet	Sapling	declining, scattered RP of all size classes. Healthy Ig sap/small pole oak. JP, RP & NPO saps combined constitute the "O2". Used previous
Bla	ck/Red (Hybrid) Oak	15	Pole/Log		8		Black/Re	d (Hybrid) Oak	Low	Variable	Sapling	SI. Gravel pad with electrical boxes off Pere Cheney Rd. This stand and
												stand 31 were left for visual by the USFS when the rest of the type (stand 46) was cut and planted. Leave these two stands to maintain the ecological and visual values associated with in-stand retention.)
36	42220 - Nati	ural Jack P	ine			r Well	25.7	54	1-50	N/A		Stand is similar to stand 16. Residuals excluded from harvest are pole size with younger jack pine and oak saplings filling in between.
	Canopy Species		Size Class		DBH	Age		nopy Species		Avg. Height	Size	
Bla	ck/Red (Hybrid) Oak	20	Pole		7			d (Hybrid) Oak	Medium	5 - 10 feet	Sapling	Old comments- (OPIC - FMD: Cut in '93 (720129101), merch stems.
	Jack Pine	77	Pole/Sapling	ıg	6	54	Wh	nite Pine	Trace	5 - 10 feet	Sapling	Roughly 20 BA in JP pole resid from cut (scattered and in pockets) over good JP and oak natural regen. Also scattered RP and small NPO resid
												from cut. Inclusion: 2 acres of uncut JP left along Chase Br. Rd. Updated year of origin, but used prev SI since current was not representative. Pere Cheney KW Management Unit. HCVA, therefore stand condition code 8 applied.)
37		ack Spruce					m 11.7	74	51-80	N/A		Numerous openings filled with alder through stand. Regen is very sparce through stand. East side of stand is denser canopy with more
	Canopy Species		Size Class		DBH			nopy Species		Avg. Height	Size	poles.OPIC - FMD: Black spruce swamp over tag alder on primarily
	Black Spruce	90	Log/Pole		10	74		Alder	High	5 - 10 feet	Tall Shrub	-pringram grama ration = - prince, imga rapa, amam ram, ar rational
					-			marack ck Spruce	Trace	5 - 10 feet Variable	Sapling Sapling	tamarack small saw, listed in order of prevalence. Stand on slightly "drier" low ground, but not as well-developed as adjacent stand 38.



Stand	Level 4 C	Level 4 Cover Type Size Density Acres Stand Age BA Range Managed		Site	General Comments						
38	6124 - Lowla	and Spruce	e-Fir Sa	awtimb	er Well	13.5	48	51-80	N/A		Was PU 2 of Thayer Creek Mix, but was not cut due to inoperable conditions (too wet), pocket of cedar dominates canopy in middle of
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	stand.Old Comments- (OPIC - FMD: Tamarack, Black spruce, balsam
	Tamarack	25	Log	12	97	Ta	amarack	Trace	Variable	Sapling	fir & NWC over F2/S2 on sphagnum mat. NWC short, not saw-quality.
	Balsam Fir	33	Pole/Sapling	6	48	Blad	ck Spruce	Trace	Variable	Sapling	Poor-quality tamarack small saw, BS & BF poles & saps. Tam saw older
No	rthern White Cedar	15	Log/Pole	11			Alder	Medium	5 - 10 feet	Tall Shrub	than the BS, one cored 105+. Cut all stems 5" DBH and up, except leave all northern white cedar. Note EMR potential.)
	Black Spruce	25	Pole	7							
39	500 -	·Water		Nonsto	cked	9.3			No		OPIC - FMD: Beaver-flooded portion of Thayer Creek drainage. Lodge. Open water, snags, marsh grass. Beaver dam at E end. HCVA - Natural River.
40	4130	- Aspen	S	awtimb	er Well	11.3	64	111-140	N/A		Aspen is getting over mature and seeing mortality. Nice white pine in the
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	understory towards the west side. Some x-log size red pine present as well.Old comments- (OPIC - FMD: TA & RM on high, grading to low,
	Bigtooth Aspen	85	Log/Pole	10	64	WI	hite Pine	Low	10 - 20 feet	Sapling	ground. On low ground circa stands 21 & 41, there is less aspen and
						Black/Re	d (Hybrid) Oak	c Low	Variable	Sapling	more JP, paper birch, Black spruce and WP. On the higher ground,
						R	ed Pine	Trace	5 - 10 feet	Sapling	there is oak and RP mixed in. Open/sparse areas common between clones. Decline beginning to occur, but hold this stand for 4 years while
						Re	ed Maple	Low	>20 feet	Sapling	the proposed aspen cut across the road (stand 27) is regenerating, then
						Hawt	horn (spp.)	Low	5 - 10 feet	Tall Shrub	cut with adjacent aspen types in Compt 298 (stands 106 & 107), 2015
							Alder	Low	5 - 10 feet	Tall Shrub	YOE. Used previous SI.)
						Ва	lsam Fir	Low	>20 feet	Sapling	
41		irch			/ledium	3.0	28	Immature	N/A		Variable mix of species with some open alder in places. Old comments- (OPIC - FMD: Cut in '91 (720189101). On low and lower ground. Mounds have RM, PB, TA, WP, JP & NPO saps. Lowest
	Canopy Species		Size Class		Age		nopy Species		Avg. Height	Size	ground has L, blue flag iris, standing water. Cresent of A3 along SW
	White Pine	25	Sapling/Pole	4			Alder	Medium	5 - 10 feet	Tall Shrub	edge. Tough to pin covertype on; E the closest. Used stand 40's SI.)
	Balsam Fir	20	Sapling/Pole	4		Hawt	horn (spp.)	Trace	5 - 10 feet	Tall Shrub	
Bla	ck/Red (Hybrid) Oak	13	Sapling	3							
42	6124 - Lowla	and Spruce	e-Fir Po	oletimb	er Poor	18.6	40	1-50	N/A		Pole size balsam fir dominates canopy, but stand has balsam poplar and
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size	tamarack that are getting saw sized. Poplar is mostly along the south side of stand and has higher ba Old comments- (OPIC - FMD: Tag
	Balsam Poplar	22	Pole/Log	8			Alder	High	5 - 10 feet	Tall Shrub	alder jungle on saturated soils, sphagnum moss, ferns, with low-density
	Tamarack	25	Log	10				'			small pole BF, BS, Tam, TA & Bam filling in. "Drier" to N, but still spongy
	Balsam Fir	35	Pole/Sapling	6	40						ground, blue flag iris.)
	Black Spruce	15	Pole	7							
43	42120 - Plar	nted Jack F	Pine Sa	apling N	/ledium	3.1	14	Immature	N/A		See old comments- Old comments- (OPIC - FMD: Cut in '02
	Canopy Species	% Cover	Size Class	DBH	Age						(720300101) merch stems except green-marked trees. Planted to JP (FTP C72-500) in May '05. In addition to the planted JP, there are oak
Blac	ck/Red (Hybrid) Oak	7	Sapling/Pole	3							stump sprouts. Rest of harvest area unplanted and split off as stand 71.
	Jack Pine	86	Sapling	2	14						Used previous SI. Pere Cheney KW Management Unit. HCVA, therefore stand condition code 8 applied.)



Stand	Level 4 Co	over Type	:	Size De	nsity	Acres	Stand Age	BA Ra	inge	Managed Si	ite	General Comments
44	42260 - Natural Pir	ne, Mixed D	eciduous Sa	wtimber	Medium	3.8	61	81-1	110	N/A		Stand disposal approved through 2021 YOE compartment review.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Car	opy Specie	es De	ensity	Avg. Height	Size	White pine heavier towards east. Oak is poor quality and dieing. Old comments- (OPIC - FMD: Small parcel in platted subdivision, aquired
	Jack Pine	57	Log/Pole	10	61	Wh	ite Pine	M	ledium	Variable	Sapling	through 1989 land exchange. Previous notes indicate that if it will be held
Bla	ck/Red (Hybrid) Oak	25	Log/XLog	16		Wh	ite Oak		Low	10 - 20 feet	Sapling	for exchanging in the future, do not harvest. Pere Cheney KW
	White Pine	10	Pole	8		Black/Red	d (Hybrid) Oa	ak	Low	>20 feet	Sapling	Management Unit. HCVA, therefore stand condition code 8 applied.)
		, ,				Bal	sam Fir	-	Trace	Variable	Sapling	
45	42121 - Planted Deci	Jack Pine, duous	Mixed	Sapling	Well	22.6	14	Imma	ature	N/A		Most of the jack pine is 10-20' tall. Some cherry dominated parts of stand in the mid/south portion of stand. Oak saps spread pretty evenly through
	Canopy Species	% Cover	Size Class	DBH	Age							stand. Mature oak and pine residuals scattered through stand are providing structural diversity and mast. Old comments- (OPIC - FMD:
	Black Cherry	10	Sapling/Pole									Cut in 2002 (720300101) merch stems minus green-marked trees.
Bla	ck/Red (Hybrid) Oak	15	Sapling	2								Planted to JP in May 2005 (FTP C72-500), not in opposing wave pattern.
	Jack Pine	75	Sapling	2	14							Overall good survivorship/stocking. Used previous SI. Note that tree line
												along the west side is not the property line; cleared area extends west onto private. Pere Cheney KW Management Unit. HCVA, therefore stand condition code 8 applied.)
46	42120 - Plan	ted Jack P	ine	Sapling	Well	192.7	35	1-5	50	N/A		A few stems getting into 6" class, but most are around 4". Old
	Canopy Species	% Cover	Size Class	DBH	Age							comments- (OPIC - FMD: JP planted in opposing wave pattern, 2-5" DBH, most stems still unmerchantable. Used previous SI. Old notes
	Jack Pine	91	Sapling/Pole	4	35							indicate planted in 1984. Cut & planted when still USFS property. Pere
Blac	ck/Red (Hybrid) Oak	7	Sapling/Pole	4								Cheney KW Management Unit. HCVA, therefore stand condition code 8 applied.)
48	622 - Low	land Shrub		Nonsto	cked	2.5				No		A few white pine, aspen, maple, spruce and fir scattered through standOld comment- (OPIC - FMD: Tag alder, salix & spirea on hummocky low ground, saturated soils. Blue flag iris. Rimmed by black spruce.)
49	622 - Low	rland Shrub	)	Nonsto	cked	3.9				No		OPIC - FMD: Marsh downstream of stand 39's beaver dam. Emergent grasses, salix, alnus, spirea, snags, blue flag iris. Thayer Creek, HCVA - Natural River.
50	4310 - Pir	ne, Oak Mix	c P	oletimb	er Poor	20.2	49	1-5	50	N/A		Low stocked stand with sub merch and merch jack pine and oak through
	Canopy Species	% Cover	Size Class	DBH	Age							most. Quaking aspen in south east. Open cherry brush in valley towards the south. Grassy understory.
	Jack Pine	48	Pole	7	49							ino souin. Orassy uniucisiory.
Bla	ck/Red (Hybrid) Oak	30	Pole/Sapling	6								Old comments- (OPIC - FMD: Cut in '92 (720549101) merch stems.
	Black Cherry	10	Sapling	3								Scattered JP poles and RP resid from cut, pocket TA on E side. Patchy
	Quaking Aspen	10	Pole/Sapling									JP, oak and TA saps, less than poor stocking overall. Updated age, but used previous SI (current on open-grown JP not representative). Pere Cheney KW Management Unit. HCVA, therefore stand condition code 8 applied.)



Stand	d Level 4 Co	over Type		Size Densi	·y /·	cres					General Comments		
51	42290 - Natu	ral Mixed P	ine Sav	vtimber Me	dium ′	18.0	50	81-110	N/A		Collected some quantitative data with stand due to the high variability		
	Canopy Species	% Cover	Size Class	DBH Ag	je Si	ub-Can	nopy Species	Density	Avg. Height	Size	throughout stand. See old comments- Old comments- (OPIC - FMD: Mixed pine/oak/aspen stand. Residual and regen from 1984 USFS cut:		
	Jack Pine	15	Pole	8	Bla	ck/Rec	d (Hybrid) Oak	Low	Variable	Sapling	About equal parts short, limby WP, RP, JP, Oak, TA, & RM over nice		
	Red Maple	6	Pole	7						•	saps, JP, aspen & RM saps. O2 is a combination of all species. WP		
	Black Spruce	16	Pole	7							nearly all weeviled. Inclusion: 2 acres of black spruce swamp along east side. Current WP SI unrepresentative, so updated age to older		
	White Pine	23	Log/Pole	11							component, but used original USFS SI. See locked comments.)		
	Red Pine	25	Log	12 50	0								
52	4130 -	- Aspen	Po	oletimber V	Vell ′	18.0	28	51-80	N/A		Stand looks like it was planted jack pine prior to last harvest (furrows still		
	Canopy Species	% Cover	Size Class	DBH Ag	je						evident).Okd comments- (OPIC - FMD: Cut in '91 (720149101). TA regen with oak, RM and JP mixed in. Lower ground to S & E along		
	Quaking Aspen	80	Pole/Sapling	6 2							private. Previous notes: SURVEY LINE FROM STAND 52 TO 51 (AEF		
	Red Maple	15	Pole/Sapling	6							TRAV.PT.))		
53	4112 - Maple, Asso	Beech, Ch	erry Pole	etimber Me	edium 4	47.1	60	51-80	N/A		Stand is pure red maple through most of stand. Residual aspen usually in pockets is over-mature and seeing mortality. Previous inventory had		
	Canopy Species	% Cover	Size Class	DBH Ag	je Si	ub-Car	nopy Species	Density	Avg. Height	Size	called stand multi-aged however, there is no longer enough of the 80 year old trees left to have its own age class. South side of stand along		
	Quaking Aspen	10	Log/Pole	10			d Maple	High	Variable	Sapling	stand 68 contains more mature trees. A few super canopy pines left in		
	Red Maple	82	Pole/Log	9 60	2						stand.		
	Red Maple	02	1 Olo/Log	9 0	0						Old comments- (OPIC - FMD: Salvage cut in '95 (720509401), dead oak,		
54	6112 - Low		Ţ,	oletimber V		34.7	27	51-80	N/A		Old comments- (OPIC - FMD: Salvage cut in '95 (720509401), dead oak, aspen 8" and up. Some surviving poor-quality NPO left, and individual TA stems.)  Assessed stand in winter, so was difficult to tell upland from lowland		
54			n Po		Vell 3		27 nopy Species		N/A Avg. Height	Size	Old comments- (OPIC - FMD: Salvage cut in '95 (720509401), dead oak, aspen 8" and up. Some surviving poor-quality NPO left, and individual TA stems.)  Assessed stand in winter, so was difficult to tell upland from lowland areas in places. In addition to list below, hawthorn and a few elm trees		
54	6112 - Low	vland Asper	n Po	oletimber V	Vell 3	ub-Can				<b>Size</b> Sapling	Old comments- (OPIC - FMD: Salvage cut in '95 (720509401), dead oak, aspen 8" and up. Some surviving poor-quality NPO left, and individual TA stems.)  Assessed stand in winter, so was difficult to tell upland from lowland areas in places. In addition to list below, hawthorn and a few elm trees found in stand. Bald eagle spotted in south east part of stand adjacent to Thayer Creek (no nest seen in area).Old comments- (OPIC - FMD:		
54	6112 - Low	vland Asper	n Po	oletimber V DBH Aç	Vell 3	u <b>b-Ca</b> n Bal	nopy Species	Density	Avg. Height		Old comments- (OPIC - FMD: Salvage cut in '95 (720509401), dead oak, aspen 8" and up. Some surviving poor-quality NPO left, and individual TA stems.)  Assessed stand in winter, so was difficult to tell upland from lowland areas in places. In addition to list below, hawthorn and a few elm trees found in stand. Bald eagle spotted in south east part of stand adjacent to Thayer Creek (no nest seen in area).Old comments- (OPIC - FMD: Cut in '91 (720199102). TA on site close to the water table, areas		
54	6112 - Low Canopy Species Quaking Aspen	vland Asper	n Po	Dletimber V  DBH Aç  6 2	Vell 3	u <b>b-Ca</b> n Bal:	nopy Species sam Fir	Density Low Medium	Avg. Height Variable	Sapling	Old comments- (OPIC - FMD: Salvage cut in '95 (720509401), dead oak, aspen 8" and up. Some surviving poor-quality NPO left, and individual TA stems.)  Assessed stand in winter, so was difficult to tell upland from lowland areas in places. In addition to list below, hawthorn and a few elm trees found in stand. Bald eagle spotted in south east part of stand adjacent to Thayer Creek (no nest seen in area).Old comments- (OPIC - FMD: Cut in '91 (720199102). TA on site close to the water table, areas seasonally wet. Rich herbaceous & shrub layers. Minority of stems just		
54	6112 - Low Canopy Species Quaking Aspen	vland Asper	n Po	Dletimber V  DBH Aç  6 2	Vell 3	u <b>b-Ca</b> n Bal:	nopy Species sam Fir Alder	Density Low Medium	Avg. Height Variable 5 - 10 feet	Sapling Tall Shrub	Old comments- (OPIC - FMD: Salvage cut in '95 (720509401), dead oak, aspen 8" and up. Some surviving poor-quality NPO left, and individual TA stems.)  Assessed stand in winter, so was difficult to tell upland from lowland areas in places. In addition to list below, hawthorn and a few elm trees found in stand. Bald eagle spotted in south east part of stand adjacent to Thayer Creek (no nest seen in area).Old comments- (OPIC - FMD: Cut in '91 (720199102). TA on site close to the water table, areas		
54	6112 - Low Canopy Species Quaking Aspen	wland Asper % Cover 84 10	n Po Size Class Pole/Sapling Sapling/Pole	Dletimber V  DBH Aç  6 2	Vell (	u <b>b-Ca</b> n Bal:	nopy Species sam Fir Alder d (Hybrid) Oak	Density Low Medium	Avg. Height Variable 5 - 10 feet	Sapling Tall Shrub	Old comments- (OPIC - FMD: Salvage cut in '95 (720509401), dead oak, aspen 8" and up. Some surviving poor-quality NPO left, and individual TA stems.)  Assessed stand in winter, so was difficult to tell upland from lowland areas in places. In addition to list below, hawthorn and a few elm trees found in stand. Bald eagle spotted in south east part of stand adjacent to Thayer Creek (no nest seen in area).Old comments- (OPIC - FMD: Cut in '91 (720199102). TA on site close to the water table, areas seasonally wet. Rich herbaceous & shrub layers. Minority of stems just into pole class. Former logging access road wet in spots, grown over, extends to near Thayer Creek. Sensitive fern, cornus, alnus, horsetail, Dirca palustris. Some beaver cutting near creek. AFO type within stand's east 1/3. Used previous SI. East edge within Natural Rivers zone of Thayer Creek (HCVA, stand conditon code 8).)		
	6112 - Low Canopy Species Quaking Aspen Balsam Fir	vland Asper	n Po Size Class Pole/Sapling Sapling/Pole	DIETIMBER V  DBH Ag  6 2	Vell 3	Bal:  Aack/Rec	nopy Species sam Fir Alder d (Hybrid) Oak	Density Low Medium Trace	Avg. Height Variable 5 - 10 feet 5 - 10 feet	Sapling Tall Shrub	Old comments- (OPIC - FMD: Salvage cut in '95 (720509401), dead oak, aspen 8" and up. Some surviving poor-quality NPO left, and individual TA stems.)  Assessed stand in winter, so was difficult to tell upland from lowland areas in places. In addition to list below, hawthorn and a few elm trees found in stand. Bald eagle spotted in south east part of stand adjacent to Thayer Creek (no nest seen in area).Old comments- (OPIC - FMD: Cut in '91 (720199102). TA on site close to the water table, areas seasonally wet. Rich herbaceous & shrub layers. Minority of stems just into pole class. Former logging access road wet in spots, grown over, extends to near Thayer Creek. Sensitive fern, cornus, alnus, horsetail, Dirca palustris. Some beaver cutting near creek. AFO type within stand's east 1/3. Used previous SI. East edge within Natural Rivers zone of Thayer Creek (HCVA, stand conditon code 8).)  Full stocking on the higher ground, but the lower ground is poorly stocked. There are small clumps of aspen and alder in the lower ground.		
	6112 - Low Canopy Species Quaking Aspen Balsam Fir	vland Asper	Size Class Pole/Sapling Sapling/Pole	Dletimber V  DBH Ag  6 2  4	Vell 3 ge Si 7 Bla or Si ge Si 8 Si 9	ub-Can Ball Anck/Rec	nopy Species sam Fir Alder d (Hybrid) Oak	Density Low Medium Trace	Avg. Height Variable 5 - 10 feet 5 - 10 feet N/A	Sapling Tall Shrub Sapling	Old comments- (OPIC - FMD: Salvage cut in '95 (720509401), dead oak, aspen 8" and up. Some surviving poor-quality NPO left, and individual TA stems.)  Assessed stand in winter, so was difficult to tell upland from lowland areas in places. In addition to list below, hawthorn and a few elm trees found in stand. Bald eagle spotted in south east part of stand adjacent to Thayer Creek (no nest seen in area). Old comments- (OPIC - FMD: Cut in '91 (720199102). TA on site close to the water table, areas seasonally wet. Rich herbaceous & shrub layers. Minority of stems just into pole class. Former logging access road wet in spots, grown over, extends to near Thayer Creek. Sensitive fern, cornus, alnus, horsetail, Dirca palustris. Some beaver cutting near creek. AFO type within stand's east 1/3. Used previous SI. East edge within Natural Rivers zone of Thayer Creek (HCVA, stand conditon code 8).)		
	6112 - Low Canopy Species Quaking Aspen Balsam Fir  6112 - Low Canopy Species Quaking Aspen 4191 - Mixed Upla	vland Asper  84  10  vland Asper  vland Asper  97  and Deciduonifer	Size Class Pole/Sapling Sapling/Pole  Size Class Sapling  Suze Class Sapling	Dietimber V  DBH Ag  6 2' 4  Sapling Po  DBH Ag  1 6	Vell 3  Je Si 7  Bla  or Si ge Si ge Si ge Si ge Si ge Si	ub-Can Ball Anck/Rec	nopy Species sam Fir Alder d (Hybrid) Oak  6 nopy Species Alder	Low Medium Trace  Immature  Density	Avg. Height Variable 5 - 10 feet 5 - 10 feet N/A Avg. Height	Sapling Tall Shrub Sapling	Old comments- (OPIC - FMD: Salvage cut in '95 (720509401), dead oak, aspen 8" and up. Some surviving poor-quality NPO left, and individual TA stems.)  Assessed stand in winter, so was difficult to tell upland from lowland areas in places. In addition to list below, hawthorn and a few elm trees found in stand. Bald eagle spotted in south east part of stand adjacent to Thayer Creek (no nest seen in area).Old comments- (OPIC - FMD: Cut in '91 (720199102). TA on site close to the water table, areas seasonally wet. Rich herbaceous & shrub layers. Minority of stems just into pole class. Former logging access road wet in spots, grown over, extends to near Thayer Creek. Sensitive fern, cornus, alnus, horsetail, Dirca palustris. Some beaver cutting near creek. AFO type within stand's east 1/3. Used previous SI. East edge within Natural Rivers zone of Thayer Creek (HCVA, stand condition code 8).)  Full stocking on the higher ground, but the lower ground is poorly stocked. There are small clumps of aspen and alder in the lower ground. Stand harvested in summer of 2013 under contract 72-046-11-01. Recommend accepting this stand as moderately stocked with openings.  Really variable species mix with pockets of fir and pockets of apsen and jp/oak in between. Old comments- (OPIC - FMD: Cut in 2004		
55	6112 - Low Canopy Species Quaking Aspen Balsam Fir  6112 - Low Canopy Species Quaking Aspen 4191 - Mixed Upla	vland Asper  84  10  vland Asper  vland Asper  97  and Deciduonifer	Size Class Pole/Sapling Sapling/Pole  Size Class Sapling	Dietimber V  DBH Ag  6 2  4  Sapling Po  DBH Ag  1 6	Vell 3  Je Si 7  Bla  or Si ge Si ge Si ge Si ge Si ge Si	Bals Ack/Rec	nopy Species sam Fir Alder d (Hybrid) Oak  6 nopy Species	Density  Low  Medium  Trace  Immature  Density  Low	Avg. Height Variable 5 - 10 feet 5 - 10 feet N/A Avg. Height 5 - 10 feet	Sapling Tall Shrub Sapling	Old comments- (OPIC - FMD: Salvage cut in '95 (720509401), dead oak, aspen 8" and up. Some surviving poor-quality NPO left, and individual TA stems.)  Assessed stand in winter, so was difficult to tell upland from lowland areas in places. In addition to list below, hawthorn and a few elm trees found in stand. Bald eagle spotted in south east part of stand adjacent to Thayer Creek (no nest seen in area).Old comments- (OPIC - FMD: Cut in '91 (720199102). TA on site close to the water table, areas seasonally wet. Rich herbaceous & shrub layers. Minority of stems just into pole class. Former logging access road wet in spots, grown over, extends to near Thayer Creek. Sensitive fern, cornus, alnus, horsetail, Dirca palustris. Some beaver cutting near creek. AFO type within stand's east 1/3. Used previous SI. East edge within Natural Rivers zone of Thayer Creek (HCVA, stand conditon code 8).)  Full stocking on the higher ground, but the lower ground is poorly stocked. There are small clumps of aspen and alder in the lower ground. Stand harvested in summer of 2013 under contract 72-046-11-01. Recommend accepting this stand as moderately stocked with openings.  Really variable species mix with pockets of fir and pockets of apsen and jp/oak in between. Old comments- (OPIC - FMD: Cut in 2004 (720310101) merch except green-marked oak. Was an old JP		
55	Canopy Species Quaking Aspen Balsam Fir  6112 - Low Canopy Species Quaking Aspen  4191 - Mixed Upla Coo Canopy Species Balsam Fir	vland Asper  84  10  vland Asper  vland Asper  97  and Deciduonifer	Size Class Pole/Sapling Sapling/Pole  Size Class Sapling  Suze Class Sapling	Dietimber V  DBH Ag  6 2' 4  Sapling Po  DBH Ag  1 6	Vell 3  Je Si 7  Bla  or Si ge Si ge Si ge Si ge Si ge Si	Bals Ack/Rec	nopy Species sam Fir Alder d (Hybrid) Oak  6 nopy Species	Density  Low  Medium  Trace  Immature  Density  Low	Avg. Height Variable 5 - 10 feet 5 - 10 feet N/A Avg. Height 5 - 10 feet	Sapling Tall Shrub Sapling	Old comments- (OPIC - FMD: Salvage cut in '95 (720509401), dead oak, aspen 8" and up. Some surviving poor-quality NPO left, and individual TA stems.)  Assessed stand in winter, so was difficult to tell upland from lowland areas in places. In addition to list below, hawthorn and a few elm trees found in stand. Bald eagle spotted in south east part of stand adjacent to Thayer Creek (no nest seen in area).Old comments- (OPIC - FMD: Cut in '91 (720199102). TA on site close to the water table, areas seasonally wet. Rich herbaceous & shrub layers. Minority of stems just into pole class. Former logging access road wet in spots, grown over, extends to near Thayer Creek. Sensitive fern, cornus, alnus, horsetail, Dirca palustris. Some beaver cutting near creek. AFO type within stand's east 1/3. Used previous SI. East edge within Natural Rivers zone of Thayer Creek (HCVA, stand conditon code 8).)  Full stocking on the higher ground, but the lower ground is poorly stocked. There are small clumps of aspen and alder in the lower ground. Stand harvested in summer of 2013 under contract 72-046-11-01. Recommend accepting this stand as moderately stocked with openings.  Really variable species mix with pockets of fir and pockets of apsen and jp/oak in between. Old comments- (OPIC - FMD: Cut in 2004 (720310101) merch except green-marked oak. Was an old JP plantation. Residual large sap/small pole BF, RM & oak over aspen, RM, oak, cherry and JP regen. A2 in a combination of all species. Some nice		
55	Canopy Species Quaking Aspen Balsam Fir  6112 - Low Canopy Species Quaking Aspen  4191 - Mixed Upla Cor Canopy Species	vland Asper  84  10  vland Asper  97  and Deciduo  nifer  % Cover	Size Class Pole/Sapling Sapling/Pole  Size Class Sapling  Dus with Sa Size Class	Sapling Po  DBH Ag  Againg Med  DBH Ag	Vell 3  Je Si 7 Bla  or Si ge Si ge Si ge Si ge Si ge Si	Bals Ack/Rec	nopy Species sam Fir Alder d (Hybrid) Oak  6 nopy Species	Density  Low  Medium  Trace  Immature  Density  Low	Avg. Height Variable 5 - 10 feet 5 - 10 feet N/A Avg. Height 5 - 10 feet	Sapling Tall Shrub Sapling	Old comments- (OPIC - FMD: Salvage cut in '95 (720509401), dead oak, aspen 8" and up. Some surviving poor-quality NPO left, and individual TA stems.)  Assessed stand in winter, so was difficult to tell upland from lowland areas in places. In addition to list below, hawthorn and a few elm trees found in stand. Bald eagle spotted in south east part of stand adjacent to Thayer Creek (no nest seen in area).Old comments- (OPIC - FMD: Cut in '91 (720199102). TA on site close to the water table, areas seasonally wet. Rich herbaceous & shrub layers. Minority of stems just into pole class. Former logging access road wet in spots, grown over, extends to near Thayer Creek. Sensitive fern, cornus, alnus, horsetail, Dirca palustris. Some beaver cutting near creek. AFO type within stand's east 1/3. Used previous SI. East edge within Natural Rivers zone of Thayer Creek (HCVA, stand conditon code 8).)  Full stocking on the higher ground, but the lower ground is poorly stocked. There are small clumps of aspen and alder in the lower ground. Stand harvested in summer of 2013 under contract 72-046-11-01. Recommend accepting this stand as moderately stocked with openings.  Really variable species mix with pockets of fir and pockets of apsen and jp/oak in between. Old comments- (OPIC - FMD: Cut in 2004 (720310101) merch except green-marked oak. Was an old JP plantation. Residual large sap/small pole BF, RM & oak over aspen, RM,		



Stand	Level 4 Co	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
57	4199 - Other Mixe	d Upland D	eciduous	Sapling	Poor	34.2	6	Immature	N/A		Stand responded well to harvest and it looks like a good job was done protecting white pine advanced regen. Oak regen came back pretty thick
	Canopy Species	% Cover	Size Class	DBH	Age						in areas and anticipate most of it to get above 6' next YOE. Stand
	Red Maple	30	Sapling	1	6						treatment indicated an aspen objective and stand failed to reach 40%
	Bigtooth Aspen	20	Sapling	1							aspen, however the stand contains an adequate mix of other desirable species (oak and white pine).
	White Pine	15	Sapling/Pole	4							species (oak and write pine).
	White Oak	15	Sapling	1							Old comments- (OPIC - FMD: Stand harvested under contract 72-050-11-
Blad	ck/Red (Hybrid) Oak	20	Sapling	1							01. Old Comment: Mature oak with RM, BTA, WP & RP on rolling/ridged terrain. Oak quality and health decreases as grade down to flats along stand margins. WP understory ranging from W0-W2, some branch flagging (more to S and W). Final harvest with reserves to regenerate the oak, keep all pine. Create 3 half-acre leave islands, evenly-spaced across the stand. Goal is a mix of oak, pine and aspen regen. Adjacent pvt shelterwooded. Used previous SI.)
58	42110 - Plar	nted Red P	ine S	Sawtimb		15.9	72	141-170	N/A		Maple and oak came up heavy in understory following last thinning. Ba is a bit lower in south side of stand.Old comments- (OPIC - FMD: RP
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	plantation, row-thinned in '91 (720509101) and free-thinned in '04
	Red Pine	91	Log	12	72		ed Maple	High	10 - 20 feet	Sapling	(720310101). Responding to release. 2/3's of stems in small saw class.
							ed (Hybrid) Oa		5 - 10 feet	Sapling	Solid O3 below at W end, grading into more RM regen as go E, still with some aspen and oak regen mixed in. A handful of dead RP, but
							ed Pine	Trace	< 5 feet	Sapling	scattered, no spreading pocket mortality. Per 11/10/09 Compt Review,
						W	hite Oak	Medium	5 - 10 feet	Sapling	the west end was split off as stand 158 to be final harvested.)
59	6112 - Lov	vland Aspe	en Sa	wtimber		m 20.7	69	1-50	N/A		Aspen and balsam poplar are seeing mortality. Black ash is all dead.  Very shrubby understory. Accepted previous inventory age as it was
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	difficult to find aspen without rot in middle. Balsam fir may be dominant
	Quaking Aspen	41	Log/Pole	12	69		king Aspen	Low	5 - 10 feet	Sapling	spp next yoe. Some black oak in understory in east side of stand.Old
	Balsam Poplar	14	Log/Pole	10			erican Elm	Trace	10 - 20 feet	Sapling	comments- (OPIC - FMD: Floodplain lowland hardwoods (Black ash, Bam, trembling aspen, balsam fir, and the occasional elm). Thayer
	Balsam Fir	35	Sapling/Pole	4			Alder	Medium	5 - 10 feet	Tall Shrub	Creek (part of AuSable's Natural Rivers designation - HCVA, therefore
							am Poplar	Low	Variable	Sapling	stand condition code 8) meanders through it, along with other ephemeral
						Hawt	thorn (spp.)	Low	5 - 10 feet	Tall Shruk	stream segments. Saturated soils, cowslip, marsh grass, poison ivy, tag alder, sensitive fern, blue flag iris. Top dieback common in black ash and
						Ва	alsam Fir	Low	Variable	Sapling	bam. Creek impacted by beaver activity upstream in stand 65.)
						Black/Re	ed (Hybrid) Oa	k Trace	>20 feet	Sapling	
60	4125 - Blac	k, N. Pin C	ak Sa	wtimber	Mediu	m 66.0	99	81-110	N/A		Stand has pretty consistant white pine established throughout sub
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size	canopy. Oak is in patches and still below browse height. Aspen saps are heavier towards the south Stand has some super canopy pines
	Red Maple	12	Pole	6		W	hite Pine	Medium	>20 feet	Sapling	scattered. Most of the red pine is getting plate-like bark. Small stick nest
Blad	ck/Red (Hybrid) Oak	70	Log	12	99	Re	ed Maple	Medium	10 - 20 feet	Sapling	found during inventory with no activity (OFS point taken).
	White Oak	10	Log	11		W	hite Oak	Low	< 5 feet	Sapling	Old comments-(OPIC - FMD: Shelterwood cut in '04-'05 (720630101).
-						Wi	tch Hazel	Low	5 - 10 feet	Tall Shruk	marked oak and all merch RM, JP & aspen. Primarily RO saw (decent
										0 "	boolth) with sonon DM solvend WD regan below. Tuned understand on

>20 feet

Medium

Bigtooth Aspen

Sapling

health) with aspen, RM, oak and WP regen below. Typed understory as

RM because it is the most common overall, but there is nearly as much aspen sprouting, the oak stump sprouts are generally doing well, and there are areas of W3. Scattered WP & RP saw. Used previous SI.)



Stand	d Level 4 Co	over Type		Size Densi	y	Acres	Stand Age B	A Range	Managed S	Site	General Comments
61	4319 - Mixed	Upland Fo	prest	Sawtimber V	/ell	9.9	78	81-110	N/A		Stand has heavily browsed white oak throughout. White pine with some
	Canopy Species	% Cover	Size Class	DBH Ag	е	Sub-Car	nopy Species	Density	Avg. Height	Size	red pine advanced regen located on west side of stand.
	Red Pine	25	Log/Pole	10 78	3	Wh	nite Oak	Medium	< 5 feet	Sapling	Old comments- (OPIC - FMD: Long stand in narrow valley along Durant
	Red Maple	23	Pole/Log	9		Wite	ch Hazel	Low	5 - 10 feet	Tall Shrub	Castle Road. Variable species mix. WP not much more common than
	White Pine	23	Log/Pole	10		Wh	ite Pine	Low	Variable	Sapling	the RM and oak, but featured that species as it is the one increasing in coverage. Stand also contains lesser amounts of JP, RP and aspen.
	Bigtooth Aspen	15	Pole/Log	8		Re	d Maple	Low	Variable	Sapling	Nice health NPO large sap/small poles to E, more WP filling in to W.
Bla	ck/Red (Hybrid) Oak	7	Pole	6		Re	ed Pine	Low	>20 feet	Sapling	Branch flagging common on the WP understory stems.)
62	4130 -	- Aspen		Sapling Po	or	20.4	6 I	mmature	N/A		Fully stocked A3 post harvest except for in the lowlands in the northeast
	Canopy Species	% Cover	Size Class	DBH Ag	е						corner.
	Black Cherry	6	Sapling	1							Old comments- (OPIC - FMD: Stand harvested under contract 72-050-11-
	Quaking Aspen	90	Sapling	1 6							01. Old Comment: TA on shallow gradient down to Thayer Creek
											floodplain. BF large sap/small pole component increases as get closer to the creek. Hypoxylon present; top die-back occuring. Cut to regenerate the aspen. Apply dead & down creation spec. Focus retention along Thayer Creek (Natural River - HCVA - stand condition code 8), note setback & EMR potential. Few SCWP leave; WP is not seedling in agressively.)
63	4130 -	- Aspen		Sapling Po	or	3.4	6 I	mmature	N/A		See old comments-Old comment- (OPIC - FMD: TA moving into saw
	Canopy Species Quaking Aspen	<b>% Cover</b> 98	Size Class Sapling	<b>DBH A</b> g							class. Occasional RM, oak, WP, BF. Individual stem mortality, some conks. Final harvest along with stand 62. No retention, apply dead & down creation spec. Used stand 62's SI.)
65	6220 - Al	lder/willow		Nonstocke	d	4.7			No		OPIC - FMD: Small beaver-flooded area on Thayer Creek, HCVA - Natural River. Salix & spirea surrounding marsh grasses surrounding small lens of open water with yellow water lilly. Dam recently opened up.
66	622 - Low	land Shrub	0	Nonstocke	d	33.5			No		OPIC - FMD: L/N type: wide flooded area with discernable deeper channel through. Tag alder, Betula pumila, spirea, salix in standing water with juncus. NW end drier now, more of a wet meadow with blue flag iris. Numerous snags to SE. Trib to Thayer Creek. SE end within Natural Rivers zone, so HCVA.
67	42290 - Natu	ral Mixed F	Pine	Sawtimber V	/ell	9.8	120	141-170	N/A		South side of stand is low alder with spruce/fir and a few aspen. Previous
	Canopy Species	% Cover	Size Class	DBH Ag	е	Sub-Car	nopy Species	Density	Avg. Height	Size	inventory had stand age at 132. The trees I cored showed it being closer to 120. Some of the larger 30+ inch trees maybe that or older. Old
	Red Pine	30	Log/XLog	16		Bal	Isam Fir	Medium	Variable	Sapling	comments refered to part of stand as "old growth area". Contains some
	White Pine	39	XLog/Log	20 12	0	Wh	ite Pine	Medium	>20 feet	Pole	trees that qualify as legacy, but does not fit the definition of old growth.
	Black Spruce	10	Pole	7		Re	d Maple	Trace	>20 feet	Sapling	See old comments-
Bla	ck/Red (Hybrid) Oak	10	Log	11							Old comments- (OPIC - FMD: Super-canopy WP & RP (18-35" DBH) in west half of stand. WP large saps and small poles below, some flagging. To east, stand picks up more JP, along with younger RP & WP, then grades into black spruce. At the far east end is an isolated pocket of WP saw. Two-track off Chase Br. Rd runs through core of the old-growth area. Used old SI.)



Stand	Level 4 Co	ver Type		Size De	nsity	Acres	Stand Age	e BA Range	Managed Site	General Comments
68	4119 - Mixed No	rthern Hard	dwoods	Sapling	Poor	15.3	6	Immature	N/A	Oak, aspen, and white pine were the desired species for this stand. A
	Canopy Species	% Cover	Size Class	DBH	Age					seed tree type cut was done in this stand and failed to produce any notable oak or aspen regeneration. There is heavy browse in this stand
Blac	ck/Red (Hybrid) Oak	7	Log	14						and it has come back to mostly red maple. White pine regen was
	White Pine	10	Sapling	3						protected during harvest and resulted a couple patches of 2-4" white pine.
	Red Maple	68	Sapling	1	6					Old Comment- (Stand harvested in summer of 2013, under contract 72-046-11-01.)
69	4310 - Pin	ne, Oak Mix	κ	Sapling	ı Well	18.6	28	1-50	N/A	See old comments- OPIC - FMD: Cut in '91 (720149101). J3 natural
	Canopy Species	% Cover	Size Class	DBH	Age					regen following cut. Over- & under-stocked areas, averages out to J3 if also include oak regen. Previous notes: SURVEY LINE FROM STAND
Blad	ck/Red (Hybrid) Oak	36	Sapling/Pole		<b>J</b>					52 TO 51 (AEF TRAV.PT.)
	Red Maple	10	Pole	7						
	Jack Pine	45	Sapling/Pole	9 4	28					
70	6112 - Low	land Aspe	n	Sapling	Poor	12.6	6	Immature	N/A	Bottom of drainage has patches of lowland aspen mixed with alder and is non-stocked or poorly stocked where its wetter. Steep north east slope
	Canopy Species	% Cover	Size Class	DBH	Age					has fully stocked aspen. Stand regen looks acceptable.
	Quaking Aspen	86	Sapling	1	6					
	Black Cherry	7	Sapling	1						Stand harvested 2012/13 under contract 72-046-11-01.
71	42290 - Natu	ral Mixed F	Pine Po	oletimber	Medium	n 15.0	54	1-50	N/A	Stand appears to be 2 aged. There is a 17 year old cohort of jack pine and white pine saplings in openings. White pine and balsam fir pole
	Canopy Species	% Cover	Size Class	DBH	Age					timber around 54 year old dominate the majority of canopy. Some super
	Balsam Fir	35	Pole/Sapling							canopy pines seen as well. Old comments - (OPIC - FMD: Cut in '02
	White Pine	37	Pole/Sapling		54					(720300101) merch stems except green-marked trees. This part of the harvest area was not planted to JP (as stand 43 was) due to the amount
	Jack Pine	25	Sapling	2	17					of residual stems following the cut. The residual included green-marked trees (primarily oak and WP, and large sap/small pole balsam fir and WP. JP regenerated naturally following the harvest, with J3+ at the landing area, and less than J1 elsewhere. "J1" is a composite of the JP, balsam fir and WP. Used previous SI. Pere Cheney KW Management Unit. HCVA, therefore stand condition code 8 applied.)
158	4125 - Black	k, N. Pin O	ak	Sapling	Poor	6.7	6	Immature	N/A	Treatment had an aspen objective with a mix of other species. Stand
	Canopy Species	% Cover	Size Class	DBH	Age					came back to O3 and is mostly above 6 feet tall. This stand meets objectives with current composition.Old comments- (OPIC - FMD:
Blad	ck/Red (Hybrid) Oak	93	Sapling	1	6					Stand harvested under contract 72-050-11-01. Old Comment: RP plantation, row-thinned in '91 (720509101) and free-thinned in '04 (720310101). Responding to release. 2/3's of stems in small saw class. Solid O3 below at W end, grading into more RM regen as go E, still with some aspen and oak regen mixed in. Per 11/10/09 Compt Review, this stand was split off from stand 58 and will be final harvested in order to release the nice oak regen and connect stands 57 & 63.)