

GRAYLING FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 278 ENTRY YEAR: 2014

GIS Compartment Acreage: 1064 County: Crawford

Revision Date:	September 5, 2012
Stand Examiner:	Tom Barnes
Legal Description:	T27N, R1W, Section 29 and 30 Lovells Township

Management Goals: To maintain a healthy habitat for the endangered species Dendroica kirtlandii (Kirtland's Warbler), taking into account structural and species diversity and visual management. Another goal within this compartment is to maintain the Crawford Red Pine Natural Area. The entire compartment is leased long-term to the National Guard and any management within the compartment needs to consider their uses.

Soils and Topography: Soils within the compartment consist of large areas of Grayling sands and small areas of Croswell and Graycalms sands in the uplands. In the lowlands within the compartment, soils consist of Dawson-Loxley peats and Tawas-Leafriver mucks. Topography within the compartment is mostly level with some gently rolling.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The compartment is entirely under state ownership with a few scattered small parcels of private ownership around the south and east boundary. Most are seasonal residences. Both sections within the compartment are leased long-term to the National Guard (I.e; L-1479 Act 154 P.A. 1935) and may need special considerations to fit military training needs. This lease provides for usage by the Military during their encampment, with no permanent buildings or improvements to be erected.

Unique, Natural Features: Crawford Red Pine Natural Area (also known as Dyer Red Pines) and the Kirtland's Warbler.

Archeological, Historical, and Cultural Features: The Crawford Red Pine Natural Area (Dyer) is considered a historical feature.

Special Management Designations or Considerations: A large portion of the compartment is designated as part of the North Down Kirtland's Warbler Management Unit. Crawford Red Pine Natural Area, also commonly referred to as the Dyer Red Pines is designated natural area and ERA within the compartment that lies along Dyer Truck Trail. A specific ERA plan was developed for this area, directing management of this old growth pine area. This natural area encompasses a small stand of old growth red pine. No motorized vehicles or camping is allowed within the natural area per a Director's order. Military training is discouraged in this stand.

Watershed and Fisheries Considerations: None.

Wildlife Habitat Considerations: The primary objective is to perpetuate the existing Jack Pine cover types suitable for the endangered Kirtland's Warbler. Refer to the Kirtland's Warbler Management Plan for management.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of ice-contact and glacial outwash sand and gravel and postglacial alluvium. Glacial drift thickness varies between 600 and 800 feet. There is elevation relief of approximately 150 feet in the compartment. Beneath the glacial drift is the Coldwater Shale. There is not an economic use for the Coldwater Shale. The nearest gravel pit is located just east of the compartment. Gravel potential appears to be good on the upland areas. This is part of the State Military Reservation. There are no current leases in this compartment. The closest production is the Antrim Shale gas play three miles to the northeast.

Vehicle Access: Vehicle access into the compartment can be obtained from several two-track roads leading off from North Down River Road just north of the compartment. County roads of Dyer Truck Trail borders the south edge of the compartment and Martindale Road borders the east edge of the compartment. Several two-track roads lead off from these two roads into the compartment. Two tracks fractionalizing the Kirtland Warbler management units will be closed/planted over when stands are replanted.

Survey Needs: None.

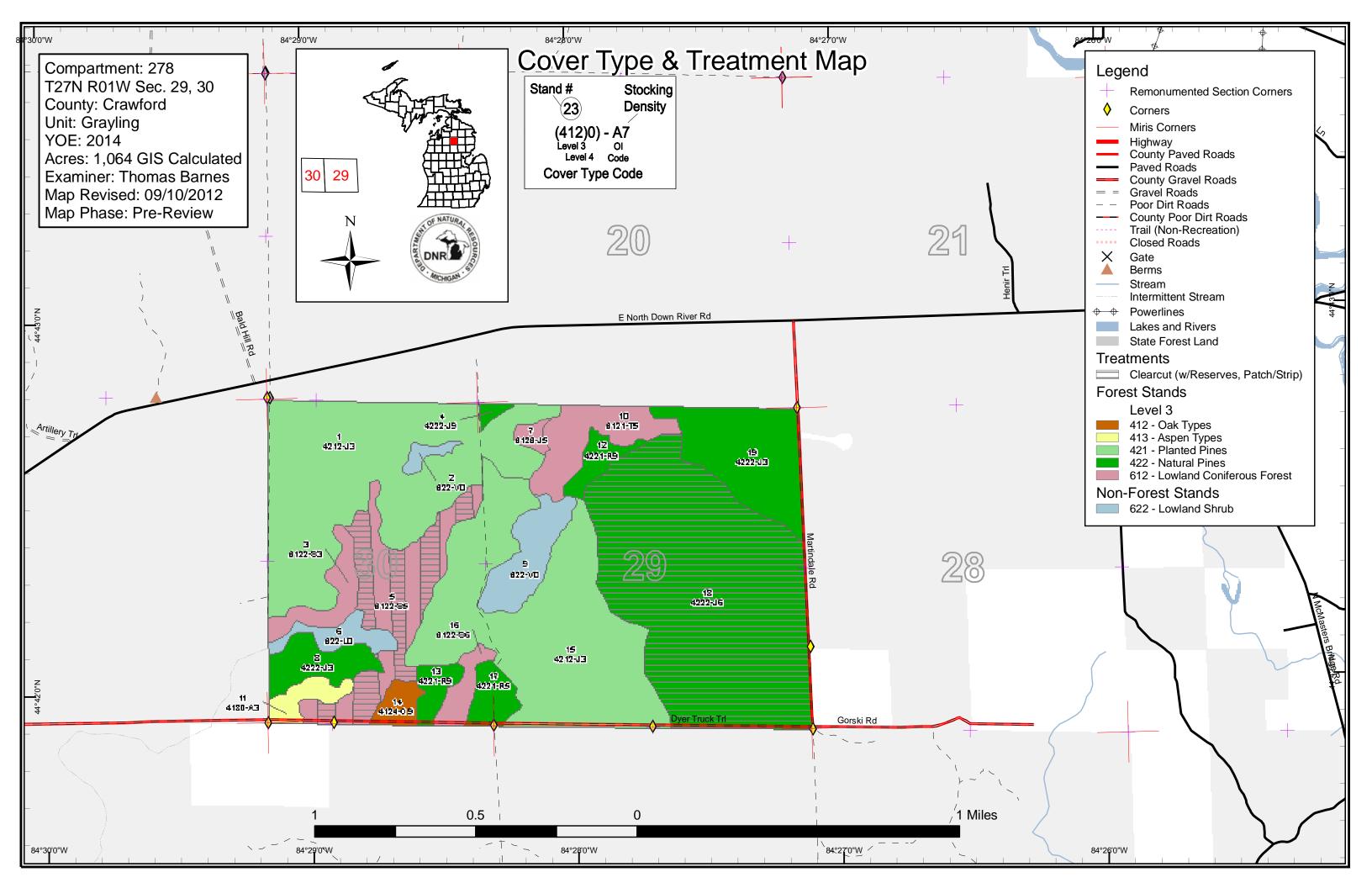
Recreational Facilities and Opportunities: There are no designated recreational facilities within the compartment. Recreational opportunities include hunting, bird watching and site seeing.

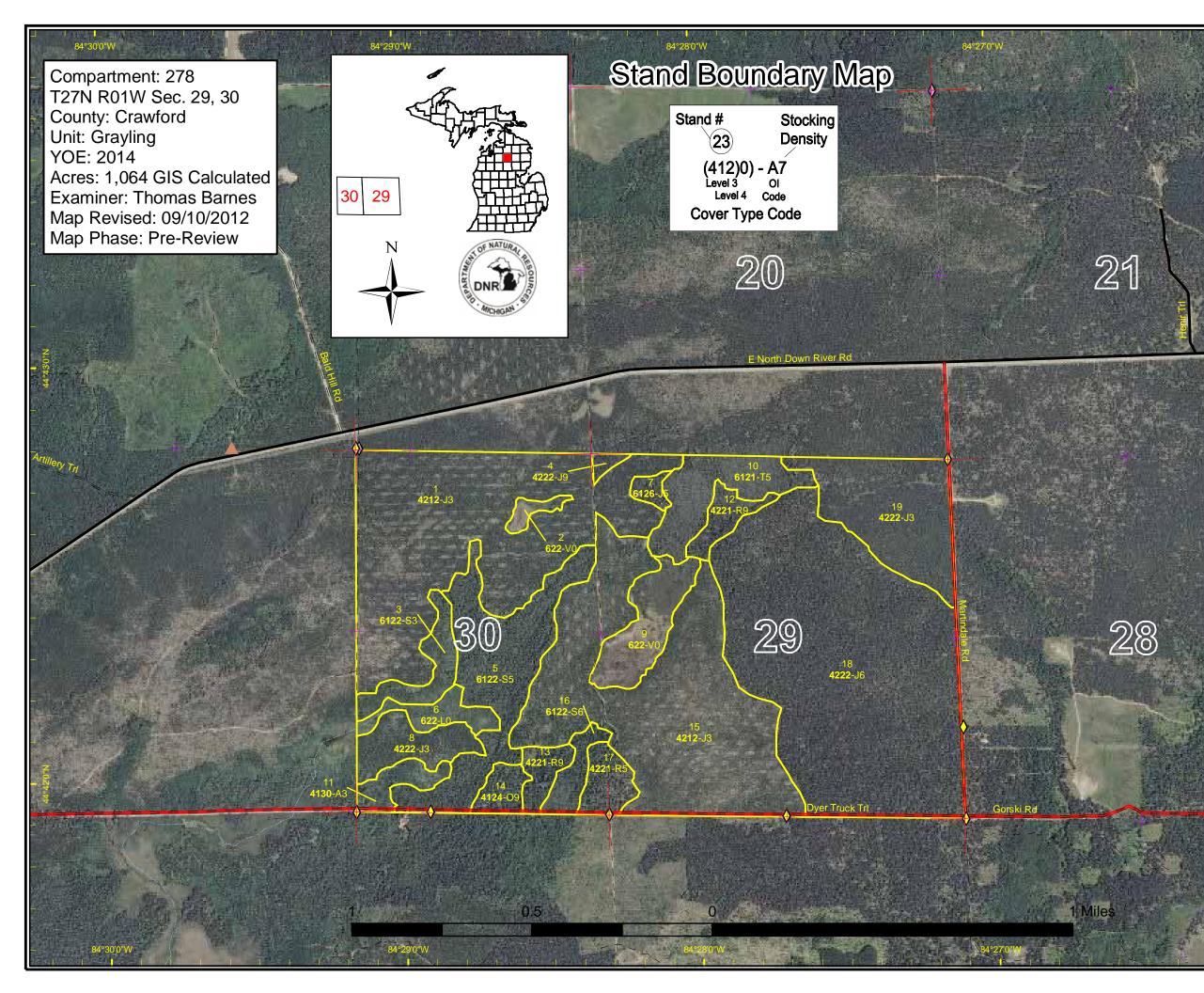
Fire Protection: Jack Pine, a highly fire susceptible species dominates the compartment. However, access for fire equipment into the compartment is adequate. The nearest water point for the compartment is the headwaters of Barker Creek, just west of the compartment.

Additional Compartment Information: This compartment has experienced a lot of wildfire activity in the past. A large portion of this compartment was involved in the 1990 Stephan Bridge Fire and another portion of this compartment was involved in the Bald Hill Fire.

> The following reports are available:

- Total Acres by Cover Type and Age Class
- Proposed Treatment Summaries
- Dedicated Conservation Area Details
- Listing of Forested Stands
- Listing of Non-Forested Stands
- Proposed Treatments with No Limiting Factor
- Proposed Treatments with Limiting Factors
- > The following information is displayed, where pertinent, on the attached compartment maps:
 - Base feature information, stand numbers, cover types, recreation trails and facilities
 - Proposed treatments
 - Dedicated & Proposed Special Conservation Areas



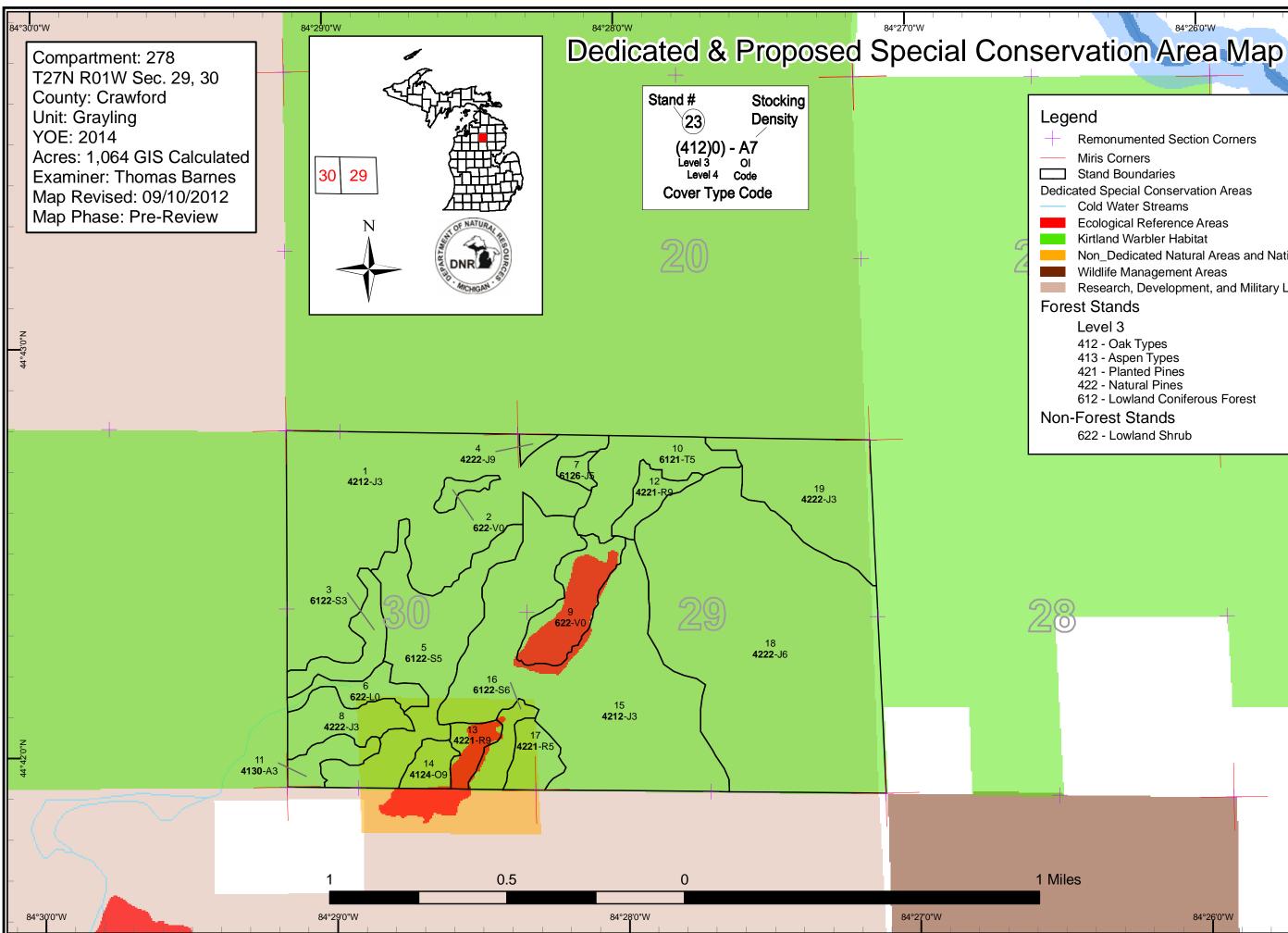




Miris Corners Highway County Paved Roads Paved Roads County Gravel Roads Gravel Roads Poor Dirt Roads County Poor Dirt Roads Trail (Non-Recreation) Closed Roads Intermittent Stream $\oplus \oplus$ Powerlines Stand Boundaries Forest Stands Level 3 412 - Oak Types 413 - Aspen Types 421 - Planted Pines 422 - Natural Pines 612 - Lowland Coniferous Forest

Non-Forest Stands 622 - Lowland Shrub

Remonumented Section Corners



84°26'0"W

- **Remonumented Section Corners**
- Miris Corners
- Stand Boundaries
- **Dedicated Special Conservation Areas**
 - Cold Water Streams
 - Ecological Reference Areas
 - Kirtland Warbler Habitat
 - Non_Dedicated Natural Areas and National Natural Landmarks

44°43'0"

44°42'0"N

- Wildlife Management Areas
- Research, Development, and Military Lands

84°26'0"W

Level 3

- 412 Oak Types
- 413 Aspen Types
- 421 Planted Pines
- 422 Natural Pines
- 612 Lowland Coniferous Forest

Non-Forest Stands

622 - Lowland Shrub

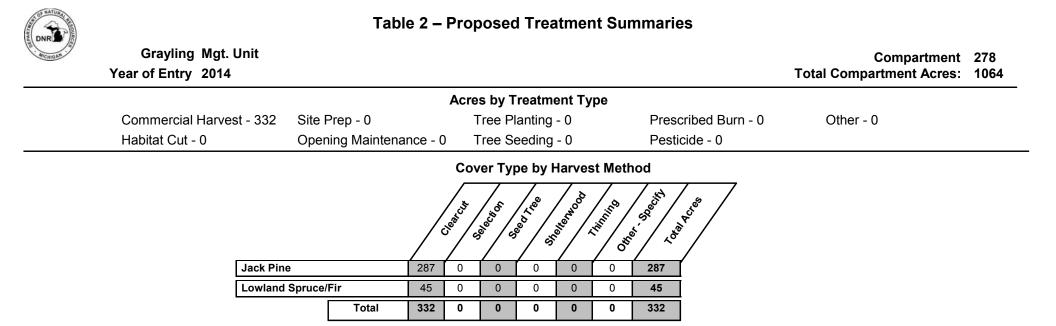
Table 1 – Total Acres by Cover Type and Age Class

Grayling Mgt. Unit Thomas Barnes : Examiner

Compartment 278 Year of Entry 2014



	Age Class															
	/	6.0	61.02	10 ⁻²²	67. 69.	40 ⁻⁶³	5. 5.	00.00	10,10,10	40, 40, 40, 40, 40, 40, 40, 40, 40, 40,	8. 6.	001.001	611.011	50× 350	AND A	lei)
Aspen	0	13	0	0	0	0	0	0	0	0	0	0	0	0	13	
Bog	37	0	0	0	0	0	0	0	0	0	0	0	0	0	37	
Jack Pine	0	205	231	69	0	5	290	0	0	0	0	0	0	0	799	
Lowland Conifers	0	0	0	0	0	0	0	12	0	0	0	0	0	0	12	
Lowland Shrub	15	0	0	0	0	0	0	0	0	0	0	0	0	0	15	
Lowland Spruce/Fir	0	0	19	0	0	0	0	12	82	0	0	0	0	0	114	
Oak	0	0	0	0	0	0	0	10	0	0	0	0	0	0	10	
Red Pine	0	0	0	0	0	0	0	15	0	0	0	0	11	0	26	
Tamarack	0	0	0	0	0	0	38	0	0	0	0	0	0	0	38	
Total	52	218	250	69	0	5	327	49	82	0	0	0	11	0	1064	



S t			Gra	ayling Mgt. Unit	Tab			ents Prescril ting Factor	Compartment: 278 Year of Entry 2014	AND	
a n d	Treatm Name		Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
5	7227800	-Cut	45.0	6122 - Black Spruce	Medium Density Pole	82	1-50	Harvest	Patch or Strip Clearcut	6122 - Black Spruce	Cmpt. Review Proposal
	<u>Prescription</u> Strip Clearcut without retention. Alternatenated treatment/untreatment area will be 4 chains wide. Include regen protection spec and rabbitat specs: spec in contract. Tops to be left and sale is to be shortwooded.										
	Other Winter time harvest, which will provide a need for an extended contract length of at least 3 years. There will also be a need for an extended <u>Comments</u> : window for determining regen success.										
<u>Next</u> Step:		cepta	ible reger	will be moderate to wel	I stocked bl	lack spru	ice with a	mixture of lowland	d conifer and decid	lious species.	
<u>Propo</u> Start I		01/20	13								
18	72278018	-Cut	286.9	42220 - Natural Jack Pine	High Density Pole	66		Harvest	Clearcut with Reserves	42121 - Planted Jack Pine, Mixed Deciduous	Cmpt. Review Proposal
	Prescription Clearcut with retention, follow stand retention guidelines. Focus pockets of retention along Dyer truck trail and N dyer truck trail. Specs:										
	Other Southeastern corner of sale is heavier to oak. Plan sale and planting so that they do not conflict with other scheduled plantings, to ensure the number of acres needed to be planted to not exceed the annual amount.										
<u>Next</u> Step		ench a	and plant	to jack pine as per the I	Down River	Kirtland's	s Warbler	Management.			
<u>Propo</u> Start I		01/20	13								
	Total Tre	atme	nt								

Total Treatment Acreage Proposed: 331.8

S t		Graylin	g Mgt. Unit	Table 4		eatments imiting	Compartment: 278 Year of Entry 2014	DE NATURA EN LOURA		
a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
			#Error							
Presc Specs	ription s:									
<u>Other</u> Comr										
<u>Next</u> <u>Steps</u>	-									
<u>Propos</u> Start D										
	ng Factor and N ment Reason	lo_								
Ac	Total Treatme creage Propose	-								

	Out of YOE Treatments Prescribed with No Limiting Factor							Year of Entry: 2014	DNR DNR	
	atment ame	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
	OYOE cc	2.0					Harvest	Clearcut	4131 - Aspen, Oak	Cmpt. Review Proposal
Prescription Specs:			eave any beech, ash . Set up concurrent					due to small sta	nd size and the proxim	ty of retention
<u>Other</u> Comments:										
<u>Next</u> <u>Steps:</u>	Natural r	egen survey.	Natural regen goal	is a mixtur	e of aspe	n, oak and	hardwoods.			
Proposed Start Date:	10/01/20	13								
	OYOE ccr	5.6					Harvest	Clearcut	42120 - Planted Jack Pine	Cmpt. Review Proposal
Prescription Specs:	Prescription Final harvest except leave the RP & WP. No additional retention due to small stand size. Run the north & west boundary to include the operable									
<u>Other</u> Comments:		he survey mo ment Block 56		ness trees	associate	ed with the	e north quarter corne	er of section 22	. Borders the Lovells K	W Unit,
<u>Next</u> <u>Steps:</u>	planting.	Artificial reg		able regen					tc.) to control scotch pi components of naturall	
Proposed Start Date:	10/01/20	13								
	OYOE_ cc	6.7					Harvest	Clearcut	42120 - Planted Jack Pine	Cmpt. Review Proposal
Prescription Specs:	Final har stand 26		any RP, WP and wł	nite oak. N	o additio	nal retentio	on due to small star	nd size. Treat c	oncurrent with the adja	cent comp 290
<u>Other</u> <u>Comments:</u>	Protect t	he survey mo	nument and witness	s trees ass	ociated w	ith the qua	arter corner commo	n to sections 26	8 27.	
<u>Next</u> <u>Steps:</u>		ind plant JP to led oak and p		al regen si	urveys. A	cceptable	regen is JP at stoc	kings suitable f	or KW habitat, along wi	th naturally-
Proposed Start Date:	10/01/20	13								

Total Treatment Acreage Proposed: 14.3

S t	Graylin	g Mgt. Unit		5 – Forested Stands		nds Compartment: 278 Year of Entry: 2014
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42120 - Planted Jack Pine	High Density Sapling	206.2	21		Immature Kirtland Warbler Plantation, part of the Down River Road Kirtland's Warbler Management Area Unit 1. Portion of stand was burned in the 1990 Stephan Bridge Fire.
3	6122 - Black Spruce	High Density Sapling	19.5	22		Jack pine is found on the drier soils and it transitions to black spruce and scattered tamarack.
4	42220 - Natural Jack Pine	High Density Log	2.8	65		Very small stand of mixed red and jack pine in the pole to log size, provides good verticle structure diveristy within the warbler management area.
5	6122 - Black Spruce	Medium Density Pole	82.2	82	1-50	Nice mixed lowland conifer stand, good amount of slash from down trees with in the stand. Good wildlife habitat.
7	6126 - Lowland Jack Pine	Medium Density Pole	4.8	50		Aspen is occupying some of the canopy gaps within this stand, Nice stand of pole to log sized jack and red pine with black spruce and aspen.
8	42220 - Natural Jack Pine	High Density Sapling	24.6	20		Stand appears to be naturally regenerated, Part of the Stephan Bridge fire.
10	6121 - Tamarack	Medium Density Pole	37.5	66		Good sized stand of Tamarack with some super canopy white pine. Black spruce is also found in this stand.
11	4130 - Aspen	High Density Sapling	12.6	16		Aspen stand with a couple of wet areas. SW portion of stand is a mixture of pine with super canopy red pine, previous inventory separated this stand out. Eastern end opens up with a mixture of sub species. Timber Sale number 72-055-94-01.
12	6127 - Lowland Pine	High Density Log	11.9	71	111-140	Large Bull Red Pine, estimating 100+ years old, scattered throughout the stand, along the same size as many of those found in the Dyer Area.
13	42210 - Natural Red Pine	High Density Log	11.2	167	111-140	The BA for R pine averaged 120 in this stand. Stand is within the ERA Dyer Natural Area. Dyer Natural Area has its own management plan. Stand is dominated by the mature red pine with a mixture of oak and red maple. There is good component of red pine in the understory of pole size. This stand has had prescribed burns in the past, along with adjacent stand to the south.
14	4124 - Red with White Oak	High Density Log	10.4	73	81-110	Mixed oak stand with red maple, pine and some fir. The understory is a mixture of red, white and jack pine as well as red and white oak with maple. Stand is within the ERA Dyer Natural Area. Dyer Natural Area has its own management plan. Previous records indicated the stand was salvaged in 1994 with the removal of dead oak. This stand has received prior prescribed burns.
15	42120 - Planted Jack Pine	High Density Sapling	205.2	10		Jack pine plantation planted in 1996 and is part of the Down River Kirtland's Warbler Management Area, block 4. Two warblers were counted in this stand in 2004.

S t	Graylin	Grayling Mgt. Unit			orested Sta	Inds Compartment: 278 Year of Entry: 2014
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
16	6122 - Black Spruce	High Density Pole	12.1	72	111-140	Nice stand of mixed lowland conifers, fair amount of down coarse woody debris. The southern end of the stand is more open and has a higher percentage of Tamarack, as you move north through the stand it transitions to more black spruce. Stand should be strongly considered for treatment in the next inventory cycle. Very nice stand for wildlife. Stand is within the ERA Dyer Natural Area. Dyer Natural Area has its own management plan.
17	42210 - Natural Red Pine	Medium Density Pole	15.0	76	81-110	Stand has a good mixture of red pine ranging from pole to supercanopy trees. Oak of log size. Stand is within the ERA Dyer Natural Area. Dyer Natural Area has its own management plan.
18	42220 - Natural Jack Pine	High Density Pole	286.9	66		Previous inventory recommended treating stand during this entry cycle. Stand is mainly pole size jack pine with oak mixed throughout. Trees are 2-3 sticks. This is part of Down River Kirtland's Warbler Unit, block.
19	42220 - Natural Jack Pine	High Density Sapling	69.0	35		Jack plantation, part of the Bald Hill Fire of 1975, this is part of the Down River Kirtland's Warbler Management Area, block 5. Stand was planted in 1977.

Grayling Mgt. Unit

Compartment: 278 Year of Entry: 2014



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
2	6225 - Bog	4.8	No	Low (NonForested)	Small bog type area that appears to hold water occasionally or has historically. Eastern end of the bog is where the majority of the trees/shrubs where located.
6	6220 - Alder/willow	14.6	No	Unspecified	Stand is a combination of tag alder with scattered jack pine, black spruce and tamarack. Water does flow through this stand and the Southwestern portion of stand is open and dominated by grass with snags scattered throughout.
9	6225 - Bog	32.4	No	Low (NonForested)	Large bog/marsh with leatherleaf along the edges, some clumps of jack pine exist and at the Northeastern end of the bog shrub and trees are present. This bog is an ERA.



7 – 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.

Stand	SCA Type	SCA Name	Acres	Comments



8 – DEDICATED CONSERVATION AREA DETAILS

* This is a list of Dedicated Biodiversity Areas for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to Dedicated Conservation Area Map for areas that the below listed Conservation Areas are located.

Conservatio Area	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
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 a 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
ERA	Ecological Reference Areas	Ecological Reference Areas (ERAs) are high quality examples of identified as Element Occurrences (EOs) by the Michigan Natura context of their natural community classification system. Element (Excellent) or B (Good) and a Global (G) or State (S) element (ra threatened (2), or rare (3) serve as an initial base of ERAs. They the State. The system is comprised of individual or associations managed for restoration and maintenance of natural ecological p submit recommendations for lands as ERAs using the DNR Con-	al Features Inventory (MNFI) within the t Occurrences with viability ranks of A urity) ranking of endangered (1), may be located upon any ownership in of natural community types that are processes and values. The public may
SCA	Habitat Area	An area that provide some specific need for the life cycle of wildl and Waterfowl Production Areas, deer wintering complexes in lo openings and savannas. Habitat areas are distinct from critical h endangered or threatened species (such as Kirtland's warbler or general in nature, are not primarily associated with threatened or covered by species recovery plans that are developed in coopera	wland conifer communities, grassland abitat designated for recovery of piping plover areas) in that they are more endangered species, and are not
SCA	Non-Dedicated Natural Areas and National Natural Landmarks	This category is comprised of those Natural, Wilderness and Wil proposed for legal dedication, but for which legal dedication by le nomination process is defined by Part 351, Wilderness and Natu Environmental Protection Act, 1994 PA 451. The program is adm 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.	egislature has not occurred. The Iral Areas, of the Natural Resources and hinistered by the DNR. Nominations e DNR. This is an active program, with
SCA	Research and Military Areas	These areas provide facilities and lands specifically dedicated fo include the 5,847 acre Forest Fire Experiment Station, the 12,00 Area, the Beaver Islands Archipelago Wildlife Research Area (th High and Hog Islands, all state owned land on Beaver, South For Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Re Nursery, and over 144,000 acres of Military Lands.	0 acre Houghton Lake Wildlife Research at includes most of Garden Island, all of x and North Fox Islands), the Cusino