

GLADWIN FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT #9 ENTRY YEAR: 2014

Compartment Acreage: 6783 County: Clare

Revision Date: June 1, 2012; June 20, 2012

Stand Examiner: Tim Gallagher, Forest Technician and Blair Tweedale, Forester

Legal Description: T20N – R5W: Sections: 2 – 10 & 15 – 20 T20N – R6W: Sections: 1, 13, 14, & 23 – 26

RMU (if applicable): N/A

Management Goals: The entire compartment is in the heart of the "Leota Kirtland Warbler Management Area" (LKWMA) which is dominated by large contiguous blocks of even age jack pine management areas that are designed to produce nesting habitat for the Kirtland Warbler. The entire LKWMA has special resource management direction as a "Dedicated Species Recovery Area" and has been dedicated as a High Conservation Value Area (HCVA). Leota KW management Blocks 113, 114, 115, 116, 117 and 118 are all within the compartment. Three of these blocks have proposed treatments this YOE and are as follows:

- Block 114 POW 2014 Natural Regeneration Acres 260
- Block 115 POW 2014 Natural Regeneration _ Acres 348
- Block 117 POW 2018 Plant Year 2021 Acres 260

Many of the red pine stands that have been thinned in the past 10 to 20 years have a very dense oak understory. The under-story is the direct result of the harvests in the past, in several of these stands it has been proposed to manage for the oak under-story.

Soil and Topography: The area varies from well drained Grayling sands in the outwash plains to poorly drained mucky Lupton-Markey soils as you enter the Muskegon River Floodplain, the Clam River Floodplain and the Cranberry Creek Corridor. The terrain varies from nearly level to the steep banks that lead down into the floodplain of the Muskegon River, Clam River and Cranberry Creek.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The state land in this compartment is spread out over 22 sections and occurs in large contiguous blocks. Private in-holdings are mostly comprised of large (40 plus acres) forested blocks with single absentee ownerships. There is little forest management activities on the private holdings. Rainbow Bend Subdivision is located in the center of the compartment (Section 16) along the Muskegon River. This is a small subdivision made up of both homes for permanent residents and seasonal use cottages that concentrates use on the state land and along the river. The town of Leota is directly adjacent to the east end of the compartment.

There are several U.S. Fish and Wildlife Service parcels within the compartment.

Unique, Natural Features: This area has a variety of rare species that could be or are present including; Secretive Locust, Kirtland Warbler, Red-legged Spittle Bug, Red Shouldered Hawk, Eastern Box Turtle, Goshawk, Bald Eagle, Osprey, Great Blue Heron, Wood Turtle and Blanding's Turtle. There is also potential for Beak Grass, Broad-leafed Puccoon in stands along the Muskegon River, and dry prairie plants in the grassy openings.

Archeological, Historical, and Cultural Features: There are six documented sites within the compartment.

Special Management Designations or Considerations: The entire compartment is within the Leota Kirtland Warbler Management Area and has special resource management direction as a "Dedicated Species Recovery Area". Therefore the entire compartment has been dedicated as a High Conservation Value Area (HCVA).

Watershed and Fisheries Considerations: Cranberry Creek and the Clam River flow into the Muskegon River within the compartment. Cranberry Creek and the Clam River are both designated trout streams and should be treated as cold water fisheries. Cranberry Creek and the Clam River are in valleys and have a natural buffer of lowland brush, lowland timber types and marsh directly adjacent to its banks; these river corridors should be considered sensitive wetland. The Muskegon River, a warm water fishery and a major Michigan watershed has a natural corridor (floodplain) of lowland swamp hardwood along most of the water course and should be considered a sensitive area for timber harvest purposes. Upland/High bank areas along the river should also be considered sensitive. The Muskegon River Floodplain and associated bottomlands are seasonally flooded.

Wildlife Habitat Considerations: Timber harvest and planting prescriptions are heavily influenced by the needs of the endangered species the Kirkland's Warbler. Jack Pine stands in this compartment will be managed to provide suitable habitat for the warblers. A Kirkland's Warbler management plan exists outlining a cutting rotation for this compartment. Some game species that use this compartment include white-tailed deer, black bear, ruffed grouse and wild turkey. Many other wildlife species likely to use this compartment include upland sandpiper, common nighthawk, brown thrasher and eastern hognose snake.

Mineral Resource and Development Concerns and/or Restrictions: Much of the compartment lies within the Cranberry Gas Storage Field. Numerous gas wells, pipelines and access roads are scattered over much of the compartment. Many of the pipelines, access roads, and gas well sites are under long term lease agreements with Consumers Energy.

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium and ice-contact outwash sand & gravel. The glacial drift thickness varies between 400 and 800 feet. Beneath the glacial drift are the Pennsylvanian Saginaw and Grand River Formations. The Saginaw Formation is used for brick making in other areas of the State. Gravel pits are located in Section 4, and potential appears to be good, especially the uplands. Cranberry Lake Field lies within the Compartment. The field produced from five formations and now is a gas storage field and also is in secondary recovery operations. The entire compartment is under lease for oil and gas production and/or gas storage operations.

Vehicle Access: Access to most of the compartment is good via the county road system and state two tracks that are in place.

Survey Needs: None

Recreational Facilities and Opportunities: The Leota ORV trail is located within the compartment. The area receives moderate hunting pressure, most of which is deer hunters. Moderate fishing occurs on Cranberry Creek, Clam River and the Muskegon River. Canoe traffic on the Muskegon River can be heavy on weekends during the summer.

Fire Protection: Large contiguous blocks of explosive jack pine fuels exist, causing this area to be vulnerable to wildfire of catastrophic proportions. This area is prime for potential fire control problems. Oak mortality has added high levels of dead woody material near the ground. If ignited, this dead wood will carry higher levels of heat up into the ladder fuels, thus torching and crown fires are more likely to develop. Some natural fuel breaks exist. The Natural Gas Storage Field and pipelines add additional challenges for fire control forces.

Additional Compartment Information: Three separate fuel breaks have been proposed this YOE and are as follows:

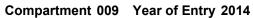
- Muskegon Fuel break POW 2014 Acres 130
- Pigeon Fuel break POW 2014 Acres 100
- Jackson Fuel break POW 2014 Acres 20

The proposed fuel breaks have been designed to meet three functional objectives; 1) Management of fuels. 2) Barrens habitat. 3) Visual corridors.

Table 1 – Total Acres by Cover Type and Age Class

Gladwin Mgt. Unit

Blair TWEEDALE : Examiner





Age	Class
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	/	6.0	6 ^{.7} 0	D ² D	60 60	100 M		00 00	10	40 ¹ 6	69	801.001	817.01'	NO JIN	AND LO	is,
Aspen	33	43	123	0	0	0	0	0	41	0	0	0	0	0	241	
Bog	18	0	0	0	0	0	0	0	0	0	0	0	0	0	18	
Herbaceous Openland	91	0	0	0	0	0	0	0	0	0	0	0	0	0	91	
Jack Pine	251	1533	395	440	182	162	589	137	0	74	0	0	0	0	3763	
Lowland Conifers	0	0	0	0	0	0	0	0	34	0	20	0	10	0	64	
Lowland Deciduous	0	11	0	0	0	10	0	117	52	145	91	0	0	0	426	
Lowland Mixed Forest	0	0	18	0	0	0	0	0	0	0	34	0	0	0	52	
Lowland Shrub	272	0	0	0	0	0	0	0	0	0	0	0	0	0	272	
Marsh	45	0	0	0	0	0	0	0	0	0	0	0	0	0	45	
Mixed Upland Deciduous	0	0	0	0	0	0	36	0	0	0	0	0	0	0	36	
Natural Mixed Pines	0	28	0	0	0	0	51	115	0	31	0	0	0	0	225	
Northern Hardwood	0	23	0	0	0	0	0	13	0	0	0	0	0	0	36	
Oak	38	41	51	0	0	0	0	0	52	73	0	0	0	0	255	
Planted Mixed Pines	0	0	71	0	0	0	0	0	0	0	0	0	0	0	71	
Red Pine	0	0	0	0	0	38	265	694	0	0	0	0	0	0	997	
Upland Mixed Forest	0	0	0	0	0	0	0	36	0	0	0	0	0	0	36	
Water	83	0	0	0	0	0	0	0	0	0	0	0	0	0	83	
White Pine	0	0	0	45	0	0	0	0	0	26	0	0	0	0	71	
Total	832	1679	659	485	182	211	941	1112	178	349	145	0	10	0	6783	



Table 2 – Proposed Treatment Summaries

MICHIGAN .	Gladwin Mgt. Unit Year of Entry 2014									Compartment Total Compartment Acres:	
				Acres	by Trea	tment T	/pe				
	Commercial Harvest - 1762	2 Site Prep - 0		Tre	ee Planti	ng - 0		Preso	ribed Burn - 0	Other - 0	
	Habitat Cut - 0	Opening Main	tenance - 0	Tre	ee Seed	ng - 0		Pesti	cide - 0		
				Cove	r Type k	y Harve	st Metl	nod			
				Selection of the second		Street of the second	Initian OS	<u> </u>	Solution of the second		
	Aspen		41	0	0 (0	41			
	Jack Pir	ne	868	0	211 (0	0	1079			
	Natural	Mixed Pines	31	0	109 (0	0	140			
	Norther	n Hardwood	0	13	0 (0	0	13			
	Oak		75	12	0 0	0	0	87			
	Red Pin	e	103	0	0 19	103	0	403			
		Total	1118	25	320 19	7 103	0	1762			

Table 3 -- Treatments Prescribed Compartment: 009 Gladwin Mgt. Unit with No Limiting Factor Year of Entry 2014 s t а Treatment Acres CoverType Size Stand BA Treatment Treatment Cover Type n Approval Method Name Density Objective Status Age Range Type d 73009009-Cut 42110 - Planted 200+ 42110 - Planted 9 57 High 52 Harvest Systematic Cmpt. Review Thinning Red Pine Red Pine Density Proposal Pole Prescription Thin red pine to 110 - 140 BA/AC. Remove all jack pine. Specs: Other_ Planted red pine. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area. Comments: <u>Next</u> Monitor residual red pine as to how it reacts to thinning. Steps: Proposed 10/01/2013 Start Date: Cmpt. Review 73009011-Cut 42290 - Natural 98 51-80 42290 - Natural 31.4 High Harvest Clearcut with 11 Mixed Pine Density Reserves Mixed Pine Proposal Pole Prescription Clear cut with reserves 2" spec. Leave all white pine, red pine and mark scattered wind firm oak to leave. Manage for a mix of natural regeneration jack pine, oak and white pine. Specs: Mixed pine stand with some oak. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area. Stand is Other falling apart, Lots of diversity. Stand could be left for buffer between jack pine regen and Cranberry Creek. However there is a high amount of Comments: dead/dying timber. Monitor natural regeneration until adequate regeneration is achieved. A mix of jack pine, mixed oak and white pine regeneration is acceptable. Next Steps: Interplant red pine to maintain full stocking if needed. Proposed 10/01/2013 Start Date: 42220 - Natural 42220 - Natural 21 73009021-Cut 25.9 High 98 Harvest Clearcut with Cmpt. Review Jack Pine Reserves Jack Pine Proposal Density Pole Prescription Clear cut with reserves 2" spec. Leave all white pine, red pine and mark scattered wind firm oak to leave. Manage for a mix of natural regeneration jack pine, oak and white pine. Specs: Other Old jack pine stand with oak. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area. Comments: Monitor natural regeneration until adequate regeneration is achieved. A mix of jack pine, mixed oak and white pine regeneration is acceptable. Next Steps: Interplant red pine to maintain full stocking if needed. Proposed Start Date: 10/01/2013 22 73009022-Cut 16.3 42220 - Natural High 50 Harvest Clearcut with 42110 - Planted Cmpt. Review Jack Pine Density Reserves Red Pine Proposal Pole Prescription Clear cut with reserves followed by planting red pine. Leave scattered mature red pine and mixed oak to meet retention guidelines. Require chip Specs: harvest Stand is within LKW block 115. Jack pine stand with scattered red pine, white pine and oak. Red pine is found in northern portion of stand. Stand Other_ Comments: is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area. <u>Next</u> Following harvest trench and plant red pine. Steps: Proposed 10/01/2013 Start Date:

Table 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 009 Year of Entry 2014



a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
27	73009027-Cut	31.3	4134 - Aspen, Spruce/Fir	High Density Pole	84	1-50	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal

Prescription Clear cut with reserves 2" spec. Manage for a mix of natural regen aspen and red maple. Leave all white pine, red pine, oak and mark scattered Specs: wind firm maple to leave.

- Stand is dominated by quaking aspen, red maple and balsam fir. Scattered oak of all size classes. Mostly an upland stand, with pockets of low <u>Other</u> wet soils. Aspen and balam have reached maturity. Deer browse present through out stand on oak less than 2' ft. Large CWD through out entire Comments: stand (aspen/balsam)
- Monitor natural regeneration until adequate regeneration is achieved. A mix of aspen, red maple, white pine, balsam fir and oak regeneration is <u>Next</u> Steps: acceptable.

s 4

Propo Start		10/01/201	3								
30	73009	9030-Cut	31.5	42220 - Natural Jack Pine	High Density Pole	50		Harvest	Clearcut with Reserves	42110 - Planted Red Pine	Cmpt. Review Proposal
<u>Pres</u> Spec		-	t with reserv chip harves		ning and plar	nting re	d pine. Leav	e scattered win	d firm oak and red p	oine to meet retention	guidelines.
<u>Othe</u> Com		the 50 y	r age class.		n remains co					n 50 - 67. Most of the j erry Gas Storage Field	
<u>Next</u> Step		Following	g harvest tre	ench and plant red pir	ıe.						
<u>Propo</u> Start		10/01/201	3								
45		9045_MF -Cut	33.6	42220 - Natural Jack Pine	High Density Pole	65		Harvest	Seed Tree with Reserves	3302 - Low Density Conifer Trees	Cmpt. Review Proposal
Pres Spec				as fuelbreak stand. S be on the 2018 POW		th rese	rves 2" spec	all jack pine. L	eave all red pine an	d oak. Require chip ha	rvest. Fuel
<u>Othe</u> <u>Com</u>	<u>r</u> ments:	Stand is	within LKW	block 115. Stand is v	within the Cr	anberry	Gas Storag	je Field; pipeline	es, wells and service	e roads are within the	area.
<u>Next</u> Step		Following	g harvest cr	reate and maintain as	fuel break s	tand.					
Propo Start		10/01/201	7								
47		9047_MF -Cut	46.9	42110 - Planted Red Pine	High Density Pole	65	111-140	Harvest	Shelter Wood with Reserves	3302 - Low Density Conifer Trees	Cmpt. Review Proposal
Pres Spec				as fuelbreak stand. S be on the 2018 POW		with re	serves 2" sp	ec. Leave 50 B	A/AC of wind firm re	ed pine. Require chip h	arvest. Fuel
<u>Othe</u> <u>Com</u>	<u>er</u> ments:	Stand is	within LKW	block 115. Stand is v	within the Cr	anberry	Gas Storag	je Field; pipeline	es, wells and service	e roads are within the	area.
<u>Next</u> Step		Following	g harvest cr	eate and maintain as	fuel break s	tand.					
Propo Start		10/01/201	7								

S t		Glad	win Mgt. Unit	Tab			ents Prescril ting Factor	bed	Compartment: 009 Year of Entry 2014	DNR DR NATURAL
a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
53	73009053-Cut	100.0	42220 - Natural Jack Pine	High Density Pole	60		Harvest	Clearcut with Reserves	42220 - Natural Jack Pine	Cmpt. Review Proposal
Pres Spec	cs: KW harv	ests. Stan		115. 2014	POW. Sa	ale specs r	need to include s		etention guidelines as t le best possible chance	
<u>Othe</u> Com									ine (3-12 inches). Jack service roads are withir	
<u>Next</u> Step		natural rege ar would be		ate regenera	ition is ad	chieved. Pl	ant jack pine if n	atural regen fails to	produce suitable KW	habitat. Target
Propo Start	<u>osed</u> <u>Date:</u> 10/01/20 ⁻	13								
57	73009057-Cut	9.4	4130 - Aspen	Medium Density Pole	80		Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
Pres Spec		t with reser	rves 2" spec. Leave so	cattered win	d firm oa	ik to meet i	retention guidline	28.		
Othe										
Com	ments:									
<u>Next</u>	Monitor	natural reg	eneration until adequa	ate regenera	ition is ad	chieved A	mix of sanon re	d manle and miver	l oak regeneration is a	ccentable
Ston	с.			0			mix of saperi, re	u maple and mixed	a oak regeneration is a	
<u>Step</u> Propo				U U			mix of sapen, re		a oak regeneration is a	
Propo		13		Ū			This of Sapen, re		oak regeneration is a	
Propo	osed_	13 70.1	42220 - Natural Jack Pine	High Density Pole	43		Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	
Propo Start	<u>Date:</u> 10/01/20 73009059_KW -Cut <u>cription</u> Clear cu <u>cs:</u> KW harv	70.1 t with reser vests. Stand	Jack Pine	Density Pole al regenerat 115. 2014	43 tion for K POW. Sa	W habitat. ale specs r	Harvest Leave scattered need to include s	Clearcut with Reserves I red pine. Follow re	42120 - Planted	Cmpt. Review Proposal hey pertain to
Propo Start 59 Press Spec Othe	73009059_KW -Cut cription Clear cu s: KW harv regenera er Stand is	70.1 t with reser rests. Stand ation. (Leav	Jack Pine rves manage for natur d is within LKW block ve tops, late summer h	Density Pole al regenerat 115. 2014 narvest, pos	43 tion for K POW. Sa t harvest	W habitat. ale specs r scarificatio	Harvest Leave scattered to include s on).	Clearcut with Reserves I red pine. Follow re pecs that ensure th	42120 - Planted Jack Pine	Cmpt. Review Proposal hey pertain to e for natural
Propo Start 59 Press Spec Othe	<u>Date:</u> 10/01/20 73009059_KW -Cut <u>cription</u> Clear cu <u>cription</u> Clear cu <u>cription</u> Stand is <u>iments:</u> Monitor	70.1 t with reser rests. Stand ation. (Leav within LKV	Jack Pine rves manage for natur d is within LKW block /e tops, late summer h V block 115. Stand is eneration until adequa	Density Pole al regenera 115. 2014 harvest, pos within the C	43 tion for K POW. Sa t harvest ranberry	W habitat. ale specs r scarification Gas Stora	Harvest Leave scattered need to include s on). ge Field; pipelind	Clearcut with Reserves I red pine. Follow re pecs that ensure th es, wells and servic	42120 - Planted Jack Pine etention guidelines as t le best possible chance	Cmpt. Review Proposal hey pertain to e for natural area.
Propo Start I 59 Press Spec Othe Com Next Step Propo	73009059_KW -Cut Cription Clear cu S: KW han regenera er Stand is ments: Monitor S: plant yea	70.1 t with reser vests. Stand tition. (Leav within LKV natural regu ar would be	Jack Pine rves manage for natur d is within LKW block /e tops, late summer h V block 115. Stand is eneration until adequa	Density Pole al regenera 115. 2014 harvest, pos within the C	43 tion for K POW. Sa t harvest ranberry	W habitat. ale specs r scarification Gas Stora	Harvest Leave scattered need to include s on). ge Field; pipelind	Clearcut with Reserves I red pine. Follow re pecs that ensure th es, wells and servic	42120 - Planted Jack Pine etention guidelines as t le best possible chance e roads are within the a	Cmpt. Review Proposal hey pertain to e for natural area.
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59 Press 59 Press Spec Com Next Step Propc Start	Date: 10/01/20° 73009059_KW -Cut cription Clear cu 25: KW harve 25: Stand is 27: Stand is 28: Monitor 29: plant yea 20: 10/01/20° 73009059_MF B-Cut cription Create a	70.1 t with reservests. Stand ation. (Leav within LKV natural regular would be 13 25.8 nd maintai	Jack Pine Twes manage for natur d is within LKW block ve tops, late summer h V block 115. Stand is eneration until adequa e 2021. 42220 - Natural Jack Pine	Density Pole al regenerai 115. 2014 harvest, pos within the C ate regenera High Density Pole Seed tree w	43 tion for K POW. Sa t harvest ranberry tion is ac	W habitat. ale specs r scarificatio Gas Stora chieved. Pl	Harvest Leave scattered teed to include s on). ge Field; pipelind ant jack pine if n Harvest	Clearcut with Reserves I red pine. Follow re pecs that ensure th es, wells and servic atural regen fails to Seed Tree with Reserves	42120 - Planted Jack Pine etention guidelines as t te best possible chance e roads are within the produce suitable KW 3302 - Low Density	Cmpt. Review Proposal hey pertain to e for natural area. habitat. Target Cmpt. Review Proposal
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t			Glad	lwin Mgt. Unit	Tab			ents Prescril ing Factor	bed	Compartment: 009 Year of Entry 2014	OF NATURAL
a n d		tment me	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
61	730090	061-Cut	37.2	42110 - Planted Red Pine	High Density Pole	77	111-140	Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal
Presc Spec:	<u>s:</u>	pine of a	verage dia		ive trees sh	ould be	eft individua	ally and in small	groups. Follow ret	to three trees per acre ention guidelines as the s 2021.	
<u>Other</u> Comr				V block 117 - 2018 PC Cranberry Gas Storag						istinguishable; jack pin	e is on decline.
<u>Next</u> Steps		Following	g harvest t	rench and plant jack p	ine for KW I	nabitat.					
Propos Start D		10/01/201	17								
64		064_KW Cut	71.8	42220 - Natural Jack Pine	High Density Pole	74		Harvest	Clearcut with Reserves	42220 - Natural Jack Pine	Cmpt. Review Proposal
Presc Spece		KW harv	ests. Stan		115. 2014	POW. S	ale specs n	eed to include s		etention guidelines as t ne best possible chanc	
Other	_	Stand is	within LKV	•	ack pine sta			,	tand is within the C	cranberry Gas Storage	Field; pipelines
<u>Next</u> Steps Propos	<u>:</u> sed_	plant yea	natural reg ar would be		ite regenera	tion is a	chieved. Pla	ant jack pine if n	natural regen fails to	o produce suitable KW	habitat. Target
Start D	Date:	10/01/201	13								
<u>64</u>	730090	10/01/201 064_MF Cut	13 18.0	42220 - Natural Jack Pine	High Density Pole	74		Harvest	Seed Tree with Reserves	3302 - Low Density Conifer Trees	Cmpt. Reviev Proposal
64	730090 B-1	064_MF Cut Create a	18.0 nd maintai	Jack Pine	Density Pole Seed tree w		ves 2" spec		Reserves		Proposal
64 Presc Specs	73009(B- cription s:	064_MF Cut Create a break tre Stand is	18.0 nd maintai atment wil	Jack Pine in as fuelbreak stand. I be on the 2018 POW	Density Pole Seed tree w /. ack pine sta	ith reser		all jack pine. Lu	Reserves eave all red pine a	Conifer Trees	Proposal arvest. Fuel
64 Presc Spec: Other Comr Next	730090 B-1 s: <u>s:</u> nents:	064_MF Cut Create a break tre Stand is pipelines	18.0 nd maintai atment wil within LKV s, wells and	Jack Pine in as fuelbreak stand. I be on the 2018 POW V block 115. Natural j	Density Pole Seed tree w /. ack pine sta hin the area	ith reser and with		all jack pine. Lu	Reserves eave all red pine a	Conifer Trees	Proposal arvest. Fuel
64 Presc Spec: Other Comr Next Steps Propos	73009(B- sription S: nents:	064_MF Cut Create a break tre Stand is pipelines	18.0 nd maintai eatment wil within LKV s, wells and g harvest c	Jack Pine in as fuelbreak stand. I be on the 2018 POW V block 115. Natural j d service roads are wit	Density Pole Seed tree w /. ack pine sta hin the area	ith reser and with		all jack pine. Lu	Reserves eave all red pine a	Conifer Trees	Proposal arvest. Fuel
64 Presc Spec: Other Comr	73009(B- s: <u>s:</u> <u>nents:</u> <u>sed</u> <u>bate:</u>	064_MF Cut Create a break tre Stand is pipelines Following	18.0 nd maintai eatment wil within LKV s, wells and g harvest c	Jack Pine in as fuelbreak stand. I be on the 2018 POW V block 115. Natural j d service roads are wit	Density Pole Seed tree w /. ack pine sta hin the area	ith reser and with		all jack pine. Lu	Reserves eave all red pine a	Conifer Trees	Proposal arvest. Fuel
64 Presc Spec: Other Comr Next Steps Propos Start I 65	73009(B- s: nents: <u>sed</u> Date: 73009(s:	D64_MF Cut Create a break tre Stand is pipelines Following 10/01/201 D65-Cut Clear cut pine of a	18.0 nd maintai eatment wil within LKV s, wells and g harvest c 17 47.2 t with reserverage dia	Jack Pine in as fuelbreak stand. I be on the 2018 POW V block 115. Natural j d service roads are wit create and maintain as 42220 - Natural Jack Pine rves followed by planti	Density Pole Seed tree w /. ack pine sta hin the area fuel break s High Density Pole ng jack pine ave trees sh	ith reser and with stand. 70 e for KW ould be	oak and rec 81-110 habitat. Lea	all jack pine. Lu pine present. S Harvest Harvest ave scattered re ally and in small	Reserves eave all red pine an Stand is within the G Clearcut with Reserves ed pine. Leave two I groups. Follow ret	Conifer Trees nd oak. Require chip ha Cranberry Gas Storage 42120 - Planted Jack Pine to three trees per acre ention guidelines as the	Proposal arvest. Fuel Field; Cmpt. Reviev Proposal favoring red
64 Pressc Spec: Other Comr Next Steps Propos Start L 65 Pressc Spec: Other	73009(B- si nents: <u>sed</u> <u>2ate:</u> 73009(sription s: <u>nents:</u>	064_MF Cut Create a break tre Stand is pipelines Following 10/01/201 065-Cut Clear cur pine of a KW harv Stand is service r	18.0 nd maintai eatment wil within LKV s, wells and g harvest c g harvest c 17 47.2 t with reserver verage dia rests. Stan within LKV oads are w	Jack Pine in as fuelbreak stand. I be on the 2018 POW V block 115. Natural j d service roads are wit create and maintain as 42220 - Natural Jack Pine rves followed by planti imeter and greater, lea d is within LKW block V block 117 - 2018 PC vithin the area. Jack pi	Density Pole Seed tree w /. ack pine sta hin the area fuel break s fuel break s High Density Pole ng jack pine ave trees sh 117. Defer W - target p ne is maturo	ith reser and with stand. 70 for KW ould be treatme blant yea e and at	81-110 Abitat. Lea eft individua nt to the 20 ar 2021. Sta risk of blow	all jack pine. Lo pine present. S Harvest Harvest ave scattered re ally and in small 18 plan-of-work, nd is within the down and/or bu	Reserves eave all red pine an Stand is within the C Clearcut with Reserves ed pine. Leave two I groups. Follow ret target plant year is Cranberry Gas Sto d worm. Oak is alro	Conifer Trees nd oak. Require chip ha Cranberry Gas Storage 42120 - Planted Jack Pine to three trees per acre ention guidelines as the	Proposal arvest. Fuel Field; Cmpt. Review Proposal favoring red ey pertain to vells and nice red pine
64 Pressc Spec: Other Comr Next Steps Propos Start L 65 Pressc Spec: Other	73009(B- si si nents: sed Date: 73009(sription si nents:	064_MF Cut Create a break tre Stand is pipelines Following 10/01/201 065-Cut Clear cur pine of a KW harv Stand is service r mixed in	18.0 Ind maintai eatment will within LKV s, wells and g harvest of g harvest of 47.2 t with reselver verage dia rests. Stan within LKV oads are w mainly in a	Jack Pine in as fuelbreak stand. I be on the 2018 POW V block 115. Natural j d service roads are wit create and maintain as 42220 - Natural Jack Pine rves followed by planti imeter and greater, lea d is within LKW block V block 117 - 2018 PC vithin the area. Jack pi	Density Pole Seed tree w /. ack pine sta hin the area fuel break s fuel break s fuel break s fuel break s fuel break s fuel break s Pole ng jack pine ave trees sh 117. Defer)W - target j ne is maturu e north edg	ith reser and with stand. 70 e for KW ould be l treatme blant yea e and at e of star	81-110 Abitat. Lea eft individua nt to the 20 ar 2021. Sta risk of blow	all jack pine. Lo pine present. S Harvest Harvest ave scattered re ally and in small 18 plan-of-work, nd is within the down and/or bu	Reserves eave all red pine an Stand is within the C Clearcut with Reserves ed pine. Leave two I groups. Follow ret target plant year is Cranberry Gas Sto d worm. Oak is alro	Conifer Trees nd oak. Require chip ha Cranberry Gas Storage 42120 - Planted Jack Pine to three trees per acre ention guidelines as the s 2021. rage Field; pipelines, v eady in decline. Some	Proposal arvest. Fuel Field; Cmpt. Review Proposal favoring red ey pertain to vells and nice red pine

Table 3 -- Treatments Prescribed Compartment: 009 Gladwin Mgt. Unit with No Limiting Factor Year of Entry 2014 s t а Treatment Acres CoverType Size Stand BA Treatment Treatment Cover Type n Approval Method Objective Name Density Status Age Range Type d 73009068-Cut 42220 - Natural 33 Clearcut with 68 294 High Harvest 3302 - Low Density Cmpt. Review Density Reserves Proposal Jack Pine Conifer Trees Pole Prescription Create and maintain as fuelbreak stand. Clear cut with reserves 2" spec. Require chip harvest. Leave all oak and red pine. Fuel break treatment will be on the 2018 POW. Specs: Other_ Stand is within LKW block 115. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area. Comments: <u>Next</u> Following harvest create and maintain as fuel break stand. Steps: Proposed 10/01/2017 Start Date: 73009069-Cut 19.0 42110 - Planted 171-200 42120 - Planted Cmpt. Review 69 High 77 Harvest Clearcut with Red Pine Density Reserves Jack Pine Proposal Pole Prescription Clear cut with reserves followed by planting jack pine for KW habitat. Leave scattered red pine. Leave two to three trees per acre favoring red pine of average diameter and greater, leave trees should be left individually and in small groups. Follow retention guidelines as they pertain to Specs: KW harvests. Stand is within LKW block 117. Defer treatment to the 2018 plan-of-work, target plant year is 2021. Stand is within LKW block 117 - 2018 POW - target plant year 2021. Old 1937 hand planting. Rows are indistinguishable; jack pine is on decline. Other Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area. Comments: Following harvest trench and plant jack pine for KW habitat. Next Steps: Proposed Start Date: 10/01/2017 73009072-Cut 42110 - Planted 51 High 77 141-170 Shelter Wood 4122 - Oak, Pine Cmpt. Review 72 Harvest Red Pine Density with Reserves Proposal Pole Prescription Shelterwood to release and establish a mix of natural regen of oak, white pine and jack pine. Remove all jack pine and oak, reduce red pine residual down to 50 BA/AC. Red pine density varies, in some places not much red pine will need marking to hit the desired residual. Address Specs: retention along slope leading down to the Cranberry Creek flood plain and leaving scattered large wolfy oak. Old 1938 hand planting. Rows are indistinguishable; jack pine is on decline. Stand is within the Cranberry Gas Storage Field; pipelines, wells and Other service roads are within the area. Comments: <u>Next</u> Monitor natural regeneration until adequate regeneration is achieved. A mix of oak/pine regeneration is acceptable. Interplant red pine to maintain full stocking if needed. Steps: Proposed Start Date: 10/01/2013 73009076-Cut 24.9 42110 - Planted 77 111-140 Harvest Shelter Wood 4122 - Oak, Pine Cmpt. Review 76 High Red Pine with Reserves Density Proposal Pole Prescription_ Shelterwood to release and establish a mix of natural regen of oak, white pine and jack pine. Remove all jack pine and oak, reduce red pine residual down to 50 BA/AC. Red pine density varies, in some places not much red pine will need marking to hit the desired residual. Address Specs: retention along slope leading down to the Muskegon River flood plain and leaving scattered large wolfy oak. Old 1938 hand planting. Rows are indistinguishable; jack pine is on decline. Stand is within the Cranberry Gas Storage Field; pipelines, wells and Other Comments: service roads are within the area. Very visable stand, Otter Drive bi-sects stand. Part off stand is a long/skinny arm pniched between KW block 117 and the Muskegon River flood plain with Otter Drive down the middle. <u>Next</u> Monitor natural regeneration until adequate regeneration is achieved. A mix of oak/pine regeneration is acceptable. Interplant red pine to maintain full stocking if needed. Steps:

Proposed Start Date: 10/01/2013

S t			Glad	dwin Mgt. Unit	Tabl			ents Prescrik ing Factor	bed	Compartment: 009 Year of Entry 2014	OF NATURAL OF NATURAL
a n d		tment Ime	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
77	73009	077-Cut	39.7	4122 - Oak, Pine	High Density Pole	88	51-80	Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal
Presc Spece		pine of a	verage dia		ive trees she	ould be l	eft individu	ally and in small	groups. Follow ret	to three trees per acre ention guidelines as the s 2021.	
<u>Other</u> Comr	<u>_</u> ments:	service r	bads are v		oak/ jack p	ine stand	d, poor qua	lity oak. jack pin	e appears to be yo	rage Field; pipelines, w unger than the oak how	
<u>Next</u> Steps	<u>:</u>	Following	g harvest f	trench and plant jack p	ine for KW I	nabitat.					
Propos Start D		10/01/201	7								
78	73009	078-Cut	5.7	42110 - Planted Red Pine	High Density Log	77	111-140	Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Reviev Proposal
Presc Specs		pine of a	verage dia		ve trees she	ould be l	eft individu	ally and in small	groups. Follow ret	to three trees per acre ention guidelines as the s 2021.	
<u>Other</u> Comr	<u>.</u> nents:	Stand is	within the		e Field; pipe	elines, w	ells and se	vice roads are v	vithin the area. All	listinguishable; jack pin jack pine and marked r	
<u>Next</u> Steps	<u>:</u>			trench and plant jack p				onie camege, m			
Propos Start D	sed	10/01/201	7								
80	73009	080-Cut	12.9	4119 - Mixed Northern Hardwoods	High Density Pole	73	81-110	Harvest	Single Tree Selection	4119 - Mixed Northern Hardwoods	Cmpt. Reviev Proposal
Presc Specs				tand with a few scatter understory.	ed red and	white pir	i. A lowland	l draw runs throu	ugh the stand with	a few cedars present. L	ow levels of
<u>Other</u> Comr	nents:	Selectior	harvest i	reduce residual BA/AC	down to 60	to 80 sq	, ft. Do not	eliminate any or	ne species.		
		Monitor r	natural reg	oporation until adoqua	te regenera	tion is a	chieved. A	mix of mixed oal	and red maple re	generation is acceptab	le.
<u>Next</u> Steps	<u>;;</u>									3	
Steps Propos	sed	10/01/201	3							3	
	<u>sed</u> Date:	10/01/201 081-Cut	3 35.0	42220 - Natural Jack Pine	High Density Pole	60	81-110	Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	
Steps Propos Start D	sed Date: 73009	081-Cut Clear cut pine of a	35.0 with reseverage dia	42220 - Natural Jack Pine rves followed by planti	Density Pole ng jack pine ive trees sho	for KW ould be I	habitat. Le eft individu	ave scattered re ally and in small	Clearcut with Reserves d pine. Leave two groups. Follow ret	42120 - Planted Jack Pine to three trees per acre ention guidelines as the	Cmpt. Revie Proposal favoring red
Steps Propos Start D 81 Presc Specs Other	sed Date: 73009 ription s:	081-Cut Clear cut pine of a KW harv Stand is Jack pine	35.0 with rese verage dia ests. Star within LKN	42220 - Natural Jack Pine rves followed by planti ameter and greater, lea Id is within LKW block W block 117 - 2018 PC It at the age of decline	Density Pole ng jack pine ive trees sho 117. Defer W - target p	for KW ould be l treatmen	habitat. Le eft individu nt to the 20 nr 2021. Aln	ave scattered re ally and in small 18 plan-of-work, nost a pure jack	Clearcut with Reserves d pine. Leave two groups. Follow ret target plant year is pine stand, not mu	42120 - Planted Jack Pine to three trees per acre ention guidelines as the	Cmpt. Revie Proposal favoring red ey pertain to 1/J1 at best.
Steps Propos Start D 81 Presc Specs Other	<u>sed</u> <u>Date:</u> 73009 <u>rription</u> <u>s:</u> <u>nents:</u>	081-Cut Clear cut pine of a KW harv Stand is Jack pine are within	35.0 with reseverage dia ests. Star within LKN e is OK bu	42220 - Natural Jack Pine rves followed by planti ameter and greater, lea Id is within LKW block W block 117 - 2018 PC It at the age of decline	Density Pole ng jack pine ive trees sho 117. Defer W - target p and budwor	for KW ould be l treatmen olant yea m risk. {	habitat. Le eft individu nt to the 20 nr 2021. Aln	ave scattered re ally and in small 18 plan-of-work, nost a pure jack	Clearcut with Reserves d pine. Leave two groups. Follow ret target plant year is pine stand, not mu	42120 - Planted Jack Pine to three trees per acre ention guidelines as the s 2021. uch in the understory O	Cmpt. Review Proposal favoring red ey pertain to 1/J1 at best.

Table 3 -- Treatments Prescribed Compartment: 009 Gladwin Mgt. Unit Year of Entry 2014 with No Limiting Factor s t а Treatment Acres CoverType Size Stand BA Treatment Treatment Cover Type n Approval Method Name Density Objective Status Age Range Type d 73009083-Cut 42120 - Planted 1-50 Clearcut with 42120 - Planted 83 51 High 62 Harvest Cmpt. Review Density Proposal Jack Pine Reserves Jack Pine Pole Prescription Clear cut with reserves followed by planting jack pine for KW habitat. Leave scattered red pine. Leave two to three trees per acre favoring red pine of average diameter and greater, leave trees should be left individually and in small groups. Follow retention guidelines as they pertain to Specs: KW harvests. Stand is within LKW block 117. Defer treatment to the 2018 plan-of-work, target plant year is 2021. Other Stand is within LKW block 117 - 2018 POW - target plant year 2021. Old 1937 hand planting. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area. Comments: Following harvest trench and plant jack pine for KW habitat. <u>Next</u> Steps: Proposed 10/01/2017 Start Date: 73009086-Cut 7.9 42110 - Planted 171-200 42120 - Planted 86 High 59 Harvest Clearcut with Cmpt. Review Density Red Pine Reserves Jack Pine Proposal Pole Prescription Clear cut with reserves followed by planting jack pine for KW habitat. Leave scattered red pine. Leave two to three trees per acre favoring red Specs: pine of average diameter and greater, leave trees should be left individually and in small groups. Follow retention guidelines as they pertain to KW harvests. Stand is within LKW block 117. Defer treatment to the 2018 plan-of-work, target plant year is 2021. Stand is within LKW block 117 - 2018 POW - target plant year 2021. Stand is within the Cranberry Gas Storage Field; pipelines, wells and Other_ service roads are within the area. Planted in 1958, never been thinned yet. Small diameter and short. Comments: Next Following harvest trench and plant jack pine for KW habitat. Steps: Proposed Start Date: 10/01/2017 87 73009087-Cut 12.0 4123 - Red Oak High 88 111-140 Harvest Single Tree 4123 - Red Oak Cmpt. Review Density Selection Proposal Pole Prescription Selection harvest reduce residual BA/AC down to 60 to 80 sq, ft. Do not eliminate any one species. Specs: Age was taken on a 12.6 in red oak, 87 feet total height. Diameters vary in renge. Some 26"+ oak scattered throughout stand. Other Comments: <u>Next</u> Monitor natural regeneration until adequate regeneration is achieved. A mix of mixed oak and red maple regeneration is acceptable. Steps: Proposed Start Date: 10/01/2013 89 73009089 JF 10.3 42110 - Planted 73 141-170 Shelter Wood 3302 - Low Density Cmpt. Review High Harvest Red Pine with Reserves Conifer Trees Proposal B-Cut Density Log Prescription Create and maintain as fuelbreak stand. Shelterwood with reserves 2" spec. Leave 50 BA/AC of wind firm red pine. Require chip harvest. Specs: Other Stand is within LKW block 117 - 2018 POW - target plant year 2021. Old 1937 hand planting. Rows are indistinguishable; jack pine is on decline. Comments: Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area. Following harvest create and maintain as fuel break stand. <u>Next</u> Steps: Proposed [Variable] Start Date: 10/01/2013

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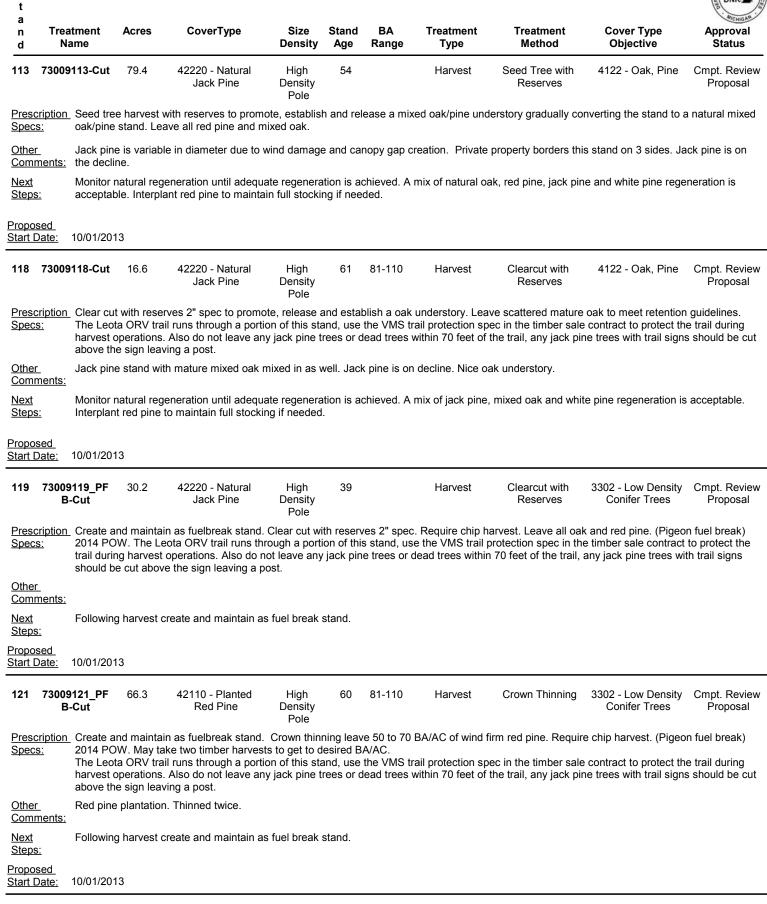
S t			Glady	vin Mgt. Unit	Tabl			ents Prescri ting Factor	bed	Compartment: 009 Year of Entry 2014	DNR DNR
a n d	Treat Nai		Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
89		89_KW Sut	18.3	42110 - Planted Red Pine	High Density Log	73	141-170	Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Reviev Proposal
Presci Specs	<u>.</u>	pine of av	/erage diar		eave trees sho	ould be	left individu	ally and in smal	l groups. Follow ret	to three trees per acre rention guidelines as th s 2021.	
<u>Other</u> Comm				block 117 - 2018 P Cranberry Gas Stora						listinguishable; jack pin	e is on decline
<u>Vext</u> Steps:		Following	harvest tre	ench and plant jack	pine for KW ł	abitat.					
ropos tart D		0/01/201	7								
90	730090	990-Cut	39.1	42110 - Planted Red Pine	High Density Log	74	81-110	Harvest	Shelter Wood with Reserves	42221 - Natural Jack Pine, Mixed Deciduous	Cmpt. Revie Proposal
Presci Specs		Shelterwo 115. 201		30 to 40 BA/AC of re	ed pine. Mana	age for a	a mix of na	tural regeneratio	n of mixed oak and	jack pine. Stand is wit	hin LKW block
Other Comm lext Steps: Copos Cart D	<u>nents:</u>	Oak unde Monitor n	erstory just atural rege gen fails to	starting to come in.	Stand is with ate regenerat	in the C tion is a	ranberry G chieved. A	as Storage Field mix of jack pine	d; pipelines, wells a	cut. Red pine residual i nd service roads are w ion is acceptable. Plan	ithin the area.
92		92_KW Sut	226.6	42220 - Natural Jack Pine	High Density Pole	63	51-80	Harvest	Clearcut with Reserves	42220 - Natural Jack Pine	Cmpt. Revie Proposal
resci pecs	<u>3:</u>	KW harve regenerat	ests. Stand tion. (Leave	is within LKW block	< 114. Ž2014 F	POW. S	ale specs i	need to include s	specs that ensure th	etention guidelines as t ne best possible chanc fails to produce suitabl	e for natural
Other Comm				block 114. Jack pir age Field; pipelines,					high amounts of re	egeneration. Stand is w	ithin the
lext iteps:			atural rege r would be		late regenerat	tion is a	chieved. P	lant jack pine if r	natural regen fails to	o produce suitable KW	habitat. Targe
opos art D		0/01/201	3								
92	730090 B-0	92_MF Cut	54.5	42220 - Natural Jack Pine	High Density Pole	63	51-80	Harvest	Seed Tree with Reserves	3302 - Low Density Conifer Trees	Cmpt. Revie Proposal
Presci Specs				as fuelbreak stand be on the 2018 PO		th rese	rves 2" spe	c all jack pine. L	eave all red pine a	nd oak. Require chip ha	arvest. Fuel
1	_			block 114. Jack pir age Field; pipelines,	•		-	• •	high amounts of re	egeneration. Stand is w	ithin the
			hanvoet or	eate and maintain a	s fuel break s	stand.					
Other Comm Jext Steps:		Following	naivest ci								

S t			Glad	win Mgt. Unit	Tabl			ents Prescril ting Factor	bed	Compartment: 009 Year of Entry 2014	DNR DNR
a n d		ment me	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
93		93_OP- ut	15.0	4122 - Oak, Pine	Medium Density Pole	90	51-80	Harvest	Clearcut with Reserves	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal
Pres Spec		Clear cut	with reser	ves followed by inter	planting to re	d pine.	FTP # C73	3-869.			
<u>Othe</u> <u>Com</u>	<u>r</u> ments:		part of solo both poor.	d timber sale, under o	contract. Otte	r Pines;	73-001-09	-01. Northern pir	n oak, jack pine mi	x. Oak salvage in 2005	. Oak and jack
<u>Next</u> Step		Following	ı harvest ir	nterplant red pine. FT	P # C73-869	has bee	en submitte	ed.			
Propc Start		10/01/200	8								
94		94_KW Cut	14.9	42110 - Planted Red Pine	High Density Log	77	141-170	Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal
Pres Spec		pine of a	verage dia		ave trees sho	uld be l	left individu	ally and in small	groups. Follow ret	to three trees per acre ention guidelines as the s 2021.	
<u>Othe</u> Com	<u>r</u> ments:			/ block 117 - 2018 P Cranberry Gas Storag						listinguishable; jack pin	e is on decline.
<u>Next</u> Step		Following	ı harvest tr	ench and plant jack p	pine for KW h	abitat.					
Propo Start		10/01/201	7								
94		94_OP- ut	30.6	42110 - Planted Red Pine	High Density Log	77	141-170	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
Pres Spec		Stand is BA/AC.	part of solo	timber sale, under c	contract. Otte	r Pines;	73-001-09	-01. Removing a	all jack pine and red	ducing residual red pine	e down to 72
<u>Othe</u> Com	<u>er</u> ments:	hand plai		s are indistinguishabl						oth gradually and in ste ge Field; pipelines, wel	
<u>Next</u> Step											
Propo Start		10/01/200	8								
95	73009)95-Cut	113.9	42220 - Natural Jack Pine	High Density Pole	65	51-80	Harvest	Clearcut with Reserves	42121 - Planted Jack Pine, Mixed Deciduous	Cmpt. Review Proposal
Pres Spec				ves, 2" spec. To mee should be 5 to 10 BA/						e and scattered northe	rn pin oak.
<u>Othe</u> Com		the age of block 118 size. Sca	of the jack 3 rolls arou ttered (10	pine consistantley at nd again. Understory BA/AC) of large DBH	60 to 70 year varies from northern pin	s. Stan O3 to O oak 10	d is within 1 1/W2/W4. 0 + years c	LKW block 118 t Scattered areas old. The white pir	hat was planted in s in which the white ne understory is de	em correct. Recent cor 1997. This stand will n e pine understory is or v nser along the west en Ils and service roads a	ot hold until very near pole d of stand
		area.									
<u>Next</u> Step		Following		nonitor natural regene red pine. Trench and						generaion is acceptable eration after 4 years.	e; jack pine,

s

Table 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 009 Year of Entry 2014



S t		Glady	win Mgt. Unit	Tab			ients Prescril iting Factor	bed	Compartment: 009 Year of Entry 2014	ANTINE CONTRACTOR
	atment ame	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
123 73009	9123-Cut	20.1	4122 - Oak, Pine	Medium Density Pole	93	51-80	Harvest	Clearcut with Reserves	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal
Prescription Specs:	L Clear cu	t with reser	ves followed by inter p	lanting to r	ed pine.	Leaving a	ll white pine (mos	stly saps) and 28 g	reen painted oak trees.	
<u>Other</u> Comments:	Stand is	part of sold	l timber sale, under co	ontract. Otte	er Pines;	73-001-09	9-01. Northern piı	n oak, jack pine mi	x. Oak salvage in 2005	
<u>Next</u> <u>Steps:</u>	Followin	g harvest in	terplant red pine.							
Proposed Start Date:	10/01/200)8								
135 73009	9135-Cut	48.1	42220 - Natural Jack Pine	High Density Pole	90	81-110	Harvest	Clearcut with Reserves	42250 - Pine, Oak	Cmpt. Review Proposal
Prescription Specs:	guideline trail duri	es. The Leo	ta ORV trail runs throu	ugh a portio It leave any	on of this	stand, us	e the VMS trail p	rotection spec in th	nd white pine to meet n e timber sale contract t , any jack pine trees wi	o protect the
<u>Other</u> Comments:	Nautural	jack pine v	vith scattered mixed of	ak and whit	e pine.					
<u>Next</u> <u>Steps:</u>		•	eneration until adequation maintain full stocking	•		chieved. A	mix of jack pine,	, mixed oak and wh	ite pine regeneration is	acceptable.
Proposed Start Date:	10/01/20 ⁻	13								
146 73009	9146-Cut	15.7	42210 - Natural Red Pine	High Density Pole	70	111-140	Harvest	Shelter Wood with Reserves	4122 - Oak, Pine	Cmpt. Review Proposal
Prescription Specs:	60 BA/A		e density varies. Addre						educe red pine residual e residual. Gradually co	
<u>Other</u> Comments:			ip for harvest in 1996 service roads are with			The jack p	ine is declining. S	Stand is within the	Cranberry Gas Storage	Field;
<u>Next</u> <u>Steps:</u>			eneration until adequat g if needed.	te regenera	ition is ad	chieved. A	mix of natural oa	ak/pine regeneratio	n is acceptable. Interpl	ant red pine to
Proposed Start Date:	10/01/20 ⁻	13								
147 73009	9147-Cut	108.6	42290 - Natural Mixed Pine	High Density Log	76 g	141-170	Harvest	Seed Tree with Reserves	4122 - Oak, Pine	Cmpt. Review Proposal
Prescription Specs:	stand. M	ark 10 to 40		leave and	leave all	l red pine	and white pine 4"	inches DBH and le	stand to a natural mixed ess. The residual red pi d white pine.	
<u>Other</u> Comments:			up for harvest in 1996 ines, wells and service					specially the jack p	pine. Stand is within the	Cranberry Gas
<u>Next</u> <u>Steps:</u>			eneration until adequat g if needed.	te regenera	tion is a	chieved. A	mix of natural oa	ak/pine regeneratio	n is acceptable. Interpl	ant red pine to
Proposed Start Date:	10/01/20 ⁻	13								

Table 3 - Treatments Prescribed with No Limiting Factor

Compartment: 009 Year of Entry 2014



S t a					with	No Limit	ting Factor		Year of Entry 2014	DNR DNR
	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
148 73	3009148-Cut	39.5	42210 - Natural Red Pine	High Density Pole	74	141-170	Harvest	Shelter Wood with Reserves	4122 - Oak, Pine	Cmpt. Review Proposal
<u>Prescrip</u> <u>Specs:</u>	60 BA/A		e density varies. Addr						duce red pine residual residual. Gradually co	
<u>Other</u> <u>Comme</u> i	nts: The sout	hern 1/3 h	•	I, and white					rea is heavier to red pi ⁻ ield; pipelines, wells a	
<u>Next</u> <u>Steps:</u>			eneration until adequang if needed.	ite regenera	ition is a	chieved. A	mix of natural oa	ak/pine regeneratior	n is acceptable. Interpla	ant red pine to
Proposed Start Date		3								

149 73009	9 149-Cut 15.9	42110 - Planted Red Pine	High Density Log	75	141-170	Harvest	Shelter Wood with Reserves	4122 - Oak, Pine	Cmpt. Review Proposal
Prescription Specs:	residual down to 5	ease and establish a io BA/AC. Red pine do ope leading down to th	ensity varies, in	some	e places not r	nuch red pine v	vill need marking to	hit the desired residu	•
<u>Other</u> Comments:		y level, but starts to sl prage Field; pipelines,						he east. Stand is with	in the
<u>Next</u> <u>Steps:</u>	Monitor natural re maintain full stock	generation until adequing if needed.	late regeneratio	n is a	chieved. A m	ix of natural oa	k/pine regeneration	is acceptable. Interpl	ant red pine to
Proposed Start Date:	10/01/2013								
	Treatment Proposed: 176	2.4							

S t		Gladwi	n Mgt. Unit	Table 4		atments imiting	s Prescribed Factor	Compartment: 009 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> Comn										
<u>Next</u> <u>Steps</u>	<u>:</u>									
<u>Propos</u> Start D										
	ng Factor and N ment Reason	<u>lo_</u>								
Ac	Total Treatme creage Propose	-								

						eatments imiting Facto		Year of Entry: 2014	DP NATURAL PLANE
Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
73010274-Cut	26.5	42260 - Natural Pine, Mixed Deciduous	High Density Log	105 9		Harvest	Clearcut with Reserves	42110 - Planted Red Pine	Cmpt. Review Proposal
Prescription The sta Specs:	nd is to be	harvested as a 2" spe	ec final harve	st. The	retention s	hould be focused	d along the snowmo	obile trail.	
<u>Other</u> <u>Comments:</u>									
<u>Next</u> After th <u>Steps:</u>	e harvest re	eplant the stand to ree	d pine, expan	d the un	planted are	ea around the Le	ota Weather Statio	n.	
Proposed Start Date: 10/01/2	009								
73010290-Cut	17.1	42110 - Planted Red Pine	High Density Pole	56		Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal
Prescription The sta	nd needs to	o be thinned by a sys	tematic thinni	ing indivi	dual tree r	narking taking th	e residual BA down	n to 110.	
Other Comments:									
<u>Next</u> <u>Steps:</u>									
Proposed Start Date: 10/01/2	009								
73010295-Cut	28.0	4122 - Oak, Pine	High Density Pole	83		Harvest	Clearcut with Reserves	4129 - Mixed Oak	Cmpt. Review Proposal
		be harvested as a 2" s ald be focused along			ne harvest	should retain all	red and white pine	as well as marked oak	for retention.
<u>Other</u> Comments:									
<u>Next</u> After th <u>Steps:</u>	e stand is h	narvested interplant w	ith red pine.						
Proposed Start Date: 10/01/2	009								
73010296-Cut	39.4	42260 - Natural Pine, Mixed Deciduous	High Density Pole	68		Harvest	Clearcut with Reserves	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal
Prescription The sta Specs: should	nd is to be be concent	harvested as a 2" spe rated along the snow	ec final harve mobile trail.	st. The	retention s	hould be a mixtu	re of individually m	ark oak and pine. The	retention
<u>Other</u> <u>Comments:</u>									
<u>Next</u> After th <u>Steps:</u>	e stand is h	narvested plant to red	pine.						
Proposed Start Date: 10/01/2	000								

<u>Start Date:</u> 10/01/2009

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Out of YOE -- Treatments Prescribed with No Limiting Factor

	tment ame	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
73010	299-Cut	15.5	4122 - Oak, Pine	High Density Log	105 9		Harvest	Clearcut with Reserves	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Reviev Proposal
Prescription Specs:	The star	id is to be	harvested to 2" DBH	but do not cu	it any rec	d or white p	oine. Focus any	addition retention to	o the area along the s	nowmobile trail.
<u>Other</u> <u>Comments:</u>										
<u>Next</u> Steps:	After ha	vest interp	plant red pine this will	lead to a mix	ked oak/p	oine stand.				
Proposed Start Date:	10/01/20	09								
73010	308-Cut	21.7	42211 - Natural Red Pine, Mixed Deciduous	High Density Pole	73		Harvest	Clearcut with Reserves	42110 - Planted Red Pine	Cmpt. Reviev Proposal
Prescription Specs:			final harvested to 2" I Id be marked along th						or visual consideratio	n. In addition
<u>Other</u> Comments:										
<u>Next</u> Steps:	After ha	vest repla	nt the stand to red pir	ne.						
Proposed Start Date:	10/01/20	09								
73010	310-Cut	6.8	42211 - Natural Red Pine, Mixed Deciduous	High Density Pole	73		Harvest	Clearcut with Reserves	42110 - Planted Red Pine	Cmpt. Review Proposal
Prescription Specs:	Harvest	the stand	as a 2" spec final har	vest. The rete	ention sh	ould be pla	aced to address	visual concerns.		
<u>Other</u> Comments:										
<u>Next</u> Steps:	After the	harvest p	lant the stand to red p	oine.						
Proposed Start Date:	10/01/20	09								
73010	312-Cut	34.7	42110 - Planted Red Pine	High Density Log	73 9		Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Reviev Proposal
Prescription Specs:			harvested as a thinni dead oak. Focus the	ng taking the	BA dow			centrated the remov	al on damaged trees	
<u>Other</u> Comments:										
<u>Next</u> Steps:										
Proposed Start Data:	10/01/20	00								

Start Date: 10/01/2009

							eatments imiting 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
73010)314-Cut	9.2	42140 - Planted Mixed Pine	High Density Pole	73		Harvest	Clearcut with Reserves	42110 - Planted Red Pine	Cmpt. Review Proposal
Prescription Specs:		id should I and for ret		nd to 2" DB	H. The s	stand shou	ld have red pine ar	nd oak marked to	o met retention or leave	the SE corner
<u>Other</u> <u>Comments:</u>										
<u>Next</u> <u>Steps:</u>	After the	stand is h	arvested replant the s	tand to red	pine.					
Proposed Start Date:	10/01/20	09								
73010)323-Cut	160.2	42220 - Natural Jack Pine	High Density Pole	63		Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal
Prescription Specs:			established KW Block uld be approximatly 33						in strip going from the	southwest to
<u>Other</u> <u>Comments:</u>										
<u>Next</u> <u>Steps:</u>	After the	harvest tr	ench and replant to jac	ck pine.						
Proposed Start Date:	10/01/20	09								
73010)324-Cut	34.3	42220 - Natural Jack Pine	High Density Pole	59		Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal
Prescription Specs:			established KW Block t to northeast going thr						ne stand should be left i wide.	n strip going
<u>Other</u> Comments:										
<u>Next</u> <u>Steps:</u>	After the	harvest tr	ench and plant jack pi	ne.						
Proposed Start Date:	10/01/20	09								
73010)325-Cut	86.7	42221 - Natural Jack Pine, Mixed Deciduous	High Density Pole	59		Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal
Prescription Specs:			established KW Block t to northeast going thr						ne stand should be left i wide.	n strip going
<u>Other</u> Comments:										
<u>Next</u> <u>Steps:</u>	After the	harvest tr	ench and plant jack pi	ne						
Proposed Start Data:	10/01/20	na								

Start Date: 10/01/2009

							eatments imiting Facto		Year of Entry: 2014	AND
	tment ime	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
73010	334-Cut	7.3	42121 - Planted Jack Pine, Mixed Deciduous	High Density Pole	72		Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal
Prescription Specs:	The stan	d is to be l	harvested as a 2" Spec	final harve	st.					
<u>Other</u> Comments:										
<u>Next</u> <u>Steps:</u>	After the	harvest re	eplant the stand to jack	pine.						
Proposed Start Date:	10/01/20	06								
73010	336-Cut	32.5	4122 - Oak, Pine	High Density Log	94		Harvest	Clearcut with Reserves	4121 - Oak, Aspen	Cmpt. Review Proposal
Prescription Specs:	Harvest retention		as a 2" spec, except for	r oak which	is to be	cut to 4" D	BH and white pi	ine to be cut to 6" D	BH. In addition mark	some trees for
<u>Other</u> <u>Comments:</u>										
<u>Next</u> Steps:	The stan	d is expec	ted to regenerate to a	mixture of a	spen, oa	ak, maple, a	and jack pine.			
Proposed Start Date:	10/01/20	06								
73010	338-Cut	86.7	42290 - Natural Mixed Pine	High Density Pole	74		Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal
Prescription Specs:			established KW Block. to northeast going three							n strip going
<u>Other</u> <u>Comments:</u>										
<u>Next</u> <u>Steps:</u>	After the	harvest tro	ench and plant jack pin	e for KW.						
Proposed Start Date:	10/01/20	09								
73010	344-Cut	22.8	4125 - Black, N. Pin Oak	High Density Pole	96		Harvest	Clearcut with Reserves	4121 - Oak, Aspen	Cmpt. Review Proposal
Prescription Specs:	Harvest	the stand a	as a 2" spec final harve	st, except t	ne oak v	which is to b	pe cut to 4" DBH	I. In addition, do no	t harvest any white an	d red pine.
<u>Other</u> <u>Comments:</u>										
<u>Next</u> <u>Steps:</u>	The stan	d is expec	ted to regenerate to a	nixture of o	ak and a	aspen.				
Proposed Start Date:	10/01/20	06								

Year of Entry: 2014

Out of YOE -- Treatments Prescribed with No Limiting Factor

 Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
73010420-Cut	1.5	42220 - Natural Jack Pine	High Density Pole	66		Harvest	Clearcut with Reserves	42120 - Planted Jack Pine	Cmpt. Review Proposal - Incomplete

<u>Prescription</u> The stand should be harvested as a 2" spec final harvest. The retention should be kept in a small patch. <u>Specs:</u>

<u>Other</u>

Comments:

Next The stand is to be replanted to jack pine after it is harvested. Steps:

Proposed Start Date: 10/01/2012

> Total Treatment Acreage Proposed: 630.9

Gladwi	n Mgt. Unit		5 – Fo	prested Sta	nds Compartment: 009 Year of Entry: 2014
Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
4130 - Aspen	High Density Sapling	33.3	4		Clear cut 2007. Aspen regen with red maple and oak mixed in.
4126 - White, Black, N. Pin Oak	High Density Pole	5.8	92	81-110	Mixed oak stand with aspen and red pmaple. Oak diameters very.
42110 - Planted Red Pine	High Density Pole	14.8	61	111-140	Red pine stand thinned in 1996.
4130 - Aspen	High Density Sapling	26.2	26		Clear cut 1986. Aspen regen with oak through out.
42220 - Natural Jack Pine	High Density Sapling	38.0	16		Natural jack pine regen with scattered oak.
42110 - Planted Red Pine	High Density Pole	7.3	78	51-80	Planted red pine. Has been thinned heavy allowing jack pine and oak to become established. Stand acts as buffer and corridor between Cranberry Creek/floodplain and KW cut to the south.
42120 - Planted Jack Pine	High Density Sapling	154.3	5		Clear cut and planted to jack pine in 2007. KW habitat planted in opposing weave pattern. LKW block 116.
42110 - Planted Red Pine	High Density Pole	5.7	52	200+	Planted red pine. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
42290 - Natural Mixed Pine	High Density Pole	31.4	98	51-80	Mixed pine stand with some oak. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
42200 - Natural White Pine	High Density Pole	25.7	90	51-80	White pine dominated stand with scattered oak and aspen. White pine is most prevelant at all stand layers. Pockets of stand are dominated by red maple.
42120 - Planted Jack Pine	High Density Sapling	64.8	24		Clear cut and planted to jack pine in 1988. KW habitat planted in opposing weave pattern. LKW block 118
42120 - Planted Jack Pine	High Density Sapling	8.9	15		Clear cut and planted to jack pine in 1997. KW habitat planted in opposing weave pattern. LKW block 118
42220 - Natural Jack Pine	High Density Pole	27.2	15		Jack pine dominated stand with scattered red pine and mixed oak.
42110 - Planted Red Pine	High Density Log	40.1	68	51-80	Red pine stand with natural jack pine and oak in the understory. Jack pine and oak were harvested in 1996.
42220 - Natural Jack Pine	High Density Pole	25.9	98		Old jack pine stand with oak. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
	Level 4 Cover Type 4130 - Aspen 4126 - White, Black, N. Pin Oak 42110 - Planted Red Pine 42220 - Natural Jack Pine 42220 - Natural Jack Pine 42110 - Planted Red Pine 42290 - Natural Mixed Pine 42200 - Natural Mixed Pine 42200 - Natural Mixed Pine 42220 - Natural Mixed Pine 42220 - Natural Jack Pine	Cover TypeDensity4130 - AspenHigh Density Sapling4126 - White, Black, N.High Density Pole42110 - Planted RedHigh Density Pole4130 - AspenHigh Density Sapling42220 - Natural JackHigh Density Pole42110 - Planted Red PineHigh Density Sapling42120 - Planted Jack PineHigh Density Pole42110 - Planted Red PineHigh Density Pole42120 - Natural Mixed PineHigh Density Pole42200 - Natural Mixed PineHigh Density Pole42200 - Natural Mixed PineHigh Density Pole42120 - Planted Jack PineHigh Density Pole42220 - Natural Mixed PineHigh Density Pole42120 - Planted Jack PineHigh Density Sapling42120 - Planted Jack PineHigh Density Sapling42120 - Planted Jack PineHigh Density Sapling42120 - Planted Jack PineHigh Density Sapling42120 - Planted Jack PineHigh Density Sapling42220 - Natural Jack PineHigh Density Sapling42220 - Natural Jack PineHigh Density Pole42220 - Natural Jack PineHigh Density Pole42220 - Natural Jack PineHigh Density Pole	Level 4 Cover TypeSize DensityAcres4130 - AspenHigh Density Sapling33.34126 - White, Black, N. Pin OakHigh Density Pole5.842110 - Planted Red PineHigh Density Sapling14.84130 - AspenHigh Density Sapling26.242220 - Natural Jack PineHigh Density Sapling38.042110 - Planted Red PineHigh Density Pole7.342120 - Planted Jack PineHigh Density Sapling5.742100 - Natural Mixed PineHigh Density Pole5.742200 - Natural Mixed PineHigh Density Pole31.442120 - Planted Jack PineHigh Density Pole31.442120 - Planted Jack PineHigh Density Pole35.742220 - Natural Mixed PineHigh Density Sapling64.842120 - Planted Jack PineHigh Density Sapling8.942120 - Planted Jack PineHigh Density Sapling8.942120 - Planted Jack PineHigh Density Sapling8.942120 - Planted Jack PineHigh Density Sapling27.242110 - Planted Mede PineHigh Density Sapling27.242110 - Planted Red PineHigh Density Sapling27.242110 - Planted Red PineHigh Density Sapling27.242120 - Natural Jack PineHigh Density Sapling27.242110 - Planted Red PineHigh Density Sapling27.242110 - Planted Red PineHigh Density <td>Level 4 Cover TypeSize DensityAcresStand Age4130 - AspenHigh Density33.344130 - AspenHigh Density5.8924126 - White, Black, N. Pin OakHigh Density5.89242110 - Planted RedHigh Density26.2264130 - AspenHigh Density26.22642220 - Natural Jack PineHigh Density38.01642110 - Planted Red PineHigh Density7.37842120 - Planted Jack PineHigh Density5.75242100 - Planted Red PineHigh Density5.75242200 - Natural Mixed PineHigh Density31.49842200 - Natural White PineHigh Density Pole25.79042120 - Planted Jack PineHigh Density Pole25.79042120 - Planted Jack PineHigh Density Sapling8.91542120 - Planted Jack PineHigh Density Sapling24.2202442120 - Planted Jack PineHigh Density Sapling25.79042120 - Planted Jack PineHigh Density Sapling27.21542220 - Natural Jack PineHigh Density Sapling27.21542110 - Planted Red PineHigh Density Sapling27.21542220 - Natural Jack PineHigh Density Sapling27.21542220 - Natural Jack PineHigh Density Sapling25.998</br></td> <td>Level 4 Cover Type Size Density Acres Stand Age BA Range 4130 - Aspen High Density Sapling 33.3 4 4126 - White, Black, N. Pin Oak High Density Pole 5.8 92 81-110 42110 - Planted Red Pine High Density Pole 14.8 61 111-140 4130 - Aspen High Density Pole 26.2 26 </td>	Level 4 Cover TypeSize 	Level 4 Cover Type Size Density Acres Stand Age BA Range 4130 - Aspen High Density Sapling 33.3 4 4126 - White, Black, N. Pin Oak High Density Pole 5.8 92 81-110 42110 - Planted Red Pine High Density Pole 14.8 61 111-140 4130 - Aspen High Density Pole 26.2 26

S t	Gladwi	n Mgt. Unit	5 – Forested Stands			Inds Compartment: 009 Year of Entry: 2014
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
22	42220 - Natural Jack Pine	High Density Pole	16.3	50		Stand is within LKW block 115. Jack pine stand with scattered red pine, white pine and oak. Red pine is found in northern portion of stand. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
23	42120 - Planted Jack Pine	High Density Sapling	229.8	13		Clear cut and planted to jack pine in 1997. KW habitat planted in opposing weave pattern. LKW block 118.
24	42110 - Planted Red Pine	High Density Log	19.7	73	51-80	Planted red pine stand. Oak and jack pine are rgenerating in the understory.
25	42120 - Planted Jack Pine	High Density Sapling	218.5	26		Clear cut and planted to jack pine in 1986. KW habitat planted in opposing weave pattern. LKW block 115.
26	42120 - Planted Jack Pine	High Density Sapling	96.8	5		Clear cut and planted to jack pine in 2007. KW habitat planted in opposing weave pattern. LKW block 116.
27	4134 - Aspen, Spruce/Fir	High Density Pole	31.3	84	1-50	Stand is dominated by quaking aspen, red maple and balsam fir. Scattered oak of all size classes. Mostly an upland stand, with pockets of low wet soils. Aspen and balam have reached maturity. Deer browse present through out stand on oak less than 2' ft. Large CWD through out entire stand (aspen/balsam)
30	42220 - Natural Jack Pine	High Density Pole	66.6	50		Stand is within LKW block 115. Natural mixed pine stand with some oak mixed in. Jack pine age varies from 50 - 67. Most of the jack pine is in the 50 yr age class. Species composition remains comparable through out stand. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
31	42110 - Planted Red Pine	High Density Pole	24.6	57	111-140	Red pine plantation. First time 3rd row thinned in 2008. All scattered oak was left.
32	42220 - Natural Jack Pine	High Density Pole	82.0	49		Jack pine dominated stand with a white pine component at all levels. Stand is within LKW block 115. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
33	42260 - Natural Pine, Mixed Deciduous	High Density Pole	51.3	61	1-50	White pine dominated stand with mixed deciduous scattered throughout stand, mainly located in gaps in the canopy. There are cut stumps present in the areas dominated by maple regeneration. Evidence of a partial harvest are present dating back 10-15 years ago.
34	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	10.4	55		
35	4130 - Aspen	High Density Pole	15.1	25		Aspen dominated stand with log size pine scattered throughout. Majority of pine is located on west edge of stand along the cranberry creekflooedplain. Some lowland pockets can be found within stand boudary.

S t	Gladwi		5 – Fo	prested Sta	rnds Compartment: 009 Year of Entry: 2014	
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
37	42120 - Planted Jack Pine	Medium Density	32.9	15		Jack pine planted area with oak regeneration throughout.
38	42120 - Planted Jack Pine	High Density Sapling	932.6	13		Clear cut and planted to jack pine in 1997. KW habitat planted in opposing weave pattern. LKW block 118.
40	42220 - Natural Jack Pine	High Density Sapling	11.0	16		Stand is within LKW block 115. Clear cut 1996 natural regen.
41	42120 - Planted Jack Pine	High Density Sapling	32.6	12		Clear cut and planted to jack pine in 2000. Buffer was left along Cranberry Creek. Not planted in oppossing weave pattern. Uncut area at NW corner of stand was left out of sale to protect foundation.
42	4199 - Other Mixed Upland Deciduous	Medium Density Pole	36.3	62	1-50	Mixed stand mainly composed of oak and maple. Mainly upland gorund, with lowland areas in the southern portion of stand. Stand has evidence of partial harvest sometime within the past 20 years. Advanced aspen regeneration pockets are present throughout the stand.
44	4130 - Aspen	High Density Sapling	43.3	16		Stand was harvested in 1996.
45	42220 - Natural Jack Pine	High Density Pole	33.6	65		Stand is within LKW block 115. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
47	42110 - Planted Red Pine	High Density Pole	46.9	65	111-140	Stand is within LKW block 115. Good red pine ground. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
51	42120 - Planted Jack Pine	High Density Sapling	24.4	12		Clear cut and planted to jack pine in 2000. Buffer was left along Cranberry Creek. Not planted in oppossing weave pattern. Stand is within LKW block 117.
52	42140 - Planted Mixed Pine	High Density Sapling	70.9	22		Clear cut and planted to red pine in 1990. A fair amount of natural jack pine and northern pin oak mixed in as well. Stand is within LKW block 117. Inclusion of small pocket of mature timber at north end of stand. Inclusion is a mix of natural red pine, jack pine and northern pin oak. (jp 50%, rp 40%, npo 10%)
53	42220 - Natural Jack Pine	High Density Pole	100.0	60		Stand is within LKW block 115. Storm damage present in stand. Somewhat variable diameters in the jack pine (3-12 inches). Jack pine dominated stand with scattered oak. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
55	6119 - Mixed Lowland Deciduous Forest	Medium Density Pole	26.4	78		Muskegon River flood plain stand, down over a bank. Seasonally flooded. Wet mucky soils.
57	4130 - Aspen	Medium Density Pole	9.4	80		

S t	Gladwir	n Mgt. Unit		5 – Fo	prested Sta	nds Compartment: 009 Year of Entry: 2014
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
58	4130 - Aspen	High Density Pole	17.3	25		
59	42220 - Natural Jack Pine	High Density Pole	95.8	43		Stand is within LKW block 115. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
61	42110 - Planted Red Pine	High Density Pole	37.2	77	111-140	Stand is within LKW block 117 - 2018 POW - target plant year 2021. Old 1937 hand planting. Rows are indistinguishable; jack pine is on decline. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
62	4121 - Oak, Aspen	High Density Sapling	29.7	25		Mixed aspen-oak stand.
63	42220 - Natural Jack Pine	High Density Pole	4.4	45	1-50	Small pocket of jack pine left on back side of private line (house) when LKW block 118 was cut.
64	42220 - Natural Jack Pine	High Density Pole	89.8	74		Stand is within LKW block 115. Good red pine ground. Natural jack pine stand with oak and red pine present. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
65	42220 - Natural Jack Pine	High Density Pole	47.2	70	81-110	Stand is within LKW block 117 - 2018 POW - target plant year 2021. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area. Jack pine is mature and at risk of blowdown and/or bud worm. Oak is already in decline. Some nice red pine mixed in mainly in a narrow strip along the north edge of stand. To confirm age I cored two jack pine trees and got 65 - 70 years old.
66	4125 - Black, N. Pin Oak	High Density Sapling	41.4	15		Mixed oak, aspen, cherry, and pine stand.
67	42110 - Planted Red Pine	High Density Log	46.5	75	81-110	Planted red pine stand with scattered oak. Stand gaps have high density of jack pine regeneration. Oak regeneration found throughout.
68	42220 - Natural Jack Pine	High Density Pole	29.4	33		Stand is within LKW block 115. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
69	42110 - Planted Red Pine	High Density Pole	19.0	77	171-200	Stand is within LKW block 117 - 2018 POW - target plant year 2021. Old 1937 hand planting. Rows are indistinguishable; jack pine is on decline. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
70	6117 - Lowland Deciduous, Mixed Coniferous	High Density Log	3.5	75		Steep slope leading down to Muskegon River flood plain. Narrow stand between PVT and large KW block, the KW harvest went up to the drop off.
72	42110 - Planted Red Pine	High Density Pole	5.1	77	141-170	Old 1938 hand planting. Rows are indistinguishable; jack pine is on decline. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.

S t	Gladwi	Gladwin Mgt. Unit			prested Sta	rinds Compartment: 009 Year of Entry: 2014
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
73	42120 - Planted Jack Pine	High Density Sapling	9.5	10		Stand is within LKW block 117. Clear cut and planted to jack pine in 2000. Not planted in opposing weave pattern.
74	42110 - Planted Red Pine	High Density Log	61.7	75	51-80	
75	42120 - Planted Jack Pine	High Density Pole	30.5	23		Stand is within LKW block 115. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
76	42110 - Planted Red Pine	High Density Pole	24.9	77	111-140	Old 1938 hand planting. Rows are indistinguishable; jack pine is on decline. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area. Very visable stand, Otter Drive bi-sects stand. Part off stand is a long/skinny arm pniched between KW block 117 and the Muskegon River flood plain with Otter Drive down the middle.
77	4122 - Oak, Pine	High Density Pole	39.7	88	51-80	Stand is within LKW block 117 - 2018 POW - target plant year 2021. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.N. pine oak/ jack pine stand, poor quality oak. jack pine appears to be younger than the oak however, both jack pine and oak are on the delcline on this very well drained site. Not much in the understory J1/O1 at best.
78	42110 - Planted Red Pine	High Density Log	5.7	77	111-140	Stand is within LKW block 117 - 2018 POW - target plant year 2021. Old 1937 hand planting. Rows are indistinguishable; jack pine is on decline. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area. All jack pine and marked red pine were removed in 2000. North/south rows were created. At desired BA for red pine sawlogs, high quality red pine.
79	4131 - Aspen, Oak	High Density Pole	59.8	23		
80	4119 - Mixed Northern Hardwoods	High Density Pole	12.9	73	81-110	Mixed deciduous stand with a few scattered red and white pin. A lowland draw runs through the stand with a few cedars present. Low levels of regeneration in the understory.
81	42220 - Natural Jack Pine	High Density Pole	35.0	60	81-110	Stand is within LKW block 117 - 2018 POW - target plant year 2021. Almost a pure jack pine stand, not much in the understory O1/J1 at best. Jack pine is OK but at the age of decline and budworm risk. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
82	42220 - Natural Jack Pine	High Density Pole	3.7	63	1-50	Small narrow strip between PVT and LKW block 118. Stand is the start of the drop off down to the Muskegon River flood plain.
83	42120 - Planted Jack Pine	High Density Pole	5.1	62	1-50	Stand is within LKW block 117 - 2018 POW - target plant year 2021. Old 1937 hand planting. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
85	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	20.3	109		Muskegon River flood plain stand, down over a bank. Seasonally flooded. Wet mucky soils.

S t	Gladwin Mgt. Unit			5 – Fo	orested Sta	nds Compartment: 009 Year of Entry: 2014
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
86	42110 - Planted Red Pine	High Density Pole	7.9	59	171-200	Stand is within LKW block 117 - 2018 POW - target plant year 2021. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area. Planted in 1958, never been thinned yet. Small diameter and short.
87	4123 - Red Oak	High Density Pole	12.0	88	111-140	Age was taken on a 12.6 in red oak, 87 feet total height. Diameters vary in renge. Some 26"+ oak scattered throughout stand.
88	4310 - Pine, Oak Mix	High Density Pole	36.3	75	51-80	
89	42110 - Planted Red Pine	High Density Log	28.6	73	141-170	Stand is within LKW block 117 - 2018 POW - target plant year 2021. Old 1937 hand planting. Rows are indistinguishable; jack pine is on decline. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
90	42110 - Planted Red Pine	High Density Log	39.1	74	81-110	Stand is within LKW block 114. Shelterwood harvest in 2009. All jack pine, oak and marked red pine were cut. Red pine residual is 80 BA/AC. Oak understory just starting to come in. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
91	6127 - Lowland Pine	High Density Pole	13.5	80		Muskegon River flood plain stand, down over a bank. Seasonally flooded. Wet mucky soils. Access issue, only access is across private.
92	42220 - Natural Jack Pine	High Density Pole	281.1	63	51-80	Stand is within LKW block 114. Jack pine is broke up in areas, creating stand gaps with high amounts of regeneration. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
93	4122 - Oak, Pine	Medium Density Pole	15.0	90	51-80	Stand is part of sold timber sale, under contract. Otter Pines; 73- 001-09-01. Northern pin oak, jack pine mix. Oak salvage in 2005. Oak and jack pine are both poor.
94	42110 - Planted Red Pine	High Density Log	45.5	77	141-170	Split stand into two treatments. 1/3 of stand (north of Otter Drive) is within LKW block 117 - 2018 POW - target plant year 2021. Old 1937 hand planting. Rows are indistinguishable; jack pine is on decline. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
						South 2/3 of stand is part of sold timber sale, under contract. Otter Pines; 73-001-09-01. In sold contract part of stand, removing all jack pine and reducing residual red pine down to 72 BA/AC. Stand changes as you move south towards the river. The elevation drops as you move towards the river both gradually and in steps.

S t	Gladwi	Gladwin Mgt. Unit			prested Sta	Ands Compartment: 009 Year of Entry: 2014
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
95	42220 - Natural Jack Pine	High Density Pole	113.9	65	51-80	Recentley aquired from Consumers Energy. Past inventory has age of jack pine at 35 to 45, this did not seem correct. Recent core samples has the age of the jack pine consistantley at 60 to 70 years. Stand is within LKW block 118 that was planted in 1997. This stand will not hold until block 118 rolls around again. Understory varies from O3 to O1/W2/W4. Scattered areas in which the white pine understory is or very near pole size. Scattered (10 BA/AC) of large DBH northern pin oak 100 + years old. The white pine understory is denser along the west end of stand (creeping out of the Clam River flood plain). Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
96	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	40.1	92		Muskegon River flood plain stand, down over a bank. Seasonally flooded. Wet mucky soils. Areas of open water and tag alder.
97	4131 - Aspen, Oak	High Density Sapling	5.0	23		Aspen habitat cut 1989. Decent regen.
98	6119 - Mixed Lowland Deciduous Forest	High Density Pole	22.4	80		Muskegon River flood plain stand, down over a bank. Seasonally flooded. Wet mucky soils.
100	6139 - Mixed Lowland Forest	High Density Log	33.7	108		Stand is down over a bank in the Clam River floodplain. Stand is a mix of pine areas and lowland hardwood areas with tag alder mixed in. Some larger diameter white pine and red pine.
101	42110 - Planted Red Pine	High Density Log	42.6	74	51-80	
102	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	17.2	104		Muskegon River flood plain stand, down over a bank. Seasonally flooded. Wet mucky soils. Mix of swamp hardwood, small red pine pocket, old oxbows, lowland brush, cedar and balsam. Small red pine pocket is 118 yrs old as per past inventory.
 103	42200 - Natural White Pine	High Density Pole	9.6	35	51-80	Most of stand is the slope leading down to the Muskegon River flood plain. All upland species however most of the stand is the slope between LKW block 118 and the flood plain. Stand is converting to white pine.
104	6119 - Mixed Lowland Deciduous Forest	High Density Log	8.1	80		Muskegon River flood plain stand, down over a bank. Seasonally flooded. Wet mucky soils.
105	42250 - Pine, Oak	High Density Sapling	27.5	16		Clear cut in 1996 all white pine left. Residual white pine is 35 to 40 yrs old, 10 to 20 BA/AC of white pine poles. 1996 harvest has produced a nice mix of natural regen jack pine, oak and white pine.
106	42200 - Natural White Pine	High Density Pole	35.7	35	51-80	All but white pine harvested in 1995. 50 to 60 BA/AC of residual white pine in the 6" to 8" DBH class. Harvest has produced a nice mix of natural regen. Nice understory of oak/white pine. Residual white pine poles are 30 to 35 yrs old.

S t	Gladwin Mgt. Unit			5 – Fo	prested Sta	Ands Compartment: 009 Year of Entry: 2014
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
107	42110 - Planted Red Pine	High Density Log	71.9	78	81-110	Fire scares present in southern portion of stand. All jack pine and oak were removed from stand in 1996. Red pine density is variable. Well established jack pine/oak understory is a direct result of partial harvest in the past.
 108	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density	11.3	14		Muskegon River flood plain, down over a bank, wet mucky soils. Some type of treatment in the past. There is an old dug road road down over the bank into this stand. Possible habitat cut in the past.
110	6119 - Mixed Lowland Deciduous Forest	High Density Pole	24.1	75		Muskegon River flood plain stand, down over a bank. Seasonally flooded. Wet mucky soils. The Clam River and Muskegon River come together along this stand. Stand is mostly under water today
111	42120 - Planted Jack Pine	High Density Sapling	49.1	22		Clear cut and planted to jack pine in 1990. Several rows of red pine planted along south edge of stand for visual along adjacent subdivision.
113	42220 - Natural Jack Pine	High Density Pole	79.4	54		
114	42110 - Planted Red Pine	High Density Log	150.5	78	81-110	Nice red pine with large amount of oak in the understory. Deer browse is present. Evidence of fire in southwest portion of stand. All jack pine, oak and marked red pine were cut in 2008. Red pine residual is at 100 BA/AC. Well established oak understory is a direct result of the 2008 partial harvest. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
115	4119 - Mixed Northern Hardwoods	Medium Density	22.9	16		
116	42110 - Planted Red Pine	High Density Log	17.7	75	111-140	Partial harvest last year of entry.
117	42290 - Natural Mixed Pine	High Density Pole	10.0	75	111-140	Narrow strip of upland timber between steep bank of the Muskegon River flood plain and intensley managed timber to the north. Stand was coded as O6 in the past, most of the oak has died off. Stand has converted to white pine/red pine. Dense W3/W4 understory. Scattered pockets of pole/sawlog red pine, the red pine is spill over planting from red pine stand to the north. Stand varies in species and density. Scattered red pine was planted in 1937. Removed some dead oak under misc. wood permit in 2007.
118	42220 - Natural Jack Pine	High Density Pole	16.6	61	81-110	
119	42220 - Natural Jack Pine	High Density Pole	30.2	39		
120	42220 - Natural Jack Pine	High Density Pole	22.3	22		
121	42110 - Planted Red Pine	High Density Pole	162.9	60	81-110	Red pine plantation.

S t	Gladwir	Gladwin Mgt. Unit			prested Sta	Ands Compartment: 009 Year of Entry: 2014
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
122	6117 - Lowland Deciduous, Mixed Coniferous	High Density Log	20.1	82		Muskegon River flood plain stand, down over a bank. Seasonally flooded. Wet mucky soils. Beaver activity.
123	4122 - Oak, Pine	Medium Density Pole	20.1	93	51-80	Stand is part of sold timber sale, under contract. Otter Pines; 73- 001-09-01. Northern pin oak, jack pine mix. Oak salvage in 2005.
125	6127 - Lowland Pine	High Density Log	9.8	127	1-50	Muskegon River flood plain, down over a bank, wet mucky soils. Some big diameter white pine. Pockets of lowland hardwood, swamp conifer and cedar. Pretty wet stand.
126	6128 - Lowland Coniferous, Mixed Deciduous	High Density Log	20.5	87		Muskegon River flood plain, down over a bank, wet mucky soils.
127	4122 - Oak, Pine	High Density Pole	31.9	90	51-80	Northern pin oak stand converting to white pine. Heavy understory of white pine W3/W5. Any type of treatment in this stand would damage a high % of the white pine understory. Scattered big diameter white pine and red pine.
128	6131 - Hemlock, White Pine, Maple, Birch	High Density Pole	18.2	25		Winter deer range cut was done in 1987. Appears to have a mix of pole size red maple, spruce, fir, and white pine regeneration.
129	42221 - Natural Jack Pine, Mixed Deciduous	Medium Density Pole	71.3	14		Mix of natural regen jack pine, mixed oak, white pine with trace amounts of aspen and cherry. Scattered mature jack pine, white pine and mixed oak were left when cut. Stand is within LKW block 113.
130	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	62.9	72		Muskegon River flood plain stand, down over a bank. Seasonally flooded. Wet mucky soils.
132	6113 - Lowland Maple	High Density Log	36.6	105		Muskegon River flood plain stand, down over a bank. Seasonally flooded. Wet mucky soils.
134	6119 - Mixed Lowland Deciduous Forest	High Density Pole	1.0	82		Muskegon River flood plain, down over a bank, wet mucky soils. Very small stand, surrounded by water, no access.
135	42220 - Natural Jack Pine	High Density Pole	48.1	90	81-110	Nautural jack pine with scattered mixed oak and white pine. Stand is within LKW block 113.
136	4125 - Black, N. Pin Oak	Medium Density	38.1	3	1-50	Seed tree harvest in 2009. Harvest has produced a nice O3 understory. Leave seed trees.
137	42120 - Planted Jack Pine	High Density Sapling	380.3	31		Stand is within LKW block 113. Clear cut and planted to jack pine in 1981 following large wildfire. KW habitat planted in opposing weave pattern. Stand includes areas that the fire skipped these skips contain older jack pine, red pine and white pine.
138	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	37.2	107		Muskegon River flood plain stand, down over a bank. Seasonally flooded. Wet mucky soils.

S t	Gladwin Mgt. Unit			5 – Fe	prested Sta	nds Compartment: 009 Year of Entry: 2014
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
139	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	105.2	97		Muskegon River flood plain stand, down over a bank. Seasonally flooded. Wet mucky soils.
141	4125 - Black, N. Pin Oak	Medium Density	21.3	24		Semi open oak regen with scattered jack pine and red pine mixed in. Clear cut 1988.
144	42120 - Planted Jack Pine	High Density Sapling	9.9	22		Clear cut and planted to jack pine in 1990. Mixed oak and red maple natural regen mixed in as well.
145	42120 - Planted Jack Pine	High Density Sapling	114.2	18		The stand was harvested in 1995. It was later planted for Kirtland's warbler using an opposing weave pattern. The amount of galling is low as well as weevil attacks. The oak stump sprouts are scattered through out the stand.
146	42210 - Natural Red Pine	High Density Pole	15.7	70	111-140	The stand was set up for harvest in 1996 but it was not cut. The jack pine is declining. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
147	42290 - Natural Mixed Pine	High Density Log	105.0	76	141-170	The stand was set up for harvest in 1996 but it was not cut. The overstory is declining, especially the jack pine. The stand appears to have a more diverse age class distribution then pre- inventory stand 2. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area. Survey corners?
148	42210 - Natural Red Pine	High Density Pole	39.5	74	141-170	The stand was set up for harvest in 1996 but it was not cut. The stand is denser in the northern 2/3. This area is heavier to red pine and oak. The southern 1/3 has more oak; jack, red, and white pines in it. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area. Survey corners?
149	42110 - Planted Red Pine	High Density Log	15.9	75	141-170	The terrain is fairly level, but starts to slope going east. There is a significant drop just before the L-type to the east. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area. Survey corners?

6 – Nonforested Stands

Compartment: 009

Year of Entry: 2014

NATURA

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
1	6239 - Mixed Emergent Wetland	15.9	No	Unspecified	
10	3102 - Grass	4.3	No	Unspecified	Old oil well pad.
13	6225 - Bog	2.5	No	Unspecified	
16	6229 - Mixed lowland shrub	172.0	No	Unspecified	
19	3102 - Grass	7.8	No	Unspecified	Trans Canada Pipeline.
20	6225 - Bog	8.1	No	Unspecified	
28	3102 - Grass	34.6	No	Unspecified	Trans Canada Pipeline.
29	3102 - Grass	1.5	No	Unspecified	Gas well.
36	6233 - Wet Meadow	28.8	No	Unspecified	
39	3102 - Grass	1.1	No	Unspecified	Gas well.
43	6220 - Alder/willow	59.0	No	Unspecified	No treatment. mostly tag alder and willow.
46	3102 - Grass	1.2	No	Unspecified	Gas well.
48	3102 - Grass	1.3	No	Unspecified	Gas well.
49	3102 - Grass	1.6	No	Unspecified	Gas well.
50	50 - Water	47.9	No	Unspecified	
54	6229 - Mixed lowland shrub	30.9	No	Unspecified	Lowland shrub, beaver activity.
56	3102 - Grass	2.2	No	Unspecified	Gas well.
60	3102 - Grass	2.3	No	Unspecified	Old storage tanks.

Compartment: 009 Year of Entry: 2014



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
71	6220 - Alder/willow	7.6	No	Unspecified	Cranberry Creek flood plain / corridor. Includes flood plain, steep banks, the creek, and buffers left along the creek corridor from adjacent timber sales. Serves as natural filtration strip for the creek.
84	3102 - Grass	3.4	No	Unspecified	Stand is within LKW block 117 - 2015 POW - plant year 2019. Stand is within the Cranberry Gas Storage Field; pipelines, wells and service roads are within the area.
99	50 - Water	4.0	No	Unspecified	Water, oxbow of the Muskegon River
109	6225 - Bog	7.7	No	Unspecified	
112	3102 - Grass	1.2	No	Unspecified	
124	50 - Water	8.4	No	Unspecified	Muskegon River oxbow
131	50 - Water	5.8	No	Unspecified	Muskegon River oxbow
133	50 - Water	2.1	No	Unspecified	Muskegon River oxbow
140	50 - Water	7.9	No	Unspecified	Oxbow.
142	50 - Water	7.3	No	Unspecified	Oxbow.
143	3102 - Grass	21.4	No	Unspecified	Grassy opening with high ORV use. Scattered red pine.
150	3105 - Mixed Upland Herbaceous	3.0	No	Low (NonForested)	This stand is a well site.
151	3105 - Mixed Upland Herbaceous	3.6	No	Low (NonForested)	This stand has high pressure gas pipelines under it.
152	6220 - Alder/willow	2.5	No	Low (NonForested)	Flood plain of the Cranberry creek.



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.

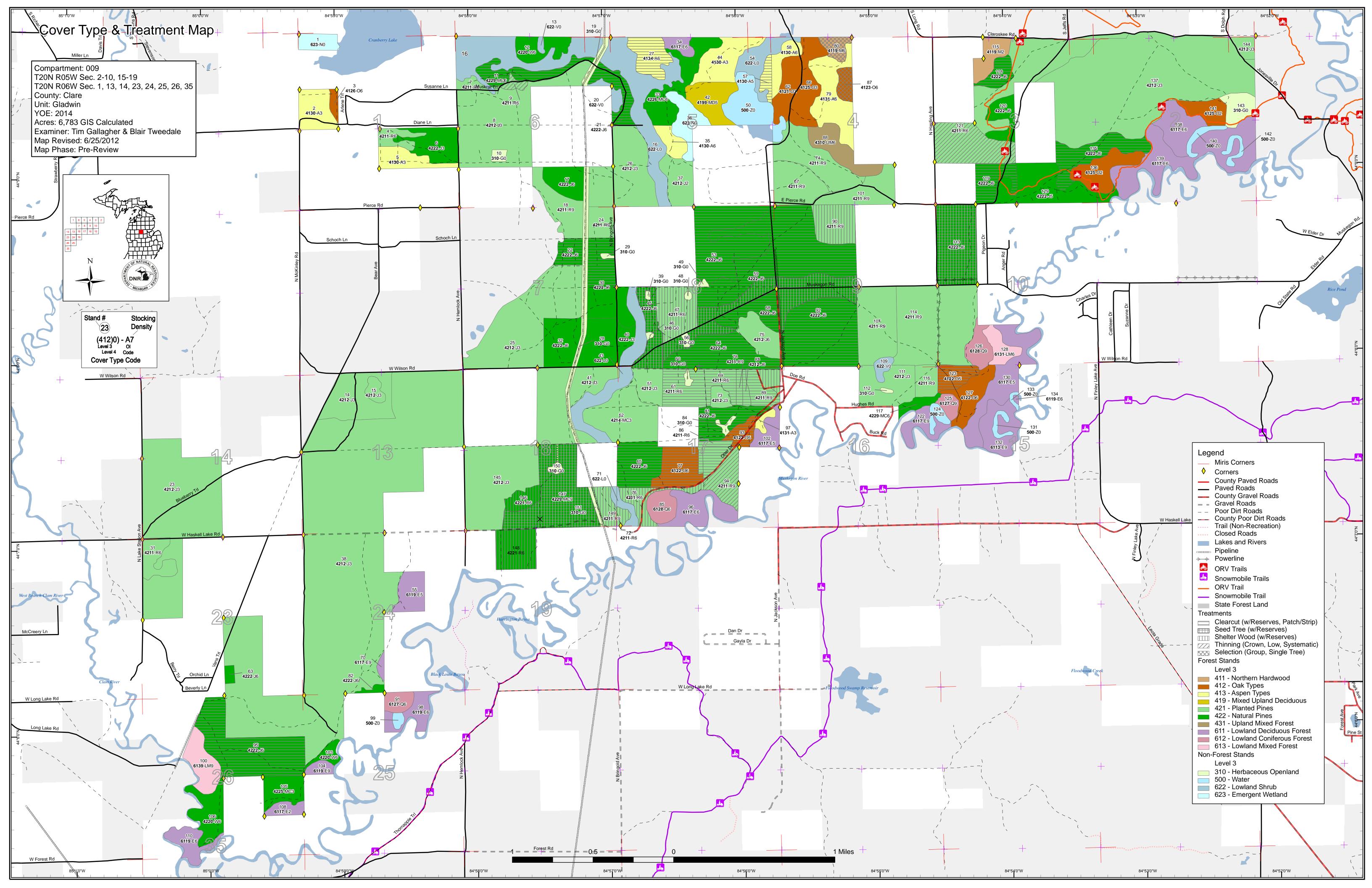
Stand	SCA Type	SCA Name	Acres	Comments



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.

Conservatior Area	п Туре	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 con- stocked trout populations and those of other coldwater fish spec year to year. Coldwater streams in Michigan typically provide th contributions of groundwater to their stream flows. Such stream designated as trout resources by Fisheries Order 210.	cies (e.g., slimy sculpin) to persist from ese conditions due to substantial
HCVA	Designated Critical Habitat	Critical habitat areas are established via a consultative and coo U.S. Fish and Wildlife service for the recovery of threatened and 365, Endangered Species Protection, of the Natural Resources PA 451, and the Federal Endangered Species Act of 1973. This species plans in various stages of review. As of now only two e Plover Habitat.	d endangered species, as governed by Part and Environmental Protection Act, 1994 is an active program, with proposed



Stand Boundary Map

Compartment: 009 T20N R05W Sec. 2-10, 15-19 T20N R06W Sec. 1, 13, 14, 23, 24, 25, 26, 35 County: Clare Unit: Gladwin YOE: 2014 Acres: 6,783 GIS Calculated Examiner: Tim Gallagher & Blair Tweedale Map Revised: 6/25/2012 Map Phase: Pre-Review

MICHIGAN

> Stand # Stocking 23 Density (412)0) - A7 Level 3 OI Level 4 Code Cover Type Code

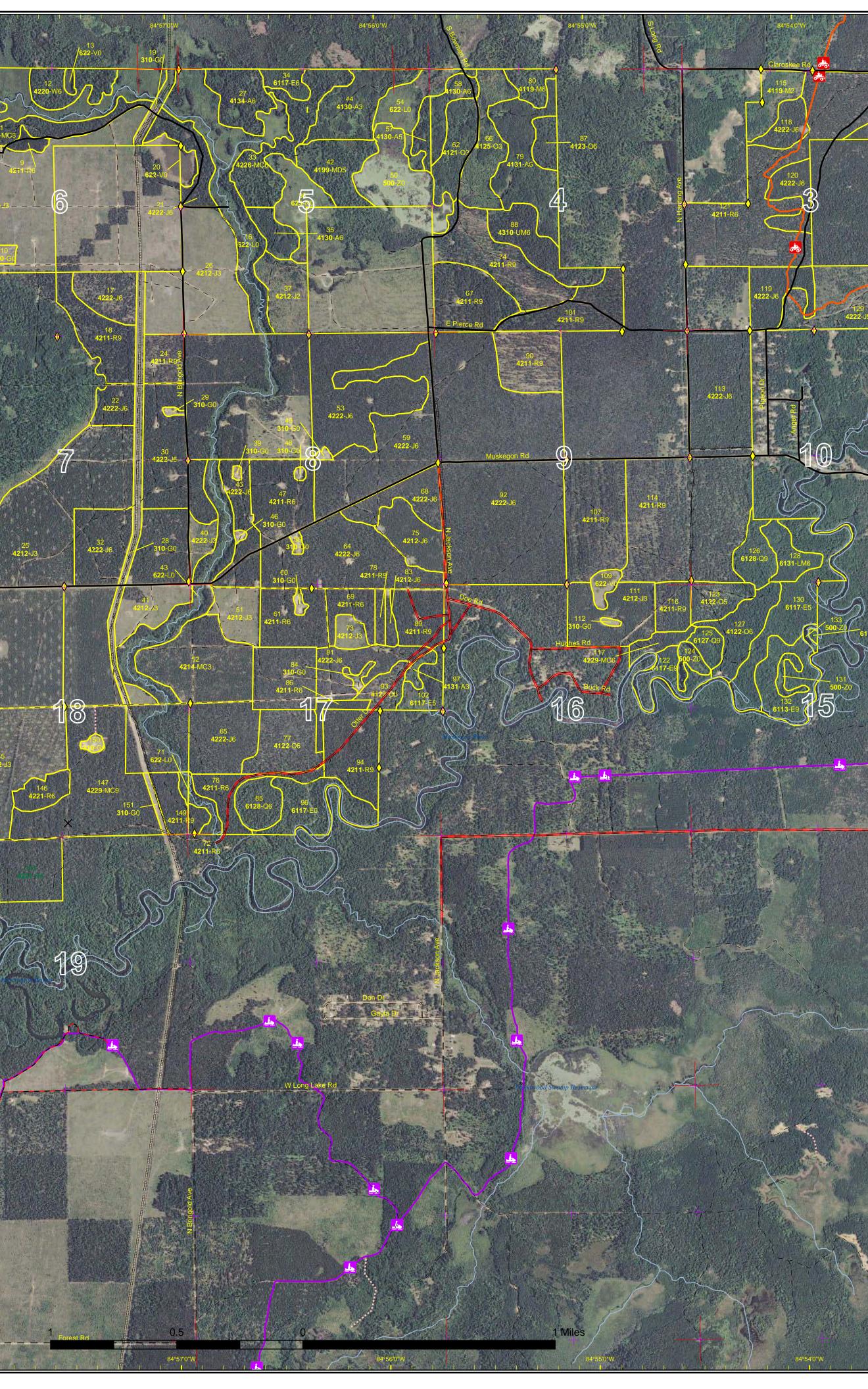
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	Legend	
	— Miris Corners	
	Corners	
1	— County Paved Roads	
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	= Gravel Roads - Poor Dirt Roads	
	County Poor Dirt Roads	
	Trail (Non-Recreation)	
	Closed Roads	
	Stream	
語の	Intermittent Stream	1
	Pipeline	加速電
1008 -	ORV Trails Snowmobile Trails	1
	— ORV Trail	4
	— Snowmobile Trail	in the
1	Stand Boundaries	
	Forest Stands	
	Level 3	
40	411 - Northern Hardwood	
in a	412 - Oak Types 413 - Aspen Types	
	419 - Mixed Upland Deciduous	d. A
	421 - Planted Pines	
	422 - Natural Pines	
	431 - Upland Mixed Forest	
1	611 - Lowland Deciduous Forest 612 - Lowland Coniferous Forest	
	613 - Lowland Mixed Forest	
	Non-Forest Stands	
29	Level 3	
	310 - Herbaceous Openland	
A SA	500 - Water	1
	622 - Lowland Shrub	3
教	623 - Emergent Wetland	
31		~

