Roscommon Forest Management Unit
Compartment Review Presentation
Compartment #11 Entry Year: 2014
Compartment Acreage: 673 County: Roscommon

Revision Date: 7/31/2012

Stand Examiner: Doug Bates

Legal Description: T24N R02W Section 04 & 05

Identified Planning Goals: AuSable Outwash Eco-Regional Management Area

Management Goals: Gradually remove the overmature jack pine to help prevent a jack pine budworm outbreak and stagger the age class in the area. There will be species diversity in a range of early and late succession ecosystems/timber types.

Soil and Topography: Terrain is largely flat to gently rolling. Soils are mainly Grayling sand on the upland areas with Lupton muck in the lower.

Ownership Patterns, Development, and Land Use in and Around the Compartment: The compartment borders the east side of the Village of Roscommon. It is a solid block of state land with no private in holdings but is surrounding by private on all sides but the east which abuts state land. The portion of the compartment north of M-18 borders U.S. Forest Service lands. Most of the private is smaller parcels with mainly permanent residences with a few seasonal.

Unique, Natural Features: The South Branch of the AuSable River flows through the south end of the compartment. The Tisdale Triangle Pathway (cross-country ski trail) meanders throughout the entire compartment with two parking lots on either ends.

Archeological, Historical, and Cultural Features: None designated. There is an old narrow gauge railroad bed traversing the compartment.

Special Management Designations or Considerations: None noted or proposed as the result of fieldwork.

Watershed and Fisheries Considerations: Protect the water quality of the South Branch of the AuSable River.

Wildlife Habitat Considerations: Maintain ecosystem diversity in the compartment via habitat manipulation to benefit game species such as deer, grouse, rabbits, turkeys, as well as other non-game species.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift is the Mississippian Michigan Formation that is quarried for gypsum in other areas of the State. Most of the good gravel pits are associated with upland areas. The nearest gravel pit is one-half mile to the south. There may be some potential on the upland areas. St. Helen Field lies four miles

to the southeast. The field has produced over 8.7 million BO and 14.7 Bcf gas from the Devonian Richfield Formation. It is in secondary recovery operations currently. All of the State minerals in the compartment are currently leased.

Vehicle Access: Both management and general public access is good with county roads bordering three sides and a seasonal county road bisecting the compartment north and south. However, the Tisdale Triangle pathway is closed to all public motorized vehicles.

Survey Needs: No survey work currently needed.

Recreational Facilities and Opportunities: The Tisdale Triangle Cross Country Ski Pathway with its two parking lots. Also present is the AuSable river recreation uses from fishing to canoeing.

Fire Protection: The compartment is in an urban wildland interface with a very heavy component of jack pine with a high percentage of this either at or overmature. The close proximity to an urban settings also brings with it heavy public interaction and potential for escaped fires, yet good vehicle access and close proximity to the Roscommon DNR Field Office helps mitigate this.

Additional Compartment Information: Visual management and harvesting protection was implemented along the Tisdale Triangle Pathway. Should a jack pine budworm outbreak occur in the compartment, the current proposed stands for harvest may be cut early along with other jack pine stands that were not designed for treatment this rotation.

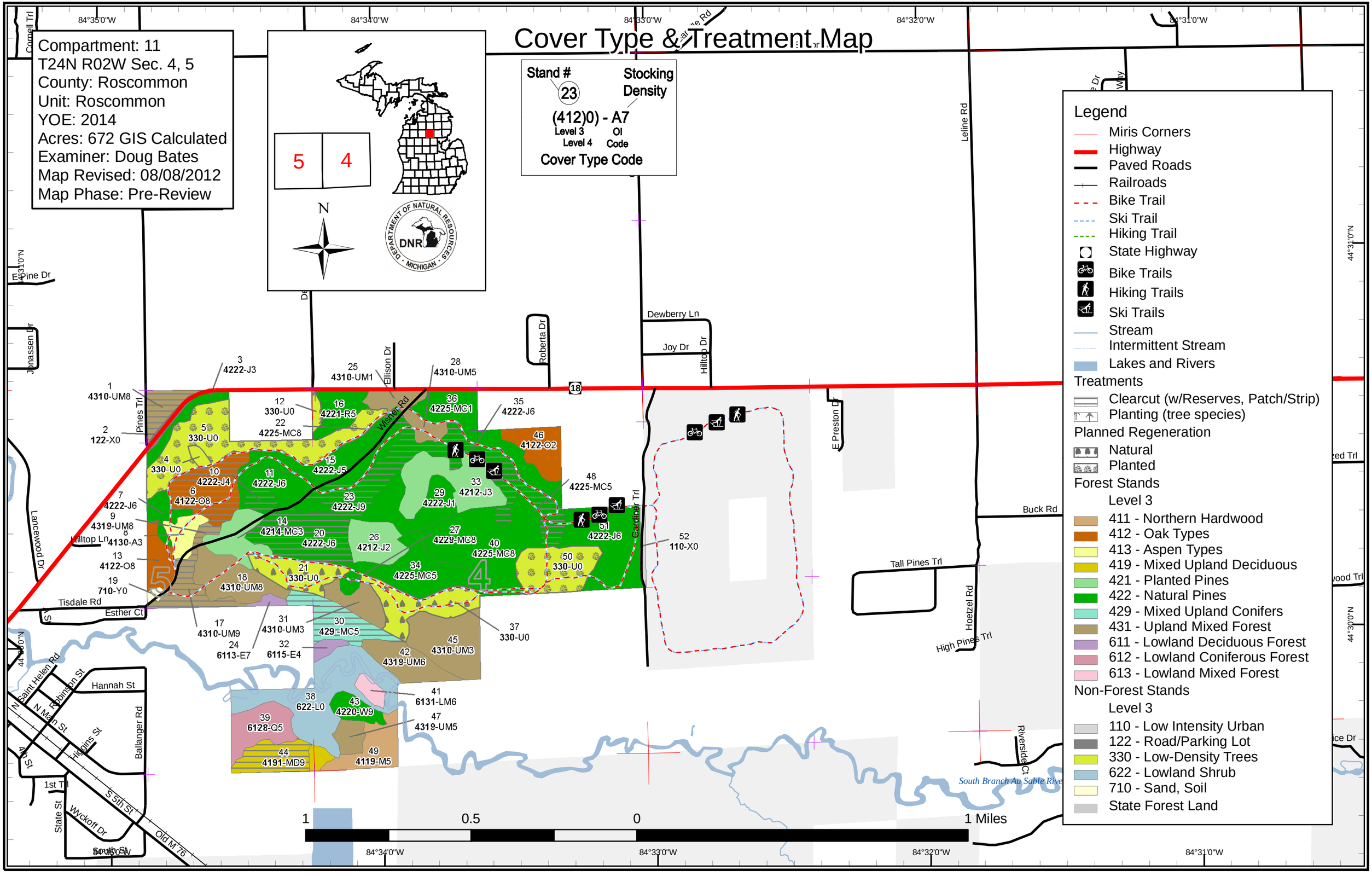
- **The following reports from the Inventory are attached:**
  - **Total Acres by Cover Type and Age Class**
  - **Proposed Treatment Summary**
  - **Proposed Treatments – No Limiting Factors**
  - **Proposed Treatments – With Limiting Factors**
  - **Stand Details (Forested and Nonforested)**
  - **Dedicated and Proposed Special Conservation Areas**

- **The following information is displayed, where pertinent, on the attached compartment maps:**
  - **Base feature information, stand boundaries, cover types, and numbers**
  - **Proposed treatments**
  - **Details on the road access system**

Cover Type & Treatment Map

Compartment: 11
T24N R02W Sec. 4, 5
County: Roscommon
Unit: Roscommon
YOE: 2014
Acres: 672 GIS Calculated
Examiner: Doug Bates
Map Revised: 08/08/2012
Map Phase: Pre-Review

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



Legend

- Miris Corners
- Highway
- Paved Roads
- Railroads
- Bike Trail
- Ski Trail
- Hiking Trail
- State Highway
- Bike Trails
- Hiking Trails
- Ski Trails
- Stream
- Intermittent Stream
- Lakes and Rivers

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Planting (tree species)

Planned Regeneration

- Natural
- Planted

Forest Stands

Level 3

- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 429 - Mixed Upland Conifers
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

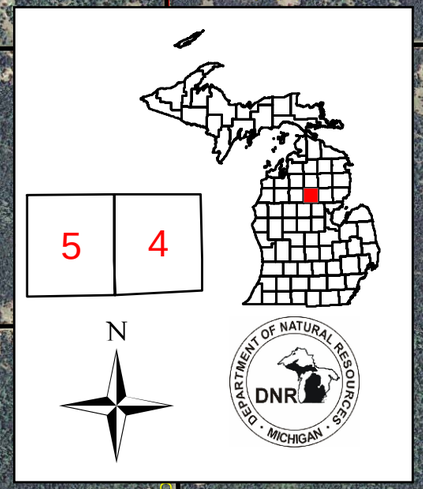
Non-Forest Stands

Level 3

- 110 - Low Intensity Urban
- 122 - Road/Parking Lot
- 330 - Low-Density Trees
- 622 - Lowland Shrub
- 710 - Sand, Soil
- State Forest Land

Stand Boundary Map

Compartment: 11
T24N R02W Sec. 4, 5
County: Roscommon
Unit: Roscommon
YOE: 2014
Acres: 672 GIS Calculated
Examiner: Doug Bates
Map Revised: 08/08/2012
Map Phase: Pre-Review



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

Legend

- Miris Corners
- Highway
- Paved Roads
- Bike Trails
- Hiking Trails
- Ski Trails
- Ski Trail
- Hiking Trail
- Bike Trail
- Railroads
- Stream
- Intermittent Stream
- Stand Boundaries

Forest Stands

Level 3

- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
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Non-Forest Stands

Level 3

- 110 - Low Intensity Urban
- 122 - Road/Parking Lot
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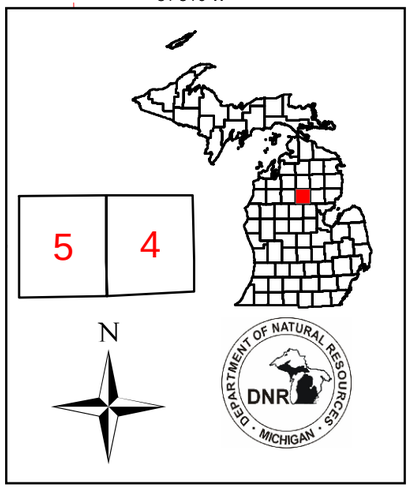
- 710 - Sand, Soil

1 0.5 0 1 Miles

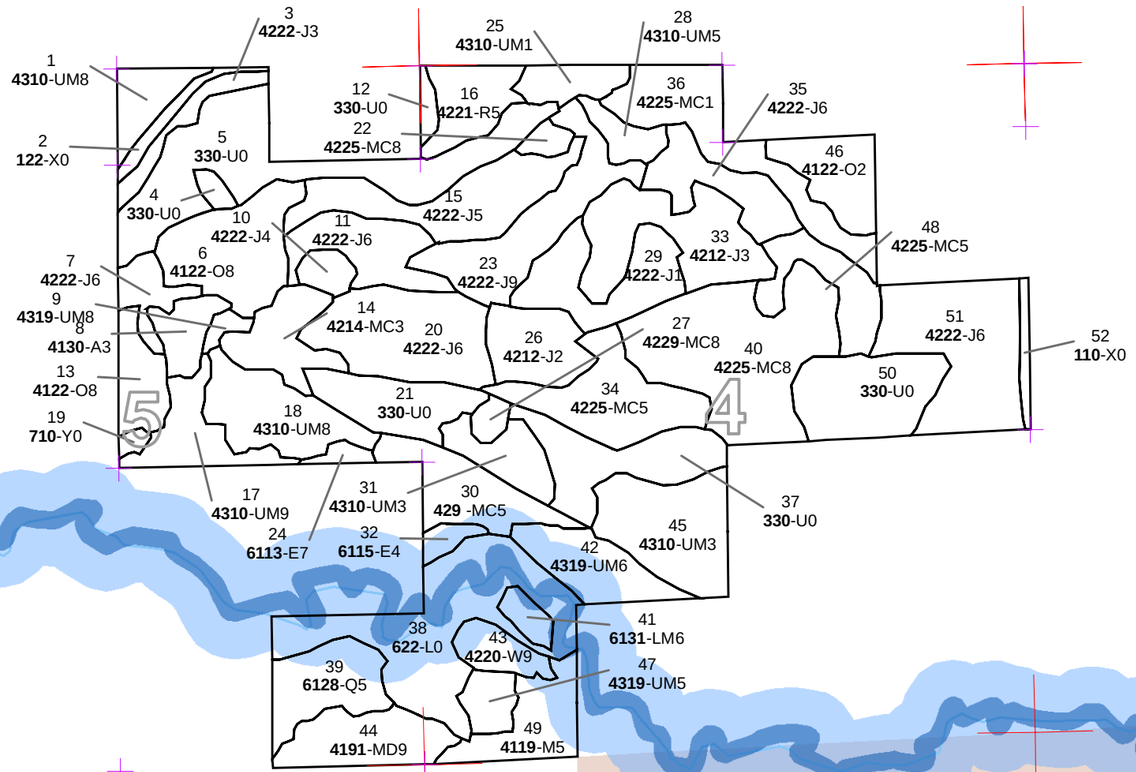
84°35'0"W 84°34'0"W 84°33'0"W 84°32'0"W 84°31'0"W
44°31'0"N 44°30'0"N

Dedicated & Proposed Special Conservation Area Map

Compartment: 11
T24N R02W Sec. 4, 5
County: Roscommon
Unit: Roscommon
YOE: 2014
Acres: 672 GIS Calculated
Examiner: Doug Bates
Map Revised: 08/08/2012
Map Phase: Pre-Review



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



Legend

- Miris Corners
- Stand Boundaries

Forest Stands

Level 3

- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
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Non-Forest Stands

Level 3

- 110 - Low Intensity Urban
- 122 - Road/Parking Lot
- 330 - Low-Density Trees
- 622 - Lowland Shrub
- 710 - Sand, Soil

Dedicated Special Conservation Areas

- Natural Rivers Vegetative Buffer
- Natural Rivers Zoning District
- Cold Water Streams
- Research, Development, and Military Lands

1 0.5 0 1 Miles

84°35'0"W 84°34'0"W 84°33'0"W 84°32'0"W 84°31'0"W

44°31'0"N 44°30'0"N

Table 1 – Total Acres by Cover Type and Age Class

Roscommon Mgt. Unit **Compartment 011 Year of Entry 2014**

Douglas Bates : Examiner

Age Class

	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +	Uneven Age	Total
Aspen	7	0	0	0	0	0	0	0	0	0	0	0	0	0	**7**
Jack Pine	17	12	0	4	0	0	30	72	35	0	0	0	0	23	**193**
Low-Density Trees	92	0	0	0	0	0	0	0	0	0	0	0	0	0	**92**
Lowland Conifers	0	0	0	0	14	0	0	0	0	0	0	0	0	0	**14**
Lowland Deciduous	0	0	3	0	0	0	0	0	0	0	2	0	0	0	**4**
Lowland Mixed Forest	0	0	0	0	0	0	0	0	3	0	0	0	0	0	**3**
Lowland Shrub	38	0	0	0	0	0	0	0	0	0	0	0	0	0	**38**
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	15	0	0	0	0	0	**15**
Natural Mixed Pines	22	0	0	0	0	0	0	32	46	0	0	0	0	0	**101**
Northern Hardwood	0	0	0	0	0	0	0	0	13	0	0	0	0	0	**13**
Oak	12	0	0	0	0	0	0	0	8	21	0	0	0	0	**41**
Planted Mixed Pines	0	12	0	0	0	0	0	0	0	0	0	0	0	0	**12**
Red Pine	0	0	0	0	0	11	0	0	0	0	0	0	0	0	**11**
Sand, Soil	1	0	0	0	0	0	0	0	0	0	0	0	0	0	**1**
Upland Conifers	0	0	0	0	0	0	0	0	0	0	15	0	0	0	**15**
Upland Mixed Forest	0	37	0	0	0	0	0	7	35	21	0	0	0	0	**99**
Urban	6	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
White Pine	0	0	0	0	0	0	0	0	6	0	0	0	0	0	**6**
Total	**195**	**62**	**3**	**4**	**14**	**11**	**30**	**111**	**162**	**41**	**17**	**0**	**0**	**23**	**672**

Data updated yesterday after 6:00 PM

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Table 2 – Proposed Treatment Summaries

Roscommon Mgt. Unit
Year of Entry 2014

Compartment 011
Total Compartment Acres: 671.9

Acres by Treatment Type

Commercial Harvest - 144	Site Prep - 0	Tree Planting - 2	Prescribed Burn - 0	Other - 0
Habitat Cut - 0	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Jack Pine	64	0	0	0	0	0	**64**
Mixed Upland Deciduous	12	0	0	0	0	0	**12**
Natural Mixed Pines	12	0	0	0	0	0	**12**
Oak	21	0	0	0	0	0	**21**
Upland Conifers	15	0	0	0	0	0	**15**
Upland Mixed Forest	21	0	0	0	0	0	**21**
Total	**144**	**0**	**0**	**0**	**0**	**0**	**144**

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1	71011001-Cut	7.3	4310 - Pine, Oak Mix	Medium Density Log	94	81-110	Harvest	Clearcut with Reserves	4122 - Oak, Pine	Cmpt. Review Proposal

Prescription Specs: Treatment=>Final harvest with reserves. Cut to a two inch dbh on all species except the oak. Remove all oak over five inch dbh. Leave approximately 20 basal area of red pine and oak of larger size evenly over stand for legacy status, mast, and visual along M-18.
Longterm MO=> A natural mix of oak and pine
Retention=> Will be met by individual leave trees. No islands needed.

Other Comments:

Next Steps: An oak/pine mix is an acceptable cover type. Interplant with red pine if natural regeneration does not meet stocking levels following regeneration survey.

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
6	71011006-Cut	20.9	4122 - Oak, Pine	Medium Density Log	95	81-110	Harvest	Clearcut with Reserves	4122 - Oak, Pine	Cmpt. Review Proposal

Prescription Specs: Treatment=>Final harvest with reserves. Remove all species to a 2 inch dbh. Leave all white oaks and mark additional pin oaks to keep an average of no more than 20 basal area of oak species in the stand. When can, mark the large wolfy ones for mast.
Longterm MO=> Stand regeneration of mixed oak with aspen and pine scattered throughout.
Retention=> Individual tree retention of oak leave trees. Mark a few additional large pines to help meet retention precentage(3-5).

Other Comments: Protect the cross country ski trail from harvest operations by boundary line placement where applicable and contract specifications.

Next Steps: A mix of oak and pine is acceptable. Plant with conifer if natural regeneration does not meet stocking levels.

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
9	71011009-Cut	1.8	4319 - Mixed Upland Forest	Medium Density Log	75		Harvest	Clearcut with Reserves	4113 - R.Maple, Conifer	Cmpt. Review Proposal

Prescription Specs: Treatment=> Harvest all species to a 2 inch dbh with the following exceptions: Remove only oaks 5 inch dbh and up and Do NOT cut any red pine.
Longterm MO=> Maple/oak/pine mix
Retention=> Due to small size and leave trees none needed.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
10	71011010-Cut	3.6	42220 - Natural Jack Pine	Low Density Pole	31		Harvest	Clearcut	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Treatment=> Site has steep sidewalls and little volume. Harvest what is accessible to a two inch d.b.h..
Longterm MO=> Planted jack pine
Retention: None, degrade site to be rehabed.

Other Comments: Potentially could have site planted by an eagle scout project or other community event.

Next Steps: Push the pit sides in to create a shallow bowl shape contour that can be hand planted to jack pine. Site will have little topsoil. This site is an old gravel pit that has some vegetation but also heavier site erosion by illegal 4x4 vehicles.

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
17	71011017-Cut	11.5	4310 - Pine, Oak Mix	High Density Log	85		Harvest	Clearcut with Reserves	4121 - Oak, Aspen	Cmpt. Review Proposal

Prescription Specs: Treatment=> Final harvest site to a 2 inch dbh. Leave retention along the x-c ski trail. Trench the site and plant to red pine, but do not trench across the ski trail. There is not good regeneration in the jack pine or oak species. Will have a mix of oak from stump sprouts and possibly natural from soil scarifying that will occur during harvest. The aspen clones will come back nicely and add to the diversity.
Longterm MO=> Mixed decidous with interplanted red pine.
Retention=> Leave a strip of retention along each side of the cross-country ski trail (30-50 feet) to meet the 3 percent

Other Comments: Protect the cross country ski trail from harvest operations by boundary line placement where applicable and contract specifications.

Next Steps: Trench the site and interplant red pine. Do not trench across the ski trail and trench around any aspen/oak regeneration present.

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
20	71011020-Cut	25.5	42220 - Natural Jack Pine	High Density Pole	71		Harvest	Clearcut with Reserves	42221 - Natural Jack Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Treatment=> Clearcut with reserves. Remove all species to a 2 inch dbh.
Longterm MO=> Jack pine with oak mix
Retention=> Leave retention along the x-c ski trail on the south boundary to meet 3 percent.

Other Comments: Protect the cross country ski trail from harvest operations by boundary line placement where applicable and contract specifications.

Next Steps: Interplant with jack pine should stocking levels fail the regeneration survey.

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
23	71011023-Cut	21.7	42220 - Natural Jack Pine	High Density Log	75		Harvest	Clearcut with Reserves	42220 - Natural Jack Pine	Cmpt. Review Proposal

Prescription Specs: Treatment => Clearcut with reserves. Remove all species to a 2 in dbh except the following: Cut all oaks 5 inches dbh and larger. Leave all white oaks for mast if present. Also do not cut any red pine over 14 inches dbh. The red pine is for diversity/legacy and will provide a visual stimulant for x-c ski trail users.
Longterm MO=> Natural jack pine with oak mix
Retention: Individual leave trees per harvest spec. will meet retention percentage. Mark a handful of oversize jack pine to leave also.

Other Comments: Protect the cross country ski trail from harvest operations by boundary line placement where applicable and contract specifications.

Next Steps: Interplant with jack pine is stocking levels fail the regeneration survey.

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
30	71011030-Cut	15.2	429 - Mixed Upland Conifers	Medium Density Pole	100	81-110	Harvest	Clearcut with Reserves	42121 - Planted Jack Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Treatment=> Final harvest with reserves. Cut all species to 2 inches dbh. Leave all jack pine tops scattered throughout sale for natural regeneration.
Longterm MO=> Jack pine with oak mix
Retention => Leave an island to meet 3 percent

Other Comments:

Next Steps: Replant with jack pine in open areas to bring stand to required stocking level should natural regeneration fail.

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
35	71011035-Cut	12.9	42220 - Natural Jack Pine	High Density Pole	75		Harvest	Clearcut with Reserves	42221 - Natural Jack Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Treatment=> Clearcut with reserves. Remove all species to 2 inch dbh. Leave all white oaks if present for mast/diversity.
Longterm MO=> Natural jack pine with oak mix
Retention=> Look at trying to leave retention as pockets along the x-c ski trail to aid visuals. Otherwise do an individual leave tree within the stand to meet the 3 percent retention guideline.

Other Comments: Protect the cross country ski trail from harvest operations by boundary line placement where applicable and contract specifications.

Next Steps: Interplant with jack pine to meet stocking levels should the site fail the regeneration survey.

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
44	71011044-Cut	12.1	4191 - Mixed Upland Deciduous with Conifer	High Density Log	88	111-140	Harvest	Clearcut with Reserves	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal

Prescription Specs: Treatment=> Harvest all species to a two inch dbh. Mark 20 basal area of supercanopy (16inch) red pine and white pine for legacy trees and visual. Mark some additional white oak trees that will act as good mast sources and retention.
Longterm MO=> Natural oak/pine mix.
Retention=> Percentage will be met by leave trees. No additional islands needed.

Other Comments: Supercanopy trees will not affect the regeneration and would be good for visual.
Access will need to be received from the Village of Roscommon Public Works to get to the stand if the gate has not been moved to the property line that is currently stopping public traffic from entering the waste water treatment lagoons.

Next Steps:

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
48	71011048-Cut	11.9	42250 - Pine, Oak	Medium Density Pole	75	111-140	Harvest	Clearcut with Reserves	42221 - Natural Jack Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Treatment=> Final harvest with reserves. Final harvest all species to a 2 inch dbh.
Longterm MO=> Natural pine with an oak mix
Retention=> Leave a retention strip along the cross country ski trail to 3 percent.

Other Comments: Protect the cross country ski trail from harvest operations by boundary line placement where applicable and contract specifications.

Next Steps: Should natural regeneration stocking levels fall short, this site would be a good one to interplant red pine to meet the stocking levels. Would give diversity to the compartment which is largely jack pine based.

Proposed Start Date: 10/01/2013

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
12	NF_71011012-Plant	1.9	3302 - Low Density Conifer Trees				Tree Planting	Hand Plant	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Trench and plant to red pine.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2013

Total Treatment Acreage Proposed: 146.2

Table 4 -- Treatments Prescribed with a Limiting Factor

Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
			#Error							

Prescription Specs:

Other Comment:

Next Steps:

Proposed Start Date: #Error

Limiting Factor and No Treatment Reason

Total Treatment Acreage Proposed: **0**

Data updated yesterday after 6:00 PM

Out of YOE -- Treatments
Prescribed with No Limiting Factor

Year of Entry: 2014

Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status

Prescription Specs:

Other Comments:

Next Steps:

Proposed Start Date: #Error

Total Treatment Acreage Proposed: **0**

Data updated yesterday after 6:00 PM

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Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4310 - Pine, Oak Mix	Medium Density Log	7.3	94	81-110	Good oak regeneration of pin oak. The red and jack pine is good also. The northline adjoins the U.S.F.S. and they have just completed a survey of the line and brushed it out in the process.
3	42220 - Natural Jack Pine	High Density Sapling	5.5	74		Mixed stand along M-18. Poor quality in all species but can hold another ten years for visual along stand 5.
6	4122 - Oak, Pine	Medium Density Log	20.9	95	81-110	Oak is dying out. Some oak regeneration in understory. Need to open stand up and get some stump sprouting off of the oak stumps.
7	42220 - Natural Jack Pine	High Density Pole	6.1	74		Stand is still in good condition. Regeneration is good and can be left for another 10 years to stagger the age class in the area.
8	4130 - Aspen	High Density Sapling	6.6	4		Good aspen regeneration. Was harvested in the winter 2007/2008.
9	4319 - Mixed Upland Forest	Medium Density Log	1.8	75		The jack pine is dying out and the heaviest regeneration is the red maple.
10	42220 - Natural Jack Pine	Low Density Pole	3.6	31		Site is an old gravel pit that is sparsely vegetat4ed and experiencing soil erosion and other site damages by illegal vehicle activity. Large 4x4 trucks are climbing the banks of the pit and making trails all around the exterior of site.
11	42220 - Natural Jack Pine	High Density Pole	13.8	84		Stand is still in good health and can hold another ten years before harvest to stagger age classes in compartment.
13	4122 - Oak, Pine	Medium Density Log	8.4	85	51-80	Hold for another 10 years to stagger age classes in compartment.
14	42141 - Planted Mixed Pine, Mixed Deciduous	High Density Sapling	11.8	15		Trenched and planted in 1997 to red pine. The red pine survival was marginal on this site. Heavy natural jack pine regeneration came back giving a good mix of species. Leave the scattered log sized oak trees because cause to much damage trying to remove.
15	42220 - Natural Jack Pine	Medium Density Pole	21.7	84		There is decent oak regeneration but is very sparse in the pine species. There are smaller sized pine poles. Leave for another ten years before harvesting because the understory does not appear to be affected by the overstory. This will stagger age classes in the compartment and provide a visual buffer until the adjoining site reestablishes itself.
16	42210 - Natural Red Pine	Medium Density Pole	10.6	55	51-80	All the jack pine and oak was removed in 2008. The basal areas/size does not warrent any treatment.
17	4310 - Pine, Oak Mix	High Density Log	11.5	85		Oak and aspen declining along with die off of the saw sized jack pines. The overstory is falling apart and the regeneration is sparse and very mixed. Need to open the site up to release the oak and aspen regeneration.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
18	4310 - Pine, Oak Mix	Medium Density Log	17.8	85		There is heavy white pine regeneration in the understory. The overstory consists of white pine and mature pin oak. The west end of stand is thinner in canopy and has white spruce regeneration. The stand will hold for another ten years and then it should be harvested. This will allow for age class diversity in compartment.
20	42220 - Natural Jack Pine	High Density Pole	25.5	71		Very poor regeneration coming in. The jack pine appears to be stagnanting and should have the overstory removed to help stimulate this and stagger the age class for the compartments jack pine component.
22	42250 - Pine, Oak	Medium Density Log	2.4	88	51-80	Even mix of both oak and jack pine but on the slightly sparser side. Leave for now as a visual and break up the harvesting foot print within the compartment this YOE. Surrounding stands have a higher priority. Will hold till next rotation when it should be harvested.
23	42220 - Natural Jack Pine	High Density Log	21.7	75		The jack pine and oak are overmature. There is good jack pine regeneration and should come in nicely once the overstory is removed.
24	6113 - Lowland Maple	Low Density Log	1.8	105		Lowland hardwood type with sawlog size red maple as the main overstory. Overstory maple is dying off but there is good regeneration of it in the understory mixed with heavy balsam fir component. Does have a tag alder so the site is poorly drained, It is bisected by an old railroad grade that is built up about 15 feet above the ground level. Where fil lwas dug out to make the road bed created a small vernal pond on one side, Best to leave the site for now and let it take care of itself. It will revegetate on its own. Fear too much damage would be done to the stand to try and harvest its small volume and may actually set back regenerating.
25	4310 - Pine, Oak Mix	Low Density Sapling	6.3	16		Was harvested, trenched, and replanted to red pine in 1996 but failed. The regeneration is good but it is an even mix of jack pine and oak. Can't discern it was a plantation except for some areas where the red pine are in rows for a short distance. The jack pine grew back into the trenches thick in spots. Some scattered pole sized red pine and oak left post harvest but will leave because volume does not justify the damage to the regeneration trying to harvest it.
26	42121 - Planted Jack Pine, Mixed Deciduous	Medium Density	12.3	16		Stand was harvested, trenched, and planted to red pine in 1996 but failed. Very little of red pine survived. Came back good to jack pine and oak naturally. An old railroad bed bisects the stand and has been built up over 20 feet above the ground level. When they harvested they left the trees on the road bed sides to help it not to errode.
27	42290 - Natural Mixed Pine	Medium Density Log	2.4	88	81-110	This stand is a depression between two ridges. Not enough though to classify as a lowland. It has an even mix of red and jack pine overstory but neither to speak of in the understory. Heavy to red maple regeneration, which would be what comes back post harvest. Leave stand for now as a visual for the x-c ski trail that passes through it.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
28	4310 - Pine, Oak Mix	Medium Density Pole	5.0	75		Sparse mixed stand predominantly jack pine with oak. Lot of dead oak in the overstory but good in the understory. Still should leave the stand till next rotation because adjacent stands would benefit more from a harvest this YOE and this will lessen the harvesting footprint within the compartment.
29	42220 - Natural Jack Pine	Low Density Sapling	17.2	4		Have a good carpet of jack pine seedlings mixed in with large saplings. There is no need to seed the sparse areas, they are filling in naturally.
30	429 - Mixed Upland Conifers	Medium Density Pole	15.2	100	81-110	Poor quality oak and jack pine in the sawlog sizes that is declining, Need to open up the overstory to alleviate the heavy balsam fir sub-canopy. Plant jack pine and will have scattered oak regeneration.
31	4310 - Pine, Oak Mix	High Density Sapling	8.8	15		Large sawlog sized oaks left post harvest. Both the oak and jack pine regeneration is good. Fairly even mix. Seeded with jack pine in 1997.
32	6115 - Lowland Ash	Low Density Pole	2.5	25		Very poor quality, sparse black ash with heavy reed canary grass ground cover. Inaccessible because north boundary is a feeder stream 20 feet wide going to the river which blocks access from the south. No volumes either.
33	42121 - Planted Jack Pine, Mixed Deciduous	High Density Sapling	23.1	Uneven Age		Seed tree harvested in 1996. It was then trenched and planted to red pine but failed. Leave the remaining overstory oak because removal would cause too much damage to the regeneration.
34	42250 - Pine, Oak	Medium Density Pole	20.4	71	81-110	More open stand with better oak and pine regeneration in sapling and pole sizes, Leave the stand for another 10 years then harvest to stagger age classes.
35	42220 - Natural Jack Pine	High Density Pole	12.9	75		The jack pine is overmature and there is a good mix of pine and oak in the understory. Harvest the stand now to open up the canopy to regeneration.
36	42250 - Pine, Oak	Low Density Sapling	21.8	7		Stand was harvested in the spring of 2005. Mixed stand in fair condition with more oak in the sub canopy.
39	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Pole	14.3	40		Cedars dying and no regeneration of it. Just balsam fir and some black ash. Cattails also so wet ground.
40	42250 - Pine, Oak	Medium Density Log	41.7	81	81-110	Very staggered ages in both the pine and oak. Canopy more open and getting good regeneration underneath. It willl hold for another ten years even with the jack pines high ages but needs to be harvested next rotation. Leaving to break up harvest foot print from adjacent stands that are in need of treatment more this rotation.
41	6131 - Hemlock, White Pine, Maple, Birch	High Density Pole	3.3	87		Very mixed stand with poorly drained soils. It is in good shape and the age does not warrant a harvest. Leave for diversity/buffer along the river.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
42	4319 - Mixed Upland Forest	High Density Pole	13.2	92		Diverse stand in the pole size class with thick understory regeneration. Predominantly balsam fir though. Hold off for at least another ten years to get more growth in the overstory and maybe the undrstroy will have thinned so there would be less damage to it from harvest operations.
43	42200 - Natural White Pine	High Density Log	6.2	87	141-170	Stand still in good condition with good regeneration. It can hold for another ten yers, Could be left also for diversity along the river because of the poor access restrictions. There is approximately 2-3 acre pure cedar stand on the west side which looks good for cover.
44	4191 - Mixed Upland Deciduous with Conifer	High Density Log	14.7	88	111-140	Leave the large white and red pines, harvest the rest to open up the understory regeneration. Supercanopy trees will not affect the regeneration and would be good for visual.
45	4310 - Pine, Oak Mix	High Density Sapling	22.3	15		Good regeneration that was seeded with jack pine in 1997. There is supercanopy oaks left from the harvest that are starting to die. There was a high percentage left but damages caused to the understory by trying to remove them far out weighs the benefit of their removal.
46	4122 - Oak, Pine	Medium Density	12.0	7		Stand was final harvested in spring in 2005. The oak regeneration is heavier in both canopy and sub-canopy. Will be a good mixed stand.
47	4319 - Mixed Upland Forest	Medium Density Pole	5.3	87		Stand is in fair shape. Would like to see more regeneration other than the balsam fir. Recheck in ten years to see if other regeneration is coming in.
48	42250 - Pine, Oak	Medium Density Pole	11.9	75	111-140	More dense jack pine with some logs but mostly is pole sized. There is jack pine regeneration in the understory. The oak in the overstory is starting to die off but is coming in good in the understory.
49	4119 - Mixed Northern Hardwoods	Medium Density Pole	12.9	88	81-110	Stand is not in decline, but would like to see more regeneration in the understory. The canopy is fairly open. Check in ten years to see if regeneration is further along and may harvest then. Willl need a temporary bridge to cross a drainage channel 30 feet across that is used to discharge the final product from the Village of Roscommon waste water lagoons. Permission may need to be obtained also to cross village property to access site.
51	42220 - Natural Jack Pine	High Density Pole	29.8	66		Jack pine still showing healthy signs in the overstory, however there is very little of it regenerating. Leave for another 10 years to stagger the jack pine age classes in the compartment and give a buffer for upcoming adjacent stand harvests. It should be harvested next rotation and maybe by then more regeneration will have come in. The oak regneration is better but still large pockets throughout the stand void of any.

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
2	122 - Road/Parking Lot	3.3	Yes	High (NonForested)	M-18
4	3301 - Low Density Deciduous Tree	1.8	No	Unspecified	This is an old gravel pit turned to dump site for some time. It has near vertical walls that are 30 feet tall. It is not feasible to try and contour to mark the site usable again.
5	3302 - Low Density Conifer Trees	37.8	Planted	Red Pine	Stand was final harvested in the winter 2007/2008. It was trenched and planted to red pine in spring 2009. There is good oak natural regeneration also,
12	3302 - Low Density Conifer Trees	1.9	Natural Regen	Red Pine	This site was final harvest in the winter 2007/2008 and has poor natural regeneration. It was supposed to have been trenched and planted to red pine with stand 5 but was overlooked.
19	710 - Sand, Soil	1.1	Yes	High (NonForested)	Tisdale cross-country ski trail parking lot.
21	3303 - Mixed Low Density Trees	13.7	Natural Regen	Oak	Good oak regeneration from both acorn and stump sprouting. Stand was final harvested in the winter 2007/2008.
37	3303 - Mixed Low Density Trees	17.9	Natural Regen	Oak	Good oak regenration coming back by acorn and stump sprouting. Was final harvested in the winter 20007/2008.
38	6220 - Alder/willow	38.4	No	Unspecified	Flood plain of the South Branch AuSable River.
50	3302 - Low Density Conifer Trees	19.4	Planted	Red Pine	Stand was final harvested in the winter 2007/2008. It was then trenched and plant to red pine in the spring 2009. Good mix of natural oak regeneration coming in also.
52	11 - Low Intensity Urban	2.3	Yes	Medium (NonForested)	Gardiner Road

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.

ERA = Ecological Reference Area
HCVA = High Conservation Value Area
SCA = Special Conservation Area

Conservation Area	Type	Description
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.
SCA	Research and Military Areas	These areas provide facilities and lands specifically dedicated for research, or other purposes. They include the 5,847 acre Forest Fire Experiment Station, the 12,000 acre Houghton Lake Wildlife Research Area, the Beaver Islands Archipelago Wildlife Research Area (that includes most of Garden Island, all of High and Hog Islands, all state owned land on Beaver, South Fox and North Fox Islands), the Cusino Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research Station, the 125 acre Wyman Nursery, and over 144,000 acres of Military Lands.