



# Compartment Review Presentation

## Grayling Forest Management Unit

Compartment 65

Entry Year 2016

Acreage: 2,753

County Alcona

Management Area: Wurtsmith

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**Revision Date:** 08/17/2014

**Stand Examiner:** Joan Charlebois

**Legal Description:**

T25N R08E Sections 15, 19, 20, 29, 30, 31, 32

**Identified Planning Goals:**

To maintain riparian and forest health, structural and species diversity, and overall productivity while providing for sustainable multiple uses.

**Soil and topography:**

The compartment's considerable lowland acreage occurs primarily on the somewhat poorly-drained mucky sand soils of the Tacoda-Wakeley complex. The uplands occur mainly on the somewhat excessively drained Graycalm sand series, dissected by steep valleys. Permanent streams flow through most of those valleys.

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

Only the south edge of the compartment borders other state land. The west side is adjacent to U.S. Forest Service lands managed for Kirtland's warbler. The rest of the compartment adjoins private property, with two private in-holdings. Both year-round and seasonal residential use occurs on the adjacent private property.

**Unique Natural Features:**

There is the potential for rare plants and animals to be associated with the large cedar swamp and stream corridors.

**Archeological, Historical, and Cultural Features:**

No Archeological, Historical, or Cultural Features known.

**Special Management Designations or Considerations:**

Duval Creek is listed as a high priority trout stream.

**Watershed and Fisheries Considerations:**

The compartment is within the Pine River watershed and contains several tributaries, including Roy, Grey & Duval Creeks. While those tributaries are classified as warm transitional streams, Duval Creek is classified as a high priority trout stream and they are all considered important for the production of young trout.

**Wildlife Habitat Considerations:**

During severe winters, deer yard in the large cedar swamp and associated stream corridor cedar stands. The compartment's mix of upland oak and pine and lowland aspen and conifers provide habitat for a variety of game and non-game wildlife. There is a long history of beaver activity along the streams.

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

Surface sediments consist of lacustrine (lake) sand and gravel and fine-textured glacial till. The glacial drift thickness varies between 400 and 600 feet. Beneath the glacial drift is the Coldwater Shale. There is not currently an economic use for the Coldwater Shale. A gravel pit is located to the west and potential appears to be good for the western upland areas. This compartment is not leased for oil and gas development. The Antrim Shale may be too deep to be developed.

**Vehicle Access:**

Direct county road access from the east is by way of Andrews, Goddard and Vandercook roads. Several U.S. Forest Service and seasonal county roads provide access from the west. There are some interior trail roads, but the steep drainage valleys and lack of stream crossings limit access.

**Survey Needs:**

The 1/16th corners for the private forty in section 29 were not found. The south 1/4 corner of section 32 also could not be located.

**Recreational Facilities and Opportunities:**

The Vandercook Road Snowmobile Trail Head is located in the northwest of section 19. Snowmobile trail #962 starts there and heads south through the compartment and the adjacent U.S. Forest Service land. Dispersed recreational opportunities include hunting, fishing, trapping, camping and wildlife viewing.

**Fire Protection:**

The wide cleared powerline corridor along the compartment's west edge acts as a fuelbreak for the adjacent Kirtland's warbler management area. The U.S.F.S. stream crossing in the NENE Section 24 is a potential water source. Steep sideslopes limit access to other streams within the compartment.

**Additional Compartment Information:**

**The following reports from the Inventory are attached:**

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

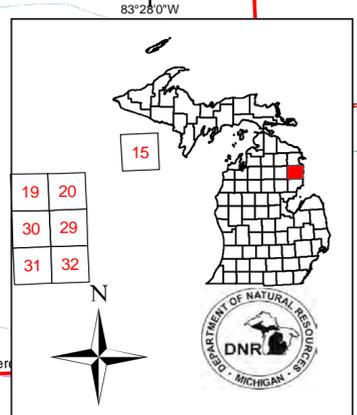
**The following information is displayed, where pertinent, on the attached compartment maps:**

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

# Cover Type & Treatment Map

Compartment: 065  
 T25N R08E Sec. 15, 19, 20, 29, 30, 31, 32  
 County: Alcona  
 Unit: Grayling  
 YOE: 2016  
 Acres: 2,753 GIS Calculated  
 Examiner: Joan Charlebois  
 Map Revised: 09/02/2014  
 Map Phase: Pre-Review

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



### Legend

- Miris Corners
- Remunemented Section Corners
- PLSS Corner
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Powerline
- Snowmobile Trails
- Snowmobile Trail
- Stream
- Intermittent Stream
- Lakes and Rivers
- State Forest Land

**Treatments w/ Site Condition**

- Treatments w/ Site Condition
- Clearcut (w/Reserves, Patch/Strip)
- Pesticide
- Regeneration Survey

**Forest Stands**

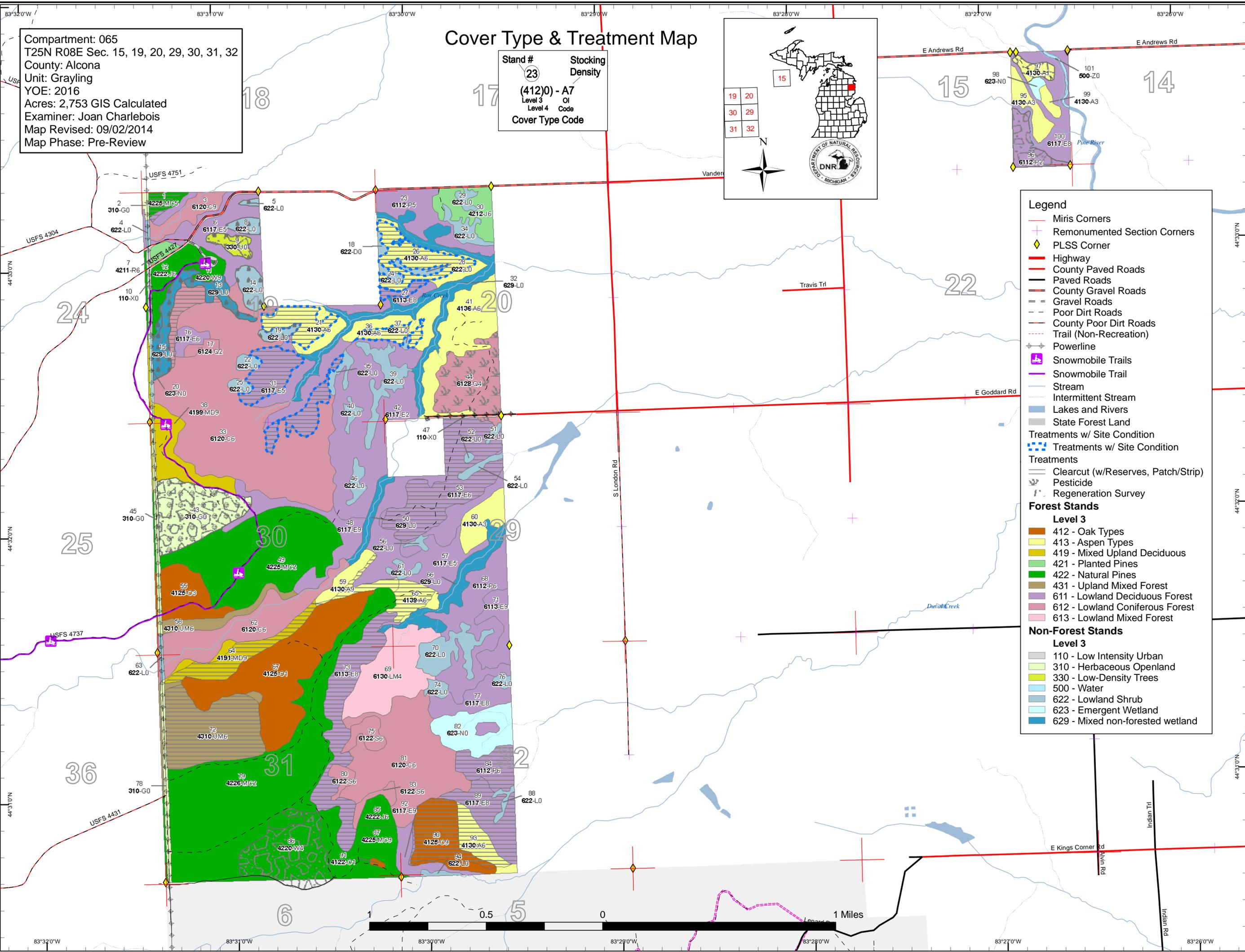
**Level 3**

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

**Non-Forest Stands**

**Level 3**

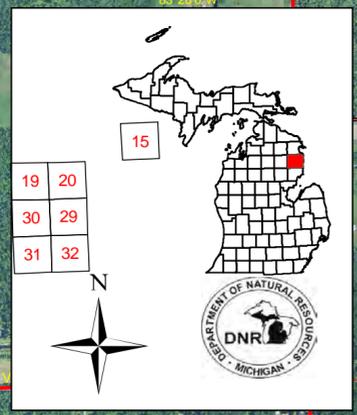
- 110 - Low Intensity Urban
- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 629 - Mixed non-forested wetland



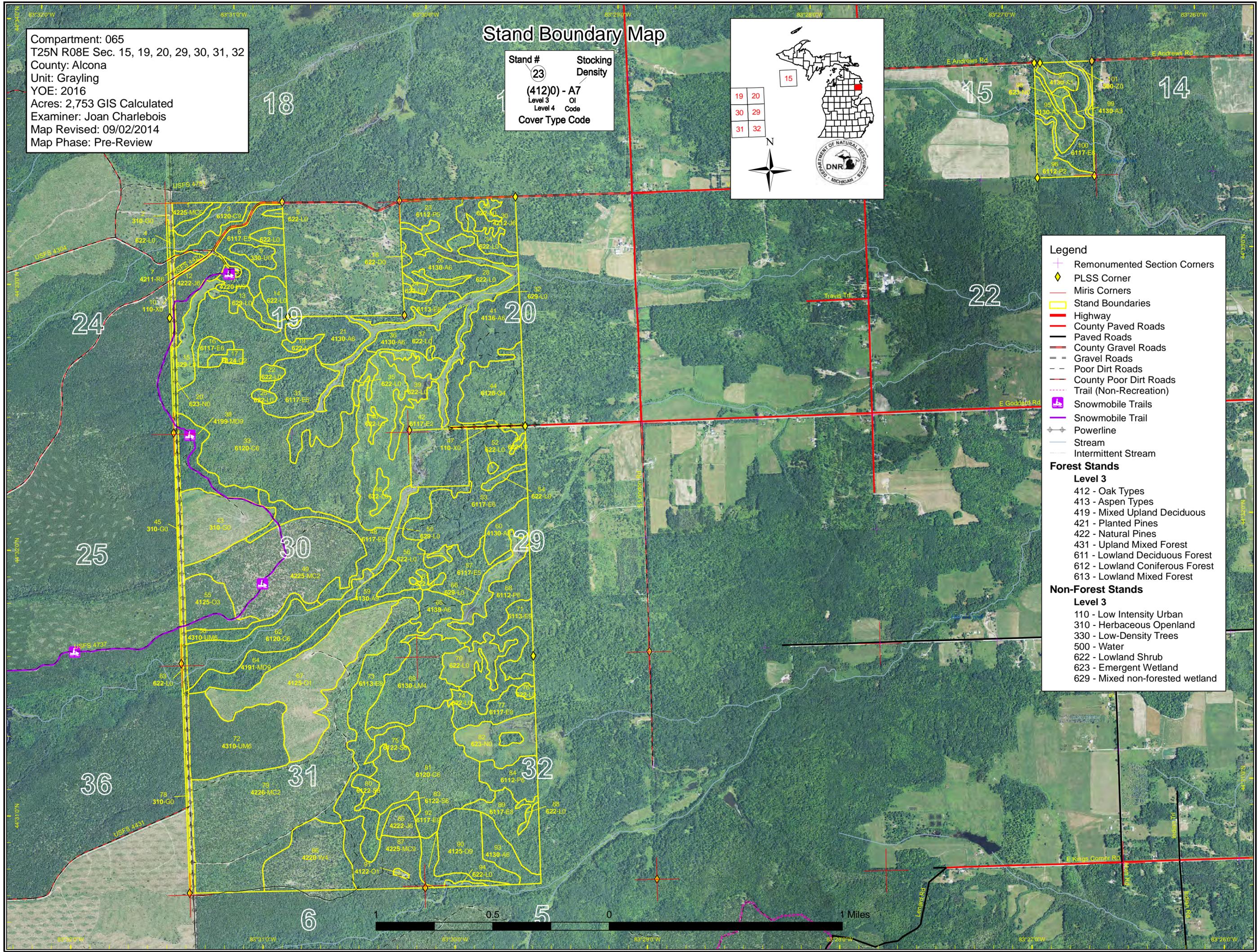
# Stand Boundary Map

Compartment: 065  
 T25N R08E Sec. 15, 19, 20, 29, 30, 31, 32  
 County: Alcona  
 Unit: Grayling  
 YOE: 2016  
 Acres: 2,753 GIS Calculated  
 Examiner: Joan Charlebois  
 Map Revised: 09/02/2014  
 Map Phase: Pre-Review

Stand #	Stocking Density
23	
(4120) - A7	
Level 3	OI
Level 4	Code
Cover Type Code	



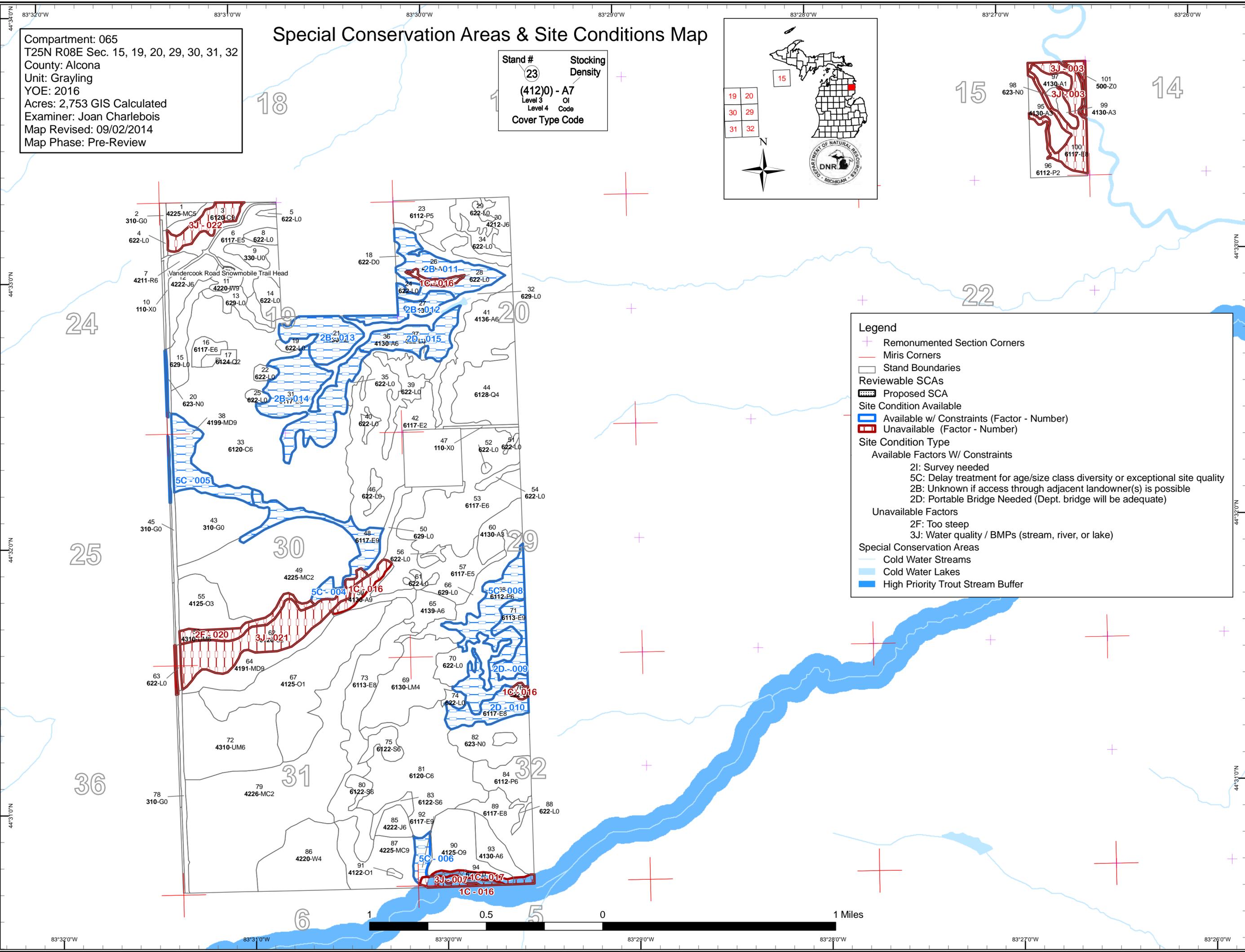
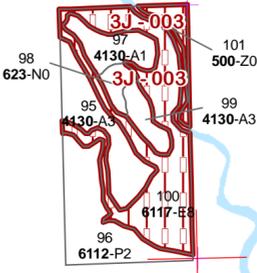
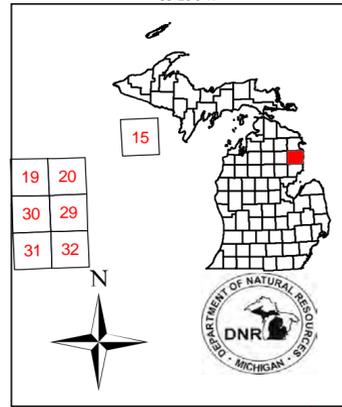
- Legend**
- ⊕ Remonumented Section Corners
  - ◆ PLSS Corner
  - Miris Corners
  - ▭ Stand Boundaries
  - Highway
  - County Paved Roads
  - Paved Roads
  - County Gravel Roads
  - Gravel Roads
  - Poor Dirt Roads
  - County Poor Dirt Roads
  - Trail (Non-Recreation)
  - Snowmobile Trails
  - Snowmobile Trail
  - ⊕ Powerline
  - Stream
  - Intermittent Stream
- Forest Stands**
- Level 3**
- 412 - Oak Types
  - 413 - Aspen Types
  - 419 - Mixed Upland Deciduous
  - 421 - Planted Pines
  - 422 - Natural Pines
  - 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
  - 310 - Herbaceous Openland
  - 330 - Low-Density Trees
  - 500 - Water
  - 622 - Lowland Shrub
  - 623 - Emergent Wetland
  - 629 - Mixed non-forested wetland



# Special Conservation Areas & Site Conditions Map

Compartment: 065  
 T25N R08E Sec. 15, 19, 20, 29, 30, 31, 32  
 County: Alcona  
 Unit: Grayling  
 YOE: 2016  
 Acres: 2,753 GIS Calculated  
 Examiner: Joan Charlebois  
 Map Revised: 09/02/2014  
 Map Phase: Pre-Review

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



**Legend**

- ✚ Remonumented Section Corners
- Miris Corners
- Stand Boundaries
- Reviewable SCAs**
- ▨ Proposed SCA
- Site Condition Available**
- Available w/ Constraints (Factor - Number)
- ▨ Unavailable (Factor - Number)
- Site Condition Type**
- Available Factors W/ Constraints
  - 2I: Survey needed
  - 5C: Delay treatment for age/size class diversity or exceptional site quality
  - 2B: Unknown if access through adjacent landowner(s) is possible
  - 2D: Portable Bridge Needed (Dept. bridge will be adequate)
- Unavailable Factors
  - 2F: Too steep
  - 3J: Water quality / BMPs (stream, river, or lake)
- Special Conservation Areas**
- Cold Water Streams
- Cold Water Lakes
- ▨ High Priority Trout Stream Buffer





	Age Class														Total
	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	
Aspen	24	19	0	52	0	131	0	18	0	0	0	0	0	0	243
Cedar	0	0	0	0	0	0	0	0	0	0	236	179	0	0	415
Herbaceous Openland	76	0	0	0	0	0	0	0	0	0	0	0	0	0	76
Jack Pine	0	0	0	0	53	0	0	0	0	0	0	0	0	0	53
Low-Density Trees	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Lowland Aspen/Balsam Poplar	17	0	0	0	31	78	0	0	0	0	0	0	0	0	125
Lowland Conifers	0	0	5	49	0	0	0	0	0	0	0	0	0	0	53
Lowland Deciduous	0	99	0	0	51	221	0	0	89	107	0	32	0	0	599
Lowland Mixed Forest	0	0	0	0	0	0	0	56	0	0	0	0	0	0	56
Lowland Shrub	249	0	0	0	0	0	0	0	0	0	0	0	0	0	249
Lowland Spruce/Fir	0	0	0	0	0	22	0	0	0	0	0	0	0	0	22
Marsh	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	30	32	0	0	0	0	62
Natural Mixed Pines	0	214	127	0	0	0	43	7	0	0	0	0	0	0	391
Oak	106	1	32	0	0	0	0	0	0	0	0	41	0	0	180
Red Pine	0	0	0	0	0	5	0	0	0	0	0	0	0	0	5
Treed Bog	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Upland Mixed Forest	0	0	0	0	0	0	0	0	0	93	0	0	0	0	93
Urban	12	0	0	0	0	0	0	0	0	0	0	0	0	0	12
Water	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
White Pine	0	0	0	0	58	0	0	8	0	0	0	0	0	0	65
<b>Total</b>	<b>535</b>	<b>333</b>	<b>163</b>	<b>100</b>	<b>193</b>	<b>457</b>	<b>43</b>	<b>89</b>	<b>119</b>	<b>233</b>	<b>236</b>	<b>252</b>	<b>0</b>	<b>0</b>	<b>2753</b>



## Report 2 – Proposed Treatment Summaries

**Grayling Mgt. Unit**  
**Year of Entry 2016**

**Compartment 065**  
**Total Compartment Acres: 2,753**

### Acres by Treatment Type

Commercial Harvest - 492    Tree Planting - 0    Other - 49  
 Habitat Cut - 0    Opening Maintenance - 0

### Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
<b>Aspen Types</b>	100	0	0	0	0	0	100
<b>Lowland Coniferous Forest</b>	13	0	0	0	0	0	13
<b>Lowland Deciduous Forest</b>	236	0	0	0	0	0	236
<b>Mixed Upland Deciduous</b>	26	0	0	0	0	0	26
<b>Natural Pines</b>	6	0	0	0	0	0	6
<b>Oak Types</b>	36	0	0	0	0	0	36
<b>Upland Mixed Forest</b>	74	0	0	0	0	0	74
<b>Total</b>	<b>492</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>492</b>



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1	72065001-cc	6.4	42250 - Pine, Oak	Medium Density Pole	73	51-80	Harvest	Clearcut	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest 2" DBH &amp; up except leave the white pine &amp; red pine. No additional retention due to small stand size. Extend the south harvest boundary as far as possible into the adjacent E-type stand 6 while leaving an adequate RMZ along the creek. Per Fisheries Division, a 300 ft buffer is recommended. The treatment boundary was edited to approximate the intended RMZ exclusion.</p> <p><u>Specs:</u></p> <p><u>Other</u> Access will have to be from the west across USFS lands. Look into access permit requirements at time of sale prep.</p> <p><u>Comments:</u></p> <p><u>Next</u> Natural regen survey. Acceptable regen includes a deciduous/conifer mix. Site prep activities would be limited on the sideslope and lower transition ground. A longer timeframe for achieving acceptable stocking may be needed.</p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2015</p>										
33	72065033-cc	12.7	6120 - Lowland Cedar	High Density Pole	104	111-140	Harvest	Clearcut	613 - Lowland Mixed Forest	Cmpt. Review Proposal
<p><u>Prescription</u> Continue the 2006 YOE prescription to final harvest merch &amp; up. Currently set up under the open contract 72-026-07-01.</p> <p><u>Specs:</u></p> <p><u>Other</u></p> <p><u>Comments:</u></p> <p><u>Next</u> Natural regen survey. Acceptable regen includes a mix of lowland tree and shrub cover. Given the slow initial growth rate of lowland conifers, allow a longer timeframe for regeneration.</p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 03/26/2014</p>										
53	72065053-ccr	75.3	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	50	81-110	Harvest	Clearcut with Reserves	6112 - Lowland Aspen	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest 2" DBH &amp; up. Apply area-based retention: first priority is adequate RMZ protection, then consider retention along linear tag alder swales. Small amounts of individual leave-trees (ie: WP saw) may also be designated. Per Fisheries Division, a 300 ft buffer is recommended along Roy Creek. A 100 ft buffer was excluded along the trib to Grey Creek. The treatment boundary has been edited to approximate the intended RMZ exclusions.</p> <p><u>Specs:</u></p> <p><u>Other</u> The stand contains a mosaic of lowland and upland ground and is dissected with linear tag alder swales.</p> <p><u>Comments:</u></p> <p><u>Next</u> Natural regen survey. Acceptable regen includes a mix of aspen, lowland deciduous, conifer, and lowland shrub cover.</p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2015</p>										
59	72065059-cc	8.3	4130 - Aspen	High Density Log	78	111-140	Harvest	Clearcut	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<p><u>Prescription</u> Final harvest, leaving an adequate RMZ for Roy Creek. No additional retention due to the narrow stand width. Spec the minimum cutting diameter to remove enough of the conifer understory to ensure vigorous aspen regeneration. Small amounts of individual leave-trees (ie: RP saw) may be designated. Per Fisheries Division, a 300 ft buffer is recommended along Roy Creek. The treatment boundary has been edited to approximate the intended RMZ exclusions.</p> <p><u>Specs:</u></p> <p><u>Other</u> Access will likely be from the west across USFS lands. Look into access permit requirements at time of sale prep.</p> <p><u>Comments:</u></p> <p><u>Next</u> Natural regen survey. Acceptable regen includes a mix of aspen, red maple &amp; conifers.</p> <p><u>Steps:</u></p> <p><u>Proposed</u></p> <p><u>Start Date:</u> 10/01/2015</p>										



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
64 72065064-cc	25.9	4191 - Mixed Upland Deciduous with Conifer	High Density Log	81	51-80	Harvest	Clearcut	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal

Prescription Final harvest, excluding an adequate RMZ along Roy Creek. No additional retention due to narrow stand width. Spec the minimum cutting diameter to remove enough of the conifer understory to ensure vigorous regeneration. Small amounts of individual leave-trees (ie: RP saw) may be designated. May need to exclude the steepest portion of the slope on the west end by the powerline. Per Fisheries Division, a 300 ft buffer is recommended along Roy Creek. The treatment boundary has been edited to approximate the intended RMZ exclusions.

Other Comments: The hillside is steep and will have to be worked from the bottom, so run the north boundary to include as much of the flats as possible. Treat at the same time as the adjacent stand 59. This stand will have to be skidded out to stand 59. Access will likely be from the west across USFS lands. Look into access permit requirements at time of sale prep.

Next Steps: Natural regen survey. Acceptable regen includes a mix of red maple, oak, aspen & conifers.

Proposed Start Date: 10/01/2015

65 72065065-ccr	12.8	4139 - Aspen, Mixed Deciduous	High Density Pole	50	81-110	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
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Prescription Final harvest. For retention, leave an adequate RMZ along the adjacent stream. Spec the minimum cutting diameter to remove enough of the conifer understory to ensure vigorous aspen regeneration. Small amounts of individual leave-trees (ie: oak saw) may be designated. Per Fisheries Division, a 300 ft buffer is recommended along Grey Creek. A 100 ft buffer was excluded along the trib to Grey Creek. The treatment boundary has been edited to approximate the intended RMZ exclusions.

Other Comments: Access will likely be from the west across USFS lands. Look into access permit requirements at time of sale prep.

Next Steps: Natural regen survey. Acceptable regen includes a mix of aspen, red maple, oak & conifers.

Proposed Start Date: 10/01/2015

72 72065072-ccr	74.4	4310 - Pine, Oak Mix	High Density Pole	94	51-80	Harvest	Clearcut with Reserves	4122 - Oak, Pine	Cmpt. Review Proposal
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Prescription Final harvest 2"+ DBH, except leave white pine and retention islands. Operational paths will have to be cut through the white pine where it is denser. Apply standard area-based retention; consider excluding the far NW on the hillside (particularly if the adjacent part of stand 64 isn't going to be cut) and an island bordering stand 67. Don't include the poly west of the powerline corridor (this exclusion is NOT part of the retention). The treatment boundary has been modified to reflect proposed exclusions.

Other Comments: Access will likely be from the west across USFS lands. Look into access permit requirements at time of sale prep.

Next Steps: Natural regen survey. Acceptable regen includes a mix of oak, pine & aspen.

Proposed Start Date: 10/01/2015

73 72065073-ccr	60.5	6113 - Lowland Maple	Medium Density Log	98	51-80	Harvest	Clearcut with Reserves	6117 - Lowland Deciduous, Mixed Coniferous	Cmpt. Review Proposal
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Prescription Final harvest except leave cedar. Spec the minimum cutting diameter so that enough of the conifer understory is removed to facilitate operations and regeneration, but enough is retained to regulate the water table. Retention will be area-based, as needed for adequate RMZ protection, but may also include designated leave-trees (ie: white pine saw). A 100 ft buffer was excluded along the trib to Grey Creek. The treatment boundary has been edited to approximate the intended RMZ exclusions. Sparse or majority-immature cover bordering the swamp conifer stands may be excluded (see Stage 1 stand comments).

Other Comments: Access will likely be from the west across USFS lands. Look into access permit requirements at time of sale prep.

Next Steps: Natural regen survey. Acceptable regen includes a mix of lowland deciduous, conifers and shrub cover.

Proposed Start Date: 10/01/2015



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
84	72065084-ccr	22.0	6112 - Lowland Aspen	High Density Pole	50	111-140	Harvest	Clearcut with Reserves	6112 - Lowland Aspen	Cmpt. Review Proposal

Prescription Final harvest except leave cedar. Spec the minimum cutting diameter to remove enough of the conifer understory to ensure vigorous regeneration. Apply standard area-based retention. Small amounts of individual leave-trees (ie: oak saw) may be designated in addition to the cedar.

Other  
Comments:

Next  
Steps: Natural regen survey. Acceptable regen includes a mix of aspen, red maple, conifers and lowland shrubs.

Proposed  
Start Date: 10/01/2015

89	72065089-ccr	32.2	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Log	116	81-110	Harvest	Clearcut with Reserves	6117 - Lowland Deciduous, Mixed Coniferous	Cmpt. Review Proposal
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Prescription Final harvest except leave cedar & hemlock. Spec the minimum cutting diameter so that enough of the conifer understory is removed to facilitate operations and regeneration, but enough is retained to regulate the water table. Apply standard area-based retention, which may include individual leave-trees (ie: white pine saw) in addition to the hemlock & cedar. Sparse or majority-immature cover bordering the swamp conifer stands may be excluded (see Stage 1 stand comments).

Other  
Comments:

Next  
Steps: Natural regen survey. Acceptable regen includes a mix of lowland deciduous, conifers and shrub cover.

Proposed  
Start Date: 10/01/2015

90	72065090-ccr	36.0	4125 - Black, N. Pin Oak	High Density Log	117	81-110	Harvest	Clearcut with Reserves	4121 - Oak, Aspen	Cmpt. Review Proposal
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Prescription Final harvest 2" DBH & up except leave white pine & red pine. Apply standard area-based retention, which may include individual leave-trees (ie: oak saw). Leave an adequate RMZ along Duval Creek. Extend the north & west harvest boundary down into the adjacent lowland stands to incorporate the denser transition ground cover. Per Fisheries Division, a 300 ft buffer is recommended along Duval Creek. A 100 ft buffer was excluded along the trib to Duval Creek. The treatment boundary has been edited to approximate the intended RMZ exclusions.

Other  
Comments:

Next  
Steps: Natural regen survey. Acceptable regen includes a mix of oak, aspen, red maple and conifers. If regen fails, conduct necessary site prep and supplemental plant red pine.

Proposed  
Start Date: 10/01/2015

93	72065093-ccr	16.7	4130 - Aspen	High Density Pole	50	81-110	Harvest	Clearcut with Reserves	413 - Aspen	Cmpt. Review Proposal
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Prescription Final harvest. Spec the minimum cutting diameter so that enough of the conifer understory is removed to facilitate operations and regeneration. Apply standard area-based retention, which may include individual leave-trees (ie: red pine, oak saw). Per Fisheries Division, a 300 ft buffer is recommended along Duval Creek. The treatment boundary has been edited to approximate the intended RMZ exclusions.

Other  
Comments:

Next  
Steps: Natural regen survey. Acceptable regen includes aspen, red maple, oak and mixed conifers.

Proposed  
Start Date: 10/01/2015



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
<b>44 72065044-Spray</b>	48.7	6128 - Lowland Coniferous, Mixed Deciduous	Low Density Pole	38	1-50	Pesticide	Hand Sprayer	6128 - Lowland Coniferous, Mixed Deciduous	Cmpt. Review Proposal

Prescription Control invasive exotic plants (such stand 44's glossy buckthorn) within the compartment, using approved methods (ie: herbiciding, cutting).  
Specs: Consider initiating one FTP for invasives control within the compartment to cover this stand and additional invaded sites as they are detected.

Other Comments:

Next Steps: Monitor effectiveness of control measures; re-treat as needed.

Proposed Start Date: 10/01/2015

<b>86 72065086-Survey</b>	55.6	42200 - Natural White Pine	Low Density Pole	47	1-50	Regeneration Survey	Intermediate Survey (natural regen)	4122 - Oak, Pine	Cmpt. Review Proposal
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Prescription Natural regen survey.  
Specs:

Other Comments: Previous YOЕ M.O. of WP. Currently fails to WP alone but has majority oak in the understory with locally high BTA regen. Change M.O. to accept a mix of oak-pine-aspen, including the residual toward stocking. By approved variance, comp 66 stand 108 to the S was cut at the same time. Check status of regen when in the area setting up harvests.

Next Steps:

Proposed Start Date: 10/01/2015

<b>96 72065096-Survey</b>	16.5	6112 - Lowland Aspen	Medium Density Sapling	5		Regeneration Survey	Next Inventory Cycle (natural regen)	6112 - Lowland Aspen	Cmpt. Review Proposal
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Prescription Natural regen survey.  
Specs:

Other Comments: The stand is a mosaic of lowland and upland ground. The lower ground is poorly-stocked. The drier ground has successfully regenerated, but the entire stand does not pass at this time. Non-stocked inclusions on the wettest ground are expected.

Next Steps: Acceptable regen includes a mix of aspen, red maple, and conifers with patches of lowland shrub/forb cover.

Proposed Start Date: 10/01/2023

<b>97 72065097-Survey</b>	7.1	4130 - Aspen	Low Density Sapling	5		Regeneration Survey	Next Inventory Cycle (natural regen)	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
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Prescription Natural regen survey. Address the illegal ORV damage: rehab measures may include signage, blocking trails, seeding or planting.  
Specs:

Other Comments: The stand is small, with non-stocked portions associated with the harvest landing, previous ground disturbance, and recent illegal ORV activity. Address the ORV damage through the RDR system. Conduct a regen survey concurrent with the next field inventory. A longer timeframe for regen establishment and in-growth will be needed.

Next Steps: Acceptable regen includes mixed upland deciduous and conifers, with some poorly-stocked inclusions.

Proposed Start Date: 10/01/2023



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
9 NF_72065009-Survey	8.2	3303 - Mixed Low Density Trees				Regeneration Survey	Next Inventory Cycle (natural regen)	4319 - Mixed Upland Forest	Cmpt. Review Proposal

Prescription Natural regen survey.  
Specs:

Other Comments: Regen is beginning to fill in, but less than two years have passed since the harvesting occurred. Additional time is needed for regen establishment and in-growth, particularly for the slower-growing conifers.

Next Steps: Acceptable regen includes a mix of deciduous, conifer and shrub cover.

Proposed Start Date: 10/01/2023

13 NF_72065013-Survey	10.7	629 - Mixed non-forested wetland				Regeneration Survey	Next Inventory Cycle (natural regen)	613 - Lowland Mixed Forest	Cmpt. Review Proposal
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Prescription Natural regen survey.  
Specs:

Other Comments: Regen is beginning to fill in, but less than two years have passed since the harvesting occurred. Additional time is needed for regen establishment and in-growth, particularly for the slower-growing conifers.

Next Steps: Acceptable regen includes a mix of lowland deciduous, conifer and shrub cover.

Proposed Start Date: 10/01/2023

15 NF_72065015-Survey	16.5	629 - Mixed non-forested wetland				Regeneration Survey	Next Inventory Cycle (natural regen)	613 - Lowland Mixed Forest	Cmpt. Review Proposal
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Prescription Natural regen survey.  
Specs:

Other Comments: Regen is beginning to fill in, but less than two years have passed since the harvesting occurred. Additional time is needed for regen establishment and in-growth, particularly for the slower-growing conifers. Deer browse is impacting red maple recruitment.

Next Steps: Acceptable regen includes a mix of lowland deciduous, conifer and shrub cover.

Proposed Start Date: 10/01/2023

43 NF_72065043-Survey1	54.0	3105 - Mixed Upland Herbaceous				Regeneration Survey	Artificial Regeneration (1yr)	4211 - Planted Red Pine	Cmpt. Review Proposal
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Prescription Year 1 artificial regen survey.  
Specs:

Other Comments: C72-623: Roller-chopped & trenched in 2013. Planted in 2014.

Next Steps: Follow-up treatment as needed to ensure adequate RP recruitment (ie: herbicide to control deciduous competition). Year 3 artificial regen survey.

Proposed Start Date: 10/01/2014

**Total Treatment Acreage Proposed: 600.7**



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
21	72065021-ccr	20.7	4130 - Aspen	High Density Pole	53		Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Final harvest. Spec the minimum cutting diameter to remove enough of the conifer understory to ensure vigorous aspen regeneration. Retention will be area-based, as needed for adequate RMZ protection, but may also include small amounts of designated-leave trees (ie: the trace of cedar). Per Fisheries Division, a 300 ft buffer is recommended along Roy Creek. A 100 ft buffer was excluded along the tribs to Roy Creek. The treatment boundary has been edited to approximate the intended RMZ exclusions.</p> <p><u>Other Comment:</u> This stand has access constraints. Stream/wetland crossings or permission to cross private property will be needed. Consider treating as one block with the adjacent limited-access stands.</p> <p><u>Next Steps:</u> Natural regen survey. Acceptable regen includes aspen, red maple and mixed conifers.</p> <p><u>Proposed Start Date:</u> 10/01/2015</p> <p><u>Limiting Factor</u> 2B: Unknown if access through adjacent landowner(s) is possible</p>										

26	72065026-ccr	32.2	4130 - Aspen	High Density Pole	53	51-80	Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Final harvest. Spec the minimum cutting diameter to remove enough of the conifer understory to ensure vigorous aspen regeneration. Retention will be area-based, as needed for adequate RMZ protection, but may also include small amounts of designated-leave trees (ie: scattered RP saw). Per Fisheries Division, a 300 ft buffer is recommended along Roy Creek. A 100 ft buffer was excluded on the trib to Roy Creek. The treatment boundary has been edited to approximate the intended RMZ exclusions.</p> <p><u>Other Comment:</u> This stand has access constraints. Stream/wetland crossings or permission to cross private property will be needed. Consider treating as one block with the adjacent limited-access stands.</p> <p><u>Next Steps:</u> Natural regen survey. Acceptable regen includes aspen, red maple and mixed conifers.</p> <p><u>Proposed Start Date:</u> 10/01/2015</p> <p><u>Limiting Factor</u> 2B: Unknown if access through adjacent landowner(s) is possible</p>										

27	72065027-ccr	4.4	6113 - Lowland Maple	Medium Density Log	83	51-80	Harvest	Clearcut with Reserves	6117 - Lowland Deciduous, Mixed Coniferous	Cmpt. Review Proposal
<p><u>Prescription Specs:</u> Final harvest. Spec the minimum cutting diameter so that enough of the conifer understory is removed to facilitate operations and regeneration, but enough is retained to regulate the water table. Retention will be area-based, as needed for adequate RMZ protection, but may also include small amounts of designated-leave trees. Per Fisheries Division, a 300 ft buffer is recommended along Roy Creek. A 100 ft buffer was excluded on the tribs to Roy Creek. The treatment boundary has been edited to approximate the intended RMZ exclusions.</p> <p><u>Other Comment:</u> This stand has access constraints. Stream/wetland crossings or permission to cross private property will be needed. Consider treating as one block with the adjacent limited-access stands.</p> <p><u>Next Steps:</u> Natural regen survey. Acceptable regen includes a mix of lowland deciduous, conifer and shrub components.</p> <p><u>Proposed Start Date:</u> 10/01/2015</p> <p><u>Limiting Factor</u> 2B: Unknown if access through adjacent landowner(s) is possible</p>										



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
31 72065031-ccr	41.9	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	53	51-80	Harvest	Clearcut with Reserves	6117 - Lowland Deciduous, Mixed Coniferous	Cmpt. Review Proposal

Prescription Specs: Final harvest. Spec the minimum cutting diameter so that enough of the conifer understory is removed to facilitate operations and regeneration, but enough is retained to regulate the water table. Retention will be area-based, as needed for adequate RMZ protection, but may also include small amounts of designated-leave trees (ie: scattered white pine saw). Per Fisheries Division, a 300 ft buffer is recommended along Roy Creek. A 100 ft buffer was excluded on the tribs to Roy Creek. The treatment boundary has been edited to approximate the intended RMZ exclusions. Sparse or majority-immature cover bordering the swamp or lowland brush stands may be excluded (see Stage 1 stand comments & management considerations).

Other Comment: This stand has access constraints. Stream/wetland crossings or permission to cross private property will be needed. Consider treating as one block with the adjacent limited-access stands.

Next Steps: Natural regen survey. Acceptable regen includes a mix of lowland deciduous, conifer and shrub components.

Proposed Start Date: 10/01/2015

Limiting Factor 2B: Unknown if access through adjacent landowner(s) is possible

36 72065036-ccr	9.7	4130 - Aspen	High Density Pole	53	81-110	Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
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Prescription Specs: Final harvest. Spec the minimum cutting diameter to remove enough of the conifer understory to ensure vigorous aspen regeneration. Retention will be area-based, as needed for adequate RMZ protection, but may also include small amounts of designated-leave trees (ie: scattered WP saw). Per Fisheries Division, a 300 ft buffer is recommended along Roy Creek. A 100 ft buffer was excluded on the trib to Roy Creek. The treatment boundary has been edited to approximate the intended RMZ exclusions.

Other Comment: This stand has access constraints. Stream/wetland crossings or permission to cross private property will be needed. Consider treating as one block with the adjacent limited-access stands.

Next Steps: Natural regen survey. Acceptable regen includes aspen, red maple and mixed conifers.

Proposed Start Date: 10/01/2015

Limiting Factor 2D: Portable Bridge Needed (Dept. bridge will be adequate)

**Total Treatment Acreage Proposed: 109.0**

## Report 5 – Site Conditions

Grayling Mgt. Unit

Joan Charlebois : Examiner

Compartment 065

Year of Entry 2016

### Availability for Management

Total Acres	Acres Available	Acres Not Available		Dominant Site Conditions							
				Un	No	5C	3J	2F	2D	2B	1C
243	232	11	<b>Aspen</b>		135				29	69	11
415	340	75	<b>Cedar</b>		340		75				
53	53	0	<b>Jack Pine</b>	0	53						
125	125		<b>Lowland Aspen/Balsam Poplar</b>		69	56					
53	53		<b>Lowland Conifers</b>		53						
599	560	39	<b>Lowland Deciduous</b>		399	39	38		39	83	1
56	56		<b>Lowland Mixed Forest</b>		56						
22	22		<b>Lowland Spruce/Fir</b>		22						
62	62		<b>Mixed Upland Deciduous</b>		30	32					
391	390	0	<b>Natural Mixed Pines</b>	0	390						
180	174	6	<b>Oak</b>		174		1				5
5	5		<b>Red Pine</b>		5						
93	79	15	<b>Upland Mixed Forest</b>		79			15			
65	65		<b>White Pine</b>		65						
2,364	2,217	146	Total Forested Acres	1	1,871	127	114	15	67	151	17
	94%	6%	Relative Percent								

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

Site No.	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
003	<b>Not Available</b>	<b>3J: Water quality / BMPs (stream, river, or lake)</b>	33	2G: Too wet (sensitive soils, does not include access issues)			
<b>Comments:</b> Floodplain and first terrace of the Pine River and three tributaries.							
004	<b>Available</b>	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	32				
<b>Comments:</b> Green-up concerns with stand 43 (to be planted in 2014). Would prefer not to leave a buffer out of this already narrow stand. Consider treating next YOE along with the adjacent stand 38 that has the same green-up issue.							

## Report 5 – Site Conditions

Grayling Mgt. Unit

Joan Charlebois : Examiner

Compartment 065

Year of Entry 2016

005	<b>Available</b>	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	32		
<b>Comments:</b> Green-up concerns with stand 43 (to be planted in 2014). Would prefer not to leave a buffer out of this already narrow stand. Consider treating next YOE along with the adjacent stand 48 that has the same green-up issue.					
006	<b>Available</b>	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	8		
<b>Comments:</b> Small portion of the lowland stand outside of the Duval Creek RMZ. Consider treating denser transition ground edges when adjacent upland stands are prescribed.					
007	<b>Not Available</b>	<b>3J: Water quality / BMPs (stream, river, or lake)</b>	6		
<b>Comments:</b> RMZ of Duval Creek and a small tributary.					
008	<b>Available</b>	<b>5C: Delay treatment for age/size class diversity or exceptional site quality</b>	56	2D: Portable Bridge Needed (Dept. bridge will be adequate)	2B: Unknown if access through adjacent landowner(s) is possible
<b>Comments:</b> Delay harvest on this stand in order to meet the M.A. plan's area regulation goal for the aspen covertype. Treat stands 71 & 77 at the same time. This block of stands is isolated by streams, beaver floodings and private property. Treat the stands in one block when the access is resolved.					
009	<b>Available</b>	<b>2D: Portable Bridge Needed (Dept. bridge will be adequate)</b>	18	2B: Unknown if access through adjacent landowner(s) is possible	
<b>Comments:</b> Delay treatment until the adjacent aspen stand 68 is prescribed for harvest (likely next YOE). Treat stand 77 at the same time. This block of stands is isolated by streams, beaver floodings and private property. Treat the stands as one block when the access is resolved.					

## Report 5 – Site Conditions

Grayling Mgt. Unit

Joan Charlebois : Examiner

Compartment 065

Year of Entry 2016

010	<b>Available</b>	<b>2D: Portable Bridge Needed (Dept. bridge will be adequate)</b>	21	2B: Unknown if access through adjacent landowner(s) is possible	
<b>Comments:</b> Delay treatment until the adjacent aspen stand 68 is prescribed for harvest (likely next YOE). Treat stand 71 at the same time. This block of stands is isolated by streams, beaver floodings and private property. Treat the stands as one block when the access is resolved.					
011	<b>Available</b>	<b>2B: Unknown if access through adjacent landowner(s) is possible</b>	39	2D: Portable Bridge Needed (Dept. bridge will be adequate)	
<b>Comments:</b> Isolated by Roy Creek, tributaries and private property. Will need to install a stream crossing or obtain permission to cross private property.					
012	<b>Available</b>	<b>2B: Unknown if access through adjacent landowner(s) is possible</b>	14	2D: Portable Bridge Needed (Dept. bridge will be adequate)	
<b>Comments:</b> Isolated by Roy Creek, tributaries and private property. Will need to install a stream crossing or obtain permission to cross private property.					
013	<b>Available</b>	<b>2B: Unknown if access through adjacent landowner(s) is possible</b>	30	2D: Portable Bridge Needed (Dept. bridge will be adequate)	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
<b>Comments:</b> Isolated by Roy Creek, tributaries, lowland stands and private property. Will need to install a stream crossing or obtain permission to cross private property.					
014	<b>Available</b>	<b>2B: Unknown if access through adjacent landowner(s) is possible</b>	68	2D: Portable Bridge Needed (Dept. bridge will be adequate)	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)
<b>Comments:</b> Isolated by Roy Creek, tributaries, lowland stands and private property. Will need to install a stream crossing or obtain permission to cross private property.					

## Report 5 – Site Conditions

Grayling Mgt. Unit

Joan Charlebois : Examiner

Compartment 065

Year of Entry 2016

015	<b>Available</b>	<b>2D: Portable Bridge Needed (Dept. bridge will be adequate)</b>	29	No Limiting Factor
<b>Comments:</b> Isolated by Roy Creek, tributaries, and lowland stands. May need to install stream crossings unless access is developed from the SSW.				
016	<b>Not Available</b>	<b>1C: Other dept or div proc/practices</b>	18	3J: Water quality / BMPs (stream, river, or lake)
<b>Comments:</b> 300 foot uncut strip along Roy Creek, left at Fisheries Division request to discourage beaver activity on a stream important for trout production. Standard RMZ width otherwise would have been 100 feet.				
017	<b>Not Available</b>	<b>1C: Other dept or div proc/practices</b>	8	3J: Water quality / BMPs (stream, river, or lake)
<b>Comments:</b> 300 foot uncut strip along Duval Creek, left at Fisheries Division request to discourage beaver activity on a stream important for trout production.				
020	<b>Not Available</b>	<b>2F: Too steep</b>	15	
<b>Comments:</b> Steep south aspect above Roy Creek swamp.				
021	<b>Not Available</b>	<b>3J: Water quality / BMPs (stream, river, or lake)</b>	59	No Limiting Factor
<b>Comments:</b> Cedar stand on Roy Creek floodplain. The stream meanders through the stand. Heavy deer use in the winter of 2013/2014.				
022	<b>Not Available</b>	<b>3J: Water quality / BMPs (stream, river, or lake)</b>	16	
<b>Comments:</b> Cedar swamp with a perennial stream meandering through it.				



**Report 6 – PROPOSED SPECIAL CONSERVATION AREA\* (SCA) DETAILS**

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
<b>Vandercook Road                      Snowmobile Trail Head</b>	Concentrated Recreation Area	Trail Head	SCA	1.2
<b>Comments</b>				
snowmobile trail parking lot				



**Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS**

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

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

Conservation Area	Type	Description
SCA	Archaeological Site	An aquatic or terrestrial area of the State that contains physical remains of human occupation. These are sites of cultural and historical significance that may occur upon terrestrial areas and Great Lakes bottomlands. They include thousands of Native American settlements and burial sites, as well as French and British outposts, nineteenth century logging camps, mines and homesteads. Beneath the waters of the Great Lakes, there are shipwrecks and other remains documenting the maritime trade. Such sites may be identified by Natural heritage data from the State Historic Preservation Office. Proposed treatments in this compartment will be implemented in such a manner as to maintain the integrity of these sites. Due to the sensitive nature of this information, no further detail about location is available.
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species to persist from year to year. Suitable conditions for coldwater fishes may occur in Michigan lakes if they are relatively deep, have substantial groundwater inflows, or are located in colder (northern) areas of the state. Such lakes are established by Director's action and designated as trout resources by Fisheries Order 200.
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in which the terrestrial ecosystem influences the aquatic ecosystem and vice-versa. Because of the unique conditions adjacent to lakes, streams and open water wetlands, riparian areas harbor a high diversity of plants and wildlife. Riparian communities are ecologically and socially significant in their effects on water quality and quantity, as well as aesthetics, habitat, bank stability, timber production, and their contribution to overall biodiversity.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42250 - Pine, Oak	Medium Density Pole	7.0	73	51-80	Stand is on a hilltop and dry south aspect down to the swamp. The hilltop has most of the overmature JP, with short, poor-quality hybridized oak. The JP cover decreases and the oak, WP & RP increases on the hillside. RM picks up as the ground flattens out near the swamp. The understory has oak, WP, and to a lesser extent RP & JP filling in. The mature oak likely represents an older age class than the JP, and the WP/RP appears to have recruited much later than either of them.
3	6120 - Lowland Cedar	High Density Log	16.1	115	111-140	Cedar swamp on bottomlands bordering a perennial stream. NWC health is good overall, but size & vigor decreases at the west end near the powerline corridor. No visible NWC regen. Black spruce has filled in densely and recruited to fill gaps in the cedar canopy. WP is a minor canopy associate, along with lesser amounts of RM, PB & balsam fir. Balsam fir regen cover is locally high, but averages out to low.
6	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	43.7	49	51-80	Lowland hardwoods stand on the transition ground between the uplands, cedar swamps & lowland brush wetlands. Mostly RM, with paper birch, WP, JP, QA, balsam fir & black spruce associates. Also trace amounts of NWC, tamarack, black oak, RP & BTA. The lowest ground bordering L3-types has mostly sapling cover. Holes in the canopy have locally high understory cover in ilex, tag alder, WP & BF. Two-thirds of the stand (that part SE of Vandercook Rd) was within the 1965 manual habitat cutting FTP G-41. While the spec's were not noted, they likely involved chainsaw felling some of the RM, PB & aspen. The partial cutting specs applied across part of the stand created two broad age classes in the deciduous species. The RM 1st age is based on the 1965 FTP record. The RM 2nd age was on the residual small saw. The previous inventory RM age of 98 years is likely representative of part of the saw class in untreated portions of the stand. Stand includes cedar strip W of the powerline.
7	42111 - Planted Red Pine, Mixed Deciduous	High Density Pole	4.6	51	81-110	RP interplanted through oak/JP, with often wide spacing between rows. North edge of stand on cutbank has majority JP. The oak is short, with poor form & quality. The RP has decent form, considering the site (PVCd) & irregular spacing. RP SI 47. The mature oak component is likely in its early 90's, estimate based on similar oak cored on PVCd sites within the compt.
11	42200 - Natural White Pine	High Density Log	7.5	73	81-110	Pine sawtimber stand wrapping around the snowmobile trail parking lot and access road. The stand is upland overall but is bordered by lowlands on three sides. Cover is majority WP, along with JP, RM, RP & black spruce, and trace amounts of oak, black cherry, cedar & aspen. The JP is largely overmature. A few xlog WP rim the south edge. Second age of 95 years was from the previous inventory on the RP.
12	42220 - Natural Jack Pine	High Density Pole	21.1	41	1-50	Most of the stand was cut 2-sticks & up on the JP, and merch & up on the oak & RM in 1973 (#19-73). Excluded from the harvest area were a narrow strip of state land on the west side of the powerline corridor, and a narrow strip of mature oak & JP along the stand's SE edge. The majority large sapling/small pole JP & oak cover regenerated from the harvest, but the scattered residual stems left by the merch+ cutting specs represent a minor older age class. A small amount of mature JP, oak & RP occurs in the two narrow uncut strips. There are a few JP with Sirex woodwasp trap tree signs in the NE.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
16	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	7.3	49	51-80	This stand was part of a manual habitat cut in 1965 under FTP G-40. The cutting specs were not noted, but appear to have involved felling RM, paper birch and aspen. The stand has small pole-large sapling cover in those species, along with a mixed conifer component (black spruce, balsam fir, WP & cedar). Stand age was set to the cut, but there is a minority component of older stems that were residual from the cut.
17	6124 - Lowland Spruce-Fir	Medium Density	4.7	26		Was cut 2" & up in three commercial harvests between 1986 and 1990 (#24-86, #9-89 & #59-89 "Alcona Co. Cedar Sales"). Q/P/E sapling regen from the cut, with no observed cedar regen. Balsam fir and black spruce regen is heaviest in the west, giving way to more balsam poplar in the east.
21	4130 - Aspen	High Density Pole	29.5	53		Merch aspen, RM & paper birch were cut across most of the stand by 1961 under #82-59A. The stand is upland aspen overall but there is E-type transition ground cover all along its margins and the stand is bisected by an ephemeral drainage swale. The stand's lower ground perimeter has less dense canopy cover, less aspen & more RM, WP, balsam fir and small amounts of cedar & black spruce. Tag alder & ilex occur along the border with the adjacent lowlands. The partial cutting spec's applied across parts of the stand resulted in two main age classes in the deciduous species. The stand's first age was set to the cutting record, and the second age was estimated based on the post-harvest residual RM cored in two adjacent stands that were part of the same timbersale. A trace of hybridized oak occurs with the aspen on the higher ground. The understory has medium to full coverage in balsam fir, with some WP regen also.
23	6112 - Lowland Aspen	Medium Density Pole	30.9	43	81-110	A manual habitat cut (FTP G-61) was carried out in 1971 across the stand's W1/2, spec'd to drop RM, PB & A, except for RM & PB w/in 5 chains of the county road. Merch & up RM & A in the stand's SE were cut commercially in 1970 (#48-68). The partial cutting spec's made for two main age classes in the A-RM-PB: 43 year old regen from the cut and 60+ year old residual. The few rows of JP that extend into this stand were part of the adjacent 1965 plantation. The ground is close to the water table, mainly PARVCo but with drier and wetter ground throughout. The lowest swales have tag alder and sparse tree cover. The higher ground has a trace of hybridized oak. The stand's SE peninsula has most of the WP, a trace of balsam poplar, and dead ash. The minority older components across all of the deciduous species have increasing rot/cull. Second age was on an older saw-sized RM residual from the cut. Previous inventory age on the RM was 83.
26	4130 - Aspen	High Density Pole	39.2	53	51-80	A manual habitat cut (FTP G-61) was carried out in 1971 across the stand's NW 7 acres, spec'd to drop RM, PB & A. Merch & up RM & A in the stand's East 13 acres were cut commercially in 1970 (#48-68). The partial cutting specs applied across parts of the stand resulted in 3 main age classes in the deciduous species: mid-40's regen from the cut, residual aspen in its early 50's, and residual RM around 80 years old. Note that the QA, BTA & RM have components landing in each age class, so the single age assigned to each canopy species record only represents part of that species. The ages assigned were based on: the cutting record for the QA, cored saw-pole aspen stems outside of the two recorded treatment areas for the BTA, and older saw residual for the RM. There is a trace of tag alder along the adjacent lowland stands, and a trace of hybridized oak on the highest ground. Most of the WP is concentrated on the stand's east edge by the creek floodplain.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
27	6113 - Lowland Maple	Medium Density Log	14.3	83	51-80	Lowland stand with >/< cull RM (poorly-healed branch scars & seams common), patches of QA, and scattered balsam fir & paper birch. A levee of drier ground along the creek floodplain has most of the WP (saw-sized but generally short & limby), some BTA (by the private property), and a trace of hybridized oak. There is locally high understory cover in WP, tag alder and BF. Previous inventory age of 83 on the RM was used for the first age. Second age was from a cored saw-sized RM representing a younger age class.
30	42120 - Planted Jack Pine	High Density Pole	21.6	49	51-80	Largely farmfield on the 1938 photos; tax reverted in 1939. WP had been seeding in when most of the stand was trenched & planted to JP in 1965. Upland, but not by much, with considerable lowland interface and small L3 inclusions. The somewhat lower ground has majority WP cover; elsewhere WP is mixed into the JP plantation as a minor component. RM is filling in below. Sparse patch of lowland hardwoods in the NE corner. See OFS.
31	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	68.4	53	51-80	Merch aspen, RM & PB were cut across most of the stand by 1961 under #82-59A. The stand is PARVCo overall, with drier and wetter inclusions, and is cut by drainage swales. The stand has pole/cull saw RM with mixed conifer, aspen & PB associates. Species distribution & canopy closure vary widely with the ground condition. The driest ground has less RM, more aspen & 75-100% canopy closure. The majority intermediate ground has 50-75% canopy cover and a higher proportion in RM, WP, balsam fir, black spruce & PB. The lowest ground adjacent to L-types and the cedar swamp tends to have sparser cover & more lowland brush. JP & a trace of hybridized oak also occur within the stand. The partial cutting spec's applied across parts of the stand resulted in two main age classes in the deciduous species. The stand's first age was set to the cutting record, but there is a significant portion of the stand that is older (second age was on the post-harvest residual RM saw).
33	6120 - Lowland Cedar	High Density Pole	236.0	104	111-140	Cedar-dominated conifer swamp that had a series of small-scale treatments recorded within it: manual habitat cut patches in 1965 under FTPs G-40 & G-41, several small "deeryard" commercial cuttings in the 1950's, 60's & late 1980's, & 3 acres cut in 2012 (72-026-07-01, open contract, approx. 12 acres yet to cut in the NNW). The harvests that were large enough to meet minimum stand mapping rules & that resulted in covertype conversion were separated out as unique stands. Cuts that did not meet those criteria remain as inclusions & tend to be occupied with balsam fir, black spruce, RM & PB regen &/or tag alder. Cedar regen was not observed. Mature lowland hardwood mixes in along the stand's perimeter. Cedar health & vigor is best on that transition ground & poorest on the stand's most saturated ground. Between those extremes, the typical cover is dense cedar poles with black spruce, balsam fir & scattered WP. The understory ranges from open to full balsam fir cover.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
36	4130 - Aspen	High Density Pole	28.6	53	81-110	Merch aspen, RM & paper birch were cut across most of the stand by 1961 under #82-59A. The stand is upland aspen overall, but transitions to low ground all along its margins, and the stand is bisected by a drainage swale. The stand's perimeter has less uniform canopy closure, less aspen & more RM, WP & balsam fir. Tag alder & ilex occur along the border with the adjacent lowlands. The partial cutting spec's applied across parts of the stand resulted in two main age classes in the deciduous species. The stand's first age was set to the cutting record, and the second age was on the post-harvest residual RM (saw-sized now). The understory has medium to full coverage in balsam fir, with some WP regen also. The aspen is not transitioned enough into the saw class to call the stand log-sized overall, and the RM tends to be oversized pulp.
38	4199 - Other Mixed Upland Deciduous	High Density Log	31.9	92	51-80	Stand is upland overall, with the highest elevation along the powerline corridor, then grading down eastward to the cedar swamp. Most of the BTA (overmature) and oak is concentrated on the higher ground west of the snowmobile trail. On the flats east of the rec trail, canopy dominance shifts from oak to RM, with increasing paper birch also. Occasional supercanopy WP & RP. The understory has variable, often full coverage in WP and balsam fir. This stand includes a narrow strip of state land with similar cover on the west side of the powerline corridor
41	4136 - Aspen, Mixed Conifer	High Density Pole	51.5	38	111-140	Most of the stand was cut merch & up in 1976 (#16-75A), then low-density residual was chainsaw felled under FTP W-178 in 1979. A narrow uncut buffer was left along Roy Creek. Stand age was set to the commercial harvest. The stand regenerated to quaking aspen and balsam fir, with minor associates (BTA, WP, JP, RM, balsam poplar & NWC). The ground is upland overall, but not by much, and transitions into low ground along most of its perimeter. The overstory balsam fir and a few pockets of cedar are concentrated along the stand margins. The understory has dense cover in balsam fir. Most of the tag alder & ilex are on the perimeter, but small patches occur interior also. A square clearing in the stand's north-center wasn't big enough to delineate out as a separate non-forested stand this YOE.
42	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density	98.7	17		Was cut merch & up except for oak in 1997 (72-026-96-01; mixed HWs, SWs, pine & A), and regenerated to a wide mix of P/E/Q. Lowland overall, with shallow ridges dry enough for sweetfern & witch hazel. JP occurs on the driest ground flanking a skid route that laps the stand, along with a 3-acre patch in the SW. Most of the dense aspen clones are strung along the stand's east side. There is very poor quality oak saw residual scattered across the stand. Roughly a chain-wide strip was left uncut along Roy Creek, with mature RM, RP, NWC, etc. Canopy closure swings off either end of 50-75%, typically where the ground is wettest and driest, respectively. The stand is cut with N-S linear swale L3 inclusions (see 1998 DOQ). Some beaver cutting in the aspen.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
44	6128 - Lowland Coniferous, Mixed Deciduous	Low Density Pole	48.7	38	1-50	Most of the stand was cut merch & up in 1976 (#16-75A), then low-density residual was chainsaw felled (FTP W-178) in 1979. Stand age set to the commercial harvest. The terrain is pock-marked with >24 sub-acre lowland brush inclusions (see 1998 DOQs). Wrapping around those wetland potholes is a mosaic of intermediate to low ground. A sketchy trail road island-hops up the stand's east side on the drier ground. Most of the aspen is concentrated there, along with traces of oak & RP. Cover in balsam fir, WP, tamarack, PB & JP increases on the lower ground. Marginal RM occurs throughout. The wettest ground has dense lowland shrub cover with encroaching E/Q. In addition to the recorded sub-canopy tag alder, salix & ilex, there are small amounts of wild raisin, mountain holly, & the invasive glossy buckthorn. Canopy closure is >50% in places, but the many non-forested wetland inclusions drag the stand average down into the 25-50% category. Poly S of road wasn't in the cut area.
48	6117 - Lowland Deciduous, Mixed Coniferous	High Density Log	31.9	92	81-110	RM-dominated stand on the narrow band of transition ground between the uplands and the cedar swamp. Associates include paper birch, JP, WP & balsam fir, with small amounts of oak, BTA, RP & cedar. Oak, BTA, witch hazel & beaked hazelnut can be found on the upland edge, but the ground is majority PARVCo or lower. The understory is heavy to balsam fir, with tag alder & ilex near the cedar swamp edge.
49	42250 - Pine, Oak	Medium Density	126.9	27		Was cut 2" & up in 1987 (72-006-87-01; JP, O, mixed pine & HWs). Cover is majority post-harvest large sap/small pole JP and stump-sprout oak. Stockier WP & RP poles are scattered across the stand. The JP distribution is variable; where sparser, the cover is short & limby. Holes in the canopy are slowly filling in as the understory oak sapling component recruits; some JP is seeding in also. On the stand's lower slope perimeter, the proportion in oak, WP & RP increases, as does the canopy closure. BTA occurs along that edge too. Did not record BA swings in this majority sapling stand. This stand includes a narrow strip of state land on the west side of the powerline corridor that was not within the state harvest; this roughly 1-acre strip has older JP, oak & RP that was not factored into the parent stand's data.
53	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	93.9	50	81-110	The stand was within a large timbersale (#78-60A, est. 390 ac. cut over) that was spec'd to remove merch A, RM, PB & JP, and merch balsam fir & NWC within aspen clones. The harvest was active from 1961-1966 (vast majority cut by 1964) and was closed with "scattered patches not cut due to inaccessibility (wet conditions)". The ground is PARVCo with drier and wetter inclusions. The terrain is cut with a series of linear swales containing tag alder, ilex & grey dogwood. The lowland brush cover is patchy elsewhere. On the highest ground, fairly complete cutting occurred in the aspen, but the merch & up specs & incomplete access made for a 2nd older age class across most species (cull common in that residual). 2nd age was on the residual RM; 1st age reflects the post-harvest regen, including a portion of the RM. In addition to the aspen & RM, there is patchy representation in balsam fir, PB, WP, JP & black spruce, & traces of balsam poplar, oak, tamarack & RP (by the PVT).



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
55	4125 - Black, N. Pin Oak	High Density Sapling	31.8	27	1-50	Was cut 2" & up in 1987 (72-006-87-01; O, JP, mixed pine & HWs). Cover is majority post-harvest large sap/small pole stump-origin oak, with stocky WP, JP & RP poles and some RM sprouts. There is a single-stem small sapling oak component that has potential to recruit. This stand includes a narrow strip of state land on the west side of the powerline corridor that was not within the state harvest; the strip includes J3 planted to the KW weave pattern by the USFS and sub-acre portions N & S in pole JP, oak & RP; that cover was not factored into the parent stand's data.
57	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	58.6	50	1-50	The stand was within a 400+ acre timbersale (#78-60A), that was spec'd to harvest merch A, RM, PB & JP, and merch BF & NWC in aspen clones. The harvest was active from 1961 to 1966 (vast majority cut by 1964) and was closed with "scattered patches not cut due to inaccessibility (wet conditions)". The partial harvest spec's partially applied made for two broad age classes in the deciduous species. The stand's first age was set to the harvest, but there is a mature component across most species. Did not attempt to break down species by age class, except for a rough approximation in the majority RM cover. This stand's ground is lowland overall, with drier inclusions & non-forested wetland swales. The variable, marginal-quality E/Q overstory is majority pole, with log-sized residual scattered throughout & concentrated in pockets that the logger didn't access. Small aspen clones occupy the drier ground. The understory has diverse lowland shrub cover and patchy E/Q regen.
58	4310 - Pine, Oak Mix	High Density Pole	14.5	93	81-110	Mixed oak-pine stand on dry south aspect; steep drop down to cedar swamp and Roy Creek. Short, scraggly oak with WP & RP of all size classes. Even large saplings reach into this stand's low canopy. On the south edge, leveling out near the swamp, the oak cover decreases and balsam fir and RM increase.
59	4130 - Aspen	High Density Log	17.7	78	111-140	Overmature BTA (age from previous inventory) with RM, small amounts of oak, balsam fir & paper birch, and scattered supercanopy RP & WP. The understory has moderate to full cover in balsam fir. The stand occupies the shallow sideslope and flats between the higher elevations and the swamps, and is upland overall. Slash is building as the mature balsam fir, paper birch and BTA breaks up.
60	4130 - Aspen	High Density Sapling	19.1	17		Was cut 2" & up in 1997 (#025-96). Regenerated to aspen with scattered residual WP, BF & RP (all conifers limby, open-grown), and small amounts of oak and RM. The ground is upland overall, but the stand's W1/2 is cut with lowland brush swales (recorded understory tag alder concentrated there). Some beaver felling along the SE edge.
62	6120 - Lowland Cedar	High Density Pole	59.3	118	141-170	Cedar swamp on the Roy Creek bottomlands. Except for the flood-stressed patch on the east end, the cedar has decent vigor and form. Associates include black spruce, RM, paper birch, balsam fir and scattered supercanopy WP. The deciduous component increases on the stand margins by the uplands. Relatively open below in the stand's core, with balsam fir regen mostly along the margins. There is slash from root-tips. Heavy deer use. Roy Creek meanders through the stand. This stand includes a narrow strip of state land with similar cover on the west side of the powerline corridor.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
64	4191 - Mixed Upland Deciduous with Conifer	High Density Log	30.2	81	51-80	Mixed upland deciduous stand occupying the cooler north facing sideslope down to Roy Creek's cedar swamp. Species distribution varies across the stand but is heavy to RM, with oak, aspen & mixed pine. The poor-quality oak and overmature JP occur mainly along the top edge of the slope. The overmature BTA occurs in several sub-acre clones scattered up and down the slope. On the lower slopes, the RM, paper birch, and BF cover increases. The understory has medium to full coverage in large sapling balsam fir. Aside from a narrow strip of transition ground along the swamp, this stand is solid upland.
65	4139 - Aspen, Mixed Deciduous	High Density Pole	15.1	50	81-110	Part of a roughly 400-acre designated harvest area (#78-60A) in which most of the merch aspen, RM, PB & JP were cut on accessible ground between 1961 & 1966. The vast majority of the sale was cut by 1964, so the First Age was set to that year. The stand has dense BTA clones separated by sparser RM & overmature JP cover. Most of the oak is saw-sized residual from the cut (estimated age of 95 based on similar oak cored in nearby stands), but there is also a large sapling/small pole component. The ground is upland overall but picks up lower transition ground on its perimeter against the L- & E-types.
67	4125 - Black, N. Pin Oak	Low Density Sapling	106.5	5		Was cut 2" & up in 2009 (72-015-06-01). removing JP, oak & some BTA & RP. Well-distributed oak regen in both stump sprout clumps and individual stems. The stump sprouts are recruiting fastest, with dominant stems 5-7 feet tall. There is an oak seedling component (<3' tall) with potential to recruit also. Deer browse occurring but not overwhelming. JP regen is concentrated at the landing, and larger residual sapling WP, JP, RP & BF are scattered throughout. Small amount of BTA regen along the NW edge.
68	6112 - Lowland Aspen	High Density Pole	56.1	50	81-110	The stand was within a large timbersale (#78-60A, est. 390 ac. cut over) spec'd to remove merch A, RM, PB & JP, and balsam fir & NWC within aspen clones. The harvest was active from 1961-1966 (vast majority cut by 1964) and was closed with "scattered patches not cut due to inaccessibility (wet conditions)". The NE 2 chains along the PVT were cut in 1984 (#79-84-02) & has more B-fir than aspen. The ground is PARVCo with drier & wetter inclusions. The terrain is dotted with small tag alder/ilex wetlands; the lowland brush cover is patchy elsewhere. On the highest ground, fairly complete cutting occurred in the aspen, but the merch & up specs & incomplete access made for a 2nd older age class across most species. 2nd age was on the residual RM; 1st age reflects the post-harvest regen, including a portion of the RM. In addition to the aspen & RM, there is balsam fir, PB, & traces of oak, WP & cherry. Medium-full BF understory. Ash snags common. Recent beaver felling of QA.
69	6130 - Fir, Aspen, Maple	Low Density Pole	56.4	73	1-50	Low ground cut with mucky, ill-defined seeps that flow barely above-ground to sub-surface. There are inclusions of marginally drier ground. The core wettest ground has a relatively open canopy of balsam fir & RM over tag alder & ilex, with black & white spruce, paper birch, cedar & aspen associates. The cedar occurs in dense sub-acre patches. The slightly drier ground has less balsam fir in the overstory, more RM & white spruce, and greater canopy closure. Patches on the stand's perimeter have 75-100% canopy closure in large RM saplings. The understory has medium-to-high cover in fir & spruce. Large canopy gaps formed from overmature fir, PB & aspen break-up are filling in from below, but not enough balsam fir has reached the canopy level to move the stand average out of the 25-50% category.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
71	6113 - Lowland Maple	High Density Log	18.3	86	81-110	The stand was within a large timbersale (#78-60A, est. 390 ac. cut over) spec'd to remove merch A, RM, PB & JP, and balsam fir & NWC within aspen clones. The harvest was active from 1961-1966 (vast majority cut by 1964) and was closed with "scattered patches not cut due to inaccessibility (wet conditions)". Only a minor amount of the 1960's cutting occurred in this stand, which is on PARVCo & lower ground with marsh/lowland brush wetland inclusions throughout. Canopy is mostly large cull RM with paper birch, overmature aspen, balsam fir, & traces of WP, elm & balsam poplar. The ash has died out. Seams & poorly-healed branch scars common in the RM. Medium-to-full balsam fir understory is recruiting into the canopy as the overmature PB, aspen & balsam fir components drop out.
72	4310 - Pine, Oak Mix	High Density Pole	78.9	94	51-80	Dry oak-pine site with short, scraggly oak, overmature and younger JP, WP of all size classes, and small amounts of white oak & BTA. Because of the relatively low canopy height, even large sapling WP are recordable in the overstory. The WP's heaviest concentration is in the stand's NW. A portion of the oak make minimum saw diameter but are largely chip quality. This stand includes a strip of similar cover on the west side of the powerline corridor.
73	6113 - Lowland Maple	Medium Density Log	61.2	98	51-80	Long narrow E-type stand between the uplands and the cedar swamp. The canopy is RM-dominated, with paper birch, balsam fir & spruce associates, and small-to-trace amounts of super-canopy WP & RP, NWC, oak, overmature JP & aspen. The RM is heavy to cull saw. Slash is building as the overmature balsam fir, PB & QA break up. The canopy closure is 75-100% on the transition ground edge, but drops moving east onto the lower ground. The balsam fir & spruce understory is thick on the lower ground, but not enough has recruited to lift the overall canopy closure beyond the 50-75% category. The understory cover is variable, ranging from relatively open, to dense balsam fir & spruce, to lowland brush or patches of tall RM saplings.
75	6122 - Black Spruce	High Density Pole	10.5	51	51-80	The largest of several patches cut along the swamp edge between 1961 & 1963 (#76-61A, spec'd to remove merch balsam fir, black spruce, NWC & JP, along with minor amounts of hemlock, RM & PB). Regen from the cut is dense pole-sapling spruce & fir with aspen, RM, PB & WP. The deciduous component is mostly along the west edge. Residual from the cut includes scattered NWC saw & super-canopy WP. Stand age was set to the harvest completion year, but the regen continued to fill in over the next few years (5"DBH spruce cored 46 years), and the merch & up specs left a minor component of older residual.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
77	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Log	23.4	89	51-80	The stand was within a large timbersale (#78-60A, est. 390 ac. cut over) spec'd to remove merch A, RM, PB & JP, and balsam fir & NWC within aspen clones. The harvest was active from 1961-1966 (vast majority cut by 1964) and was closed with "scattered patches not cut due to inaccessibility (wet conditions)". Patches of the 1960's cutting occurred in this stand, which is on PARVCo & lower ground, but there is more post-harvest residual (1st age) than regen (2nd age) across the designated-cut species. Terrain is dissected with lowland brush swales. Overstory is mostly poor-quality RM with balsam fir, paper birch, aspen & small amounts of NWC, black spruce & super-canopy WP. Canopy closure drifts off either end of 50-75%. Canopy gaps formed where overmature PB, balsam fir & QA died-out are filling in with balsam fir. The south polygon cut off by the beaver-dammed stream is a roughly 3-acre island that appears to have similar ground and tree cover. Did not visit that poly.
79	42260 - Natural Pine, Mixed Deciduous	Medium Density	214.0	15	1-50	Was cut merch & up in 1999 (72-035-96-01: JP, oak, BTA, mixed HWs & pine). Canopy is majority sapling regen from the harvest, with an older residual small pole class across all species. WP is the only species with most of its stems pole-sized or larger. Canopy closure is at the high end of 50-75% and continuing to fill in. The stand has a mix of JP, WP, oak, RM & BTA, with small amounts of black cherry, balsam fir and RP. Species distribution varies. While scattered throughout, the WP is more concentrated on the E-W ridge through the stand's south half. The RM is mostly in the NE along the swamp edge. The BTA occurs in a few small clones. The older residual JP pole component is heaviest on the stand's W & S edges. The stand has two dissimilar inclusions: A sub-acre uncut strip S of the S-end two-track, and a narrow strip of state land on the west side of the powerline corridor that was managed with the adjacent USFS lands (cut & trenched to the KW weave pattern by 2012).
80	6122 - Black Spruce	High Density Pole	5.6	51	81-110	One of several patches cut along the swamp edge between 1961 & 1963 (#76-61A, spec'd to remove merch balsam fir, black spruce, NWC & JP, along with minor amounts of hemlock, RM & PB). Regen from the cut is dense pole-sapling spruce & fir with aspen, RM, PB & WP. Residual from the cut includes scattered NWC saw & super-canopy WP. Stand age was set to the harvest completion year, but the regen continued to fill in over the next few years, and the merch & up specs left a minor component of older residual. An acre in the stand's NE is a patch of cedar windthrow that wasn't part of the original cut. Because the blow-down happened more recently, the balsam fir and spruce regen within it is much younger.
81	6120 - Lowland Cedar	High Density Pole	103.7	114	141-170	Dense cedar cover with minor spruce, fir, RM, PB & hemlock components, and traces of tamarack, balsam poplar & supercanopy WP. A lot of deer use this winter. Open below where the canopy is closed; heavy balsam fir understory in canopy gaps. The cedar is relatively healthy & vigorous, but there is an area of stressed trees in the SE by a couple acres of root-tipped cedar. Amongst the tangled of downed trees, there are cedar and paper birch saplings. Some of the cedar regen is from layering, but even the apparent seed-origin stems are vigorous and unbrowsed. On the transition ground to the uplands, the cedar diameter gets larger but it's canopy representation decreases as the RM/E increases. Patches of concentrated RM saplings occur there also.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
83	6122 - Black Spruce	High Density Pole	5.9	51	51-80	One of several patches cut along the swamp edge between 1961 & 1963 (#76-61A, spec'd to remove merch balsam fir, black spruce, NWC & JP, along with minor amounts of hemlock, RM & PB). Regen from the cut is dense pole-sapling spruce & fir with WP, RM, aspen & PB. Residual from the cut includes scattered NWC saw & super-canopy WP. Stand age was set to the harvest completion year, but the regen continued to fill in over the next few years, and the merch & up specs left a minor component of older residual.
84	6112 - Lowland Aspen	High Density Pole	22.0	50	111-140	The stand was within a large timbersale (#78-60A, est. 390 ac. cut over) spec'd to remove merch A, RM, PB & JP, and balsam fir & NWC within aspen clones. The harvest was active from 1961-1966 (vast majority cut by 1964) and was closed with "scattered patches not cut due to inaccessibility (wet conditions)". The ground is PARVCo with drier & wetter inclusions. The terrain is dotted with small tag alder/ilex wetlands; the lowland brush cover is sparse elsewhere. On the highest ground, fairly complete cutting occurred in the aspen, but the merch & up specs & incomplete access made for a 2nd older age class across the designated-cut species. 2nd age was on the residual RM. In addition to the aspen & RM, there is balsam fir, PB, & traces of oak, NWC & balsam poplar. The stand's NW has a more open canopy where the ash died out, leaving mostly RM & balsam fir. The stand's NE has a higher proportion in older residual stems. Medium-full BF understory.
85	42220 - Natural Jack Pine	High Density Pole	10.4	41	51-80	JP along with some marked RP & WP sawtimber were salvaged after a fire in 1973 (#28-73). Residual from the salvage included super-canopy WP & RP bordering the lowland edge, and scattered JP & poor-quality oak that survived the fire. Regen that filled in post-salvage is the majority cover across the stand's interior: JP & WP small pole/ large sapling material. The WP regen is heaviest along the stand's margins, where the RM also occurs. The canopy is at the low end of 75-100% closure, but continues to fill in as the understory WP, oak, JP & RP recruit. Stand's second age was on the residual JP saw.
86	42200 - Natural White Pine	Low Density Pole	57.8	47	1-50	Was cut 2" & up except for WP & RP in 2009 (72-015-06-01), removing JP, oak & BTA. A roughly 4-acre island in the N end was excluded from harvesting & noted as an old burned area with good WP regen. The stand's WP & RP residual is the featured canopy. The canopy WP ranges from large saplings to supercanopy saw, but most land in the pole class (1st age of 47 on 9" DBH WP). The WP saw component increases towards the stand's perimeter (2nd age of 70 on 12" DBH WP). The minor RP saw-pole component is scattered throughout. The small amounts of JP & oak are mainly in the north island & an uncut strip south of the south end two-track. Canopy closure drifts off either end of the 25-50% category. The understory has vigorous stump-origin oak regen from the cut, & an oak seedling layer with potential to recruit. BTA has locally high cover in the stand's SE. Understory WP & RP coverage is low. The stand did not have heavy deer use -- there was only light browse on the oak regen.



Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
87	42250 - Pine, Oak	High Density Log	43.1	61	81-110	Merch & up "old growth JP" were cut in 1961 (#29-61A), and a small amount of RP & WP saw were marked to cut in 1965 (#53-64). A sub-acre inclusion in the stand's far SE was cut merch & up in 1999 (72-035-96-01). Canopy representation is almost equally split between WP, JP & poor-quality oak, with a minor RP component, and near trace amounts of BTA & RM. While the top three species are present throughout, the proportion in each varies across the stand. The JP is greatest in the stand's core. To the S & W, the WP component increases, most of the RP occurs there, and the average diameter increases also. The RM & BTA occur largely on the stand's perimeter. The BTA sapling component is down in the 1999 harvest patch. The stand has 4 significant age classes: most of the JP regenerated after the 1961 harvest and is in its early 50's. Saw-sized JP residual is 70+. The WP was running around 60 years old, and the oak around 90. The understory has medium-high WP cover.
89	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Log	32.2	116	81-110	The stand was within a large timbersale (#78-60A, est. 390 ac. cut over) spec'd to remove merch A, RM, PB & JP, and balsam fir & NWC w/in aspen clones. The harvest was active from 1961-1966 (vast majority cut by 1964) and was closed with "scattered patches not cut due to inaccessibility (wet conditions)". Dispersed cutting occurred on the highest of this stand's PARVCo & lower ground, generally leaving more post-harvest residual (1st age) than regen (2nd age) across the designated-cut species. That incomplete cutting made the stand highly variable in terms of species, age, and diameter distribution. Pronounced tip-up mound topography with lowland brush swales. Overstory is mostly poor-quality RM with balsam fir, PB, aspen, patches of NWC & hemlock, & super-canopy WP & RP. Canopy closure averages at the high end of 50-75%, with sparser areas where the ash died out. Canopy gaps formed where overmature PB, balsam fir & aspen broke up are filling in with balsam fir, WP & RM.
90	4125 - Black, N. Pin Oak	High Density Log	40.9	117	81-110	Most of this mature oak stand was on land aquired from the USFS in 1986. The stand's perimeter near the lowlands has more large NRO, but the drier interior has poorer quality hybridized oak, white oak & overmature JP. Canopy closure is at the low end of 75-100% there, with WP poles & large saplings filling in. The aspen occurs in small clones scattered across the stand. Most of the aspen is overmature large cull, but the stand's southeast 6 acres were within timbersale #78-60A (merch aspen, RM, PB, & JP cut; oak left) resulting in patches of younger pole aspen (second age, cutting record) mixed into the mature oak overstory.
91	4122 - Oak, Pine	Low Density Sapling	1.1	15		Landing cleared for nearby aspen cutting unit in 1999 (72-035-96-01). Opening filling in with oak saplings (mostly stump sprouts), WP & JP. Handful of mature oak around deer season campsite.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
92	6117 - Lowland Deciduous, Mixed Coniferous	High Density Log	14.3	98	51-80	Lowland swale hemmed in by uplands W & E, and running from the cedar swamp at the N end down to the Duval Creek floodplain at the S end. RM is the common thread, but canopy cover varies greatly with the ground conditions. The N end is wettest, with a more open canopy, smaller-diameter RM, significant spruce-fir-tamarack components, and patches of NWC. Moving south, the ground isn't as saturated. The canopy closure & RM component increases, and large oak & overmature BTA occur on the transition ground margins. The stand's S end is on a couple old terraces above Duval Creek and encompasses a small tributary. The ground is wet-mesic, and has a mix of supercanopy WP & RP, cedar, hemlock, RM, large red oak & BTA, & a trace of sugar maple. The balsam fir understory is heaviest along the creek.
93	4130 - Aspen	High Density Pole	18.6	50	81-110	The stand was within a large timbersale (#78-60A, est. 390 ac. cut over) spec'd to remove merch A, RM, PB & JP, and balsam fir & NWC within aspen clones. The harvest was active from 1961-1966 (vast majority cut by 1964) and was closed with "scattered patches not cut due to inaccessibility (wet conditions)". This upland stand had good access and was cut close to specs, resulting in a fairly uniform regen event for the designated species. The majority pole bigtooth aspen cover has RM and small amounts of QA & paper birch in the same cohort. Residual from the harvest includes large oak, RP & WP, often super-canopy in stature. A few dozen RP & WP saw were cut in 1964 (#32-64). The stand's perimeter near the lowlands has heavy subcanopy balsam fir, but only low-medium cover in WP saplings interior. The second age estimate was based on the adjacent mature upland oak stand, likely in the same cohort as this stand's residual oak.
95	4130 - Aspen	High Density Sapling	12.7	5		Was final harvested 2" & up except hemlock & NWC, and WP 25"+ DBH in fall 2009 (72-031-07-01). Regenerating well overall to quaking & bigtooth aspen, with minor amounts of red maple & balsam fir, and scattered residual hemlock, NWC & WP. A lot less RM regen than expected, given the volume removed; what did sprout is seeing deer browse. The stand has small poorly-stocked inclusions, most of them low ground swales, but the ground is upland overall.
96	6112 - Lowland Aspen	Medium Density	16.5	5		Was final harvested 2" & up except hemlock & NWC, and WP 25"+ DBH in fall 2009 (72-031-07-01). Patchy distribution of quaking & bigtooth aspen regen with traces of balsam poplar. Residual includes hemlock poles, supercanopy WP, and a few NWC. Most of the hemlock is concentrated in a sub-acre patch in the stand's S-center. There is a narrow uncut swath bordering the S private line where most of the balsam fir is. The stand has poorly-stocked inclusions scattered throughout, occurring mostly on the lowest ground. While the stand has ground dry enough to support bigtooth aspen, the widespread presence of woolgrass indicates that the stand is majority lowland. As the aspen regen grows & transpires more, the balance may shift back toward upland overall. Narrow drainage valleys border and cut through the stand.
97	4130 - Aspen	Low Density Sapling	7.1	5		Stand was a red pine plantation, final harvested 2" & up in fall 2009 (72-031-07-01). Primarily quaking aspen filling in, with minor amounts of oak, black cherry & balsam fir. The cover is patchy, with a non-stocked inclusion in the NW where the original planted RP was densest. This area included the landing and some pitted/rolling topography. An illegal ORV trail snakes through the stand, originating from the west.

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Grayling Mgt. Unit

## Report 8 – Forested Stands

Compartment: 065  
Year of Entry: 2016

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
99	4130 - Aspen	High Density Sapling	4.0	5		Was final harvested 2" & up except for hemlock & NWC in fall 2009 (72-031-07-01). Regenerating to quaking aspen, with scattered residual hemlock and NWC poles. Aside from a sub-acre opening in the SE, the stand is filling in well. Although hemlock & NWC are present, the ground appears to be upland overall.
100	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Log	33.1	84	51-80	The stand occupies the floodplain and first terrace of the Pine River and the narrow valleys of three tributaries. The ground is majority lowland but includes drier transition ground on the steep risers, along with isolated ridges in the SE. The lowest ground where most of the black & green ash grew is shifting to non-forested/sparse cover. The NWC is concentrated along the river and stream corridors. The drier transition ground to the uplands has the densest cover and is heavier to RM, balsam fir, aspen & paper birch. Minor associates include hemlock, basswood and supercanopy WP. Boxelder, prickly ash and riverbank grape occur along the Pine.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
2	3102 - Grass	1.8	No	Low	Cleared powerline corridor and a strip of state land on the corridor's west side. That strip (approx. a chain wide) on the off side of the corridor was recently cut, roller-chopped & burned by the USFS concurrent with their adjacent lands. Oak regen there.
4	6220 - Alder/willow	1.3	No	Low	Short willow and tag alder within the cleared powerline corridor. Permanent stream crosses through it.
5	6220 - Alder/willow	1.4	Natural Regen	Lowland Deciduous	Within an area of manual habitat cutting in 1965 under FTP G-41, spec's not noted. Tag alder, willow & ilex with <25% cover in large sapling E/Q.
8	6220 - Alder/willow	5.3	Natural Regen	Lowland Deciduous	Within an area of manual habitat cutting in 1965 under FTP G-41, spec's not noted. Tag alder with ilex and <25% cover in RM & PB large saplings/small poles.
9	3303 - Mixed Low Density Trees	8.2	Natural Regen	Upland Mixed Forest	Was cut merch & up in 2012 (72-026-07-01). Upland overall, with transition ground at margins with swamp. Current sparse cover includes sapling residual from the cut, scattered shrubs, and WP & black spruce seeding in.
10	11 - Low Intensity Urban	9.8	No	Unspecified	Vandercook Road, the snowmobile trailhead parking lot, and a portion of the powerline corridor with sandy two-tracks.
13	629 - Mixed non-forested wetland	10.7	Natural Regen	Lowland Conifers	Was cut merch & up in 2012 (72-026-07-01). A portion of the harvest unit remains to be cut. Operations were suspended due to rutting. The wettest ground in the SW has woolgrass visible above the snow. The NW has scattered, heavily-browsed RM stump sprout regen. To the SE, the ground is a little drier. That peninsula has most of the sparse residual RM, WP, black spruce & balsam fir sapling cover. Tag alder increases there too.
14	6220 - Alder/willow	11.2	Natural Regen	Lowland Deciduous	Tag alder, willow and ilex with encroaching large sapling/small pole RM, PB & BF (as seen from the edge) and what appears on the aerial imagery to be small patches of E/Q interior.
15	629 - Mixed non-forested wetland	17.9	Natural Regen	Lowland Mixed Forest	Was cut merch & up in 2012 (72-026-07-01). A portion of the harvest unit remains to be cut; that narrow strip was included in the adjacent swamp stand. This stand is on the transition ground between the uplands and the cedar swamp. Typed as lowland overall, it does have dry ground along the west edge where the serviceberry, witch hazel & some oak saps are found. The wetter ground has tag alder, woolgrass & some cattail, with scattered residual sapling regen. The RM stump sprouts have been heavily browsed; each stump has deer trails extending out from it like spokes on a wheel. Black cherry sprouts are untouched and really taking off. The balsam fir sapling patches are mostly in the S1/2. If there was a Low-Density Tree cover type option for lowlands, that's what this stand would be typed as.
18	6224 - Treed Bog	1.6	No	Low	Bog with WP, JP & RM filling in.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
19	6220 - Alder/willow	4.6	Natural Regen	Lowland Deciduous	Tag alder with RM & balsam fir filling in. Was part of a manual habitat cut in 1965 under FTP G-41, The W1/2 of the cut filled in enough to make the forested benchmark and was included in the adjacent swamp conifer stand.
20	6233 - Wet Meadow	2.5	No	Low	Lowland stretch of cleared powerline corridor. Wetland ferns, grass, sedge, cattail, etc. visible above the snow.
22	6220 - Alder/willow	3.9	No	Low	Tag alder & ilex with E/Q colonizing. Not enough cover in the large sapling RM, balsam fir, PB & tamarack to call Forested overall, but close.
24	6220 - Alder/willow	2.7	No	Low	Tag alder & willow, with ilex, and sparse E/Q to west.
25	6220 - Alder/willow	3.0	No	Low	Tag alder & ilex with E/Q colonizing. Not enough cover in the large sapling/small pole balsam fir, RM, PB, black spruce & tamarack to call Forested overall.
28	6220 - Alder/willow	3.6	No	Low	Tag alder swale with scattered E/Q.
29	6220 - Alder/willow	3.4	No	Low	Part of farmfields on 1938 photos; tax reverted in 1939. Trenched & planted to JP in 1965. Current condition: willow, tag alder & ilex with scattered WP, tamarack, JP.
32	629 - Mixed non-forested wetland	55.4	No	Low	Floodplain of Roy Creek & associated tribs. Terraced with beaver dams. Cover alternates between alder-willow, wet meadow and open water, depending on proximity to each dam and the level of dam maintenance. Cedar snags and stumps common. Cedar was salvaged in beaver floodings in 1981 & 1982 under several small negotiated sales. Scattered E/Q encroaching along margins. OFS point is for glossby buckthorn.
34	6220 - Alder/willow	8.4	No	Low	Part of farmfields on 1938 photos; tax reverted in 1939. Trenched & planted to JP in 1965. Current condition: tall tag alder with scattered WP saw and small clumps of QA, balsam poplar.
35	6220 - Alder/willow	5.1	No	Low	Willow and tag alder with some cattail. Balsam fir, paper birch and RM encroaching.
37	6220 - Alder/willow	1.0	No	Low	Tag alder & willow with scattered pole RM & QA.
39	6220 - Alder/willow	18.5	No	Low	Part of the stand was cut merch & up in 1997 (72-026-96-01). Salix & tag alder with ilex, aronia and patches of cattail. Balsam fir & paper birch saplings starting to fill in. Wettest to east. A small stream drains out of that end, with periodic ponding as beaver activity picks up.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
40	6220 - Alder/willow	3.4	No	Low	Willow and tag alder, traces of ilex & wild raisin. Balsam fir, tamarack, RM & paper birch saplings encroaching.
43	3105 - Mixed Upland Herbaceous	54.0	Plantation	Red Pine	Was cut 2" & up in 2009 (72-015-06-01), removing JP, oak & small amounts of BTA & RM. FTP C72-623 submitted for planting JP. Variance approved July 2013 to change M.O. to RP. Was roller-chopped & trenched in fall 2013. Site prep left a trace of sapling WP & oak. Following field inventory, the site was planted to RP in May 2014. RP seedlings added to species records from planting completion report.
45	3102 - Grass	10.6	No	Low	Cleared powerline corridor. Grass visible above the snow.
46	6220 - Alder/willow	5.3	No	Low	Tag alder with ilex, some aronia. Being colonized by paper birch, balsam fir, WP & RM saplings.
47	11 - Low Intensity Urban	2.5	No	Unspecified	Cleared corridor of Goddard Road and overhead powerline. Lowland patches beneath powerline.
50	629 - Mixed non-forested wetland	9.1	No	Unspecified	Floodplain of Roy Creek. Cover alternates between alder-willow, wet meadow and water, depending on the level of beaver activity. Flood-killed cedar snags common in the north end. E/Q is encroaching along the margins, and the south end is filling in with WP, balsam fir & tamarack.
51	6220 - Alder/willow	1.4	No	Low	Tag alder, with grey dogwood, and balsam fir colonizing.
52	6220 - Alder/willow	1.0	No	Low	Tag alder & salix with E/Q colonizing.
54	6220 - Alder/willow	3.8	No	Low	Linear swale with tall tag alder, some grey dogwood, dead ash & elm, widely-scattered RM, overmature QA & balsam poplar, and colonizing balsam fir.
56	6220 - Alder/willow	1.9	No	Low	Tag alder, salix & some grey dogwood. Patch of open marsh in the middle.
61	6220 - Alder/willow	3.8	No	Low	Stand encompasses a group of small wetlands with salix, ilex, tag alder and encroaching Q/E.
63	6220 - Alder/willow	2.3	No	Low	Lowland stretch of cleared powerline corridor. Roy Creek flows through. Brush-hogged tag alder, salix, shrubby St. John's-wort?
66	629 - Mixed non-forested wetland	25.9	No	Low	Floodplain of Grey Creek trib. Terraced with beaver dams. Cover alternates between alder-willow-ilex, wet meadow and open water, depending on proximity to each dam and the level of dam maintenance. Patches of ash snags. E/Q encroaching along margins.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
70	6220 - Alder/willow	22.4	No	Low	Tag alder, salix, ilex with patches of beaver meadow. Active lodge. Flooded portion of what was probably the 1960's harvest haul route cuts through it. Dead ash at north end.
74	6222 - Shrub-Carr	3.8	No	Low	Ilex & tag alder with <25% cover in large sap/small pole RM, PB, BF, NWC.
76	6220 - Alder/willow	2.6	No	Low	The pole-sapling ash cover died off, shifting this stand into the non-forested category. Cover is tag alder & ilex with < 25% cover in large sap/small pole RM, PB & BF.
78	3102 - Grass	9.9	No	Low	Cleared powerline corridor. Grass visible above the snow.
82	6233 - Wet Meadow	33.2	No	Low	Large beaver meadows behind extensive dams. Tag alder, salix & spiraea cover is colonizing the edges. The forested island in the middle was made a multi-poly of the stand to the north.
88	6220 - Alder/willow	2.8	No	Low	A string of wetlands with tag alder, ilex, patches of marsh, dead ash.
94	6220 - Alder/willow	2.0	No	Low	Duval Creek floodplain: tag alder with patches of marsh, cattail.
98	6233 - Wet Meadow	2.7	No	Low	Was cut 2" & up except for hemlock & NWC in 2009 (72-031-07-01), Cover is now mostly woolgrass, with cattail, scattered residual hemlock and cedar, and dead ash.
101	50 - Water	2.1	No	Low	Pine River