



Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 61106

Entry Year 2018

Acreage: 2,296

County Kalkaska

Management Area: Grayling Ice Contact

Revision Date: 2016-06-10

Stand Examiner: Kelly Standerfer

Legal Description:

T27N R5W, Sections 13, 14, 15, 22, 23 & 24.

Identified Planning Goals:

Management in the Grayling Ice Contact management area (MA) will emphasize continuing to balance the age class of aspen on suitable sites and thinning the northern hardwoods, balancing age classes of red pine and jack pine and regenerating the aging oak resource. Management will strive to sustainably produce various forest products; enhance game and non-game wildlife habitat; protect areas of unique character, such as the historic Deward Tract; and provide for forest-based recreational uses. With about 3% of the management area being lowland, management activities will be minimally constrained. Expected trends within this 10-year planning period are increased recreational pressure, managing oil and gas development, introduced pests and diseases and the difficulty in regenerating oak.

Soil and topography:

The topography in this compartment ranges from flat to slightly rolling to hilly. Poor sandy soils are found in much of this part of Kalkaska County. Soils east of Deward Road are mostly poorly drained loamy sands and peat.

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

The state ownership is fragmented in the west two thirds of the compartment. Private lands and development are most prevalent around the lakes and upon the better soils. Sections 13 & 24 are exclusively state owned. Much of the compartment is bounded by other state owned lands. In contrast, there are three "forties" and a twenty acre parcel that are landlocked by state lands. These private parcels were listed as desired forest land acquisitions in the Pere Marquette State Forest plan and they should remain on our list of desired properties. Only scattered seasonal development is found scattered through the private forestlands.

Unique Natural Features:

Bald Eagle, Common Loon and Eastern Massasauga rattlesnake have been documented in the compartment.

Archeological, Historical, and Cultural Features:

There is evidence of some old homesteads and lots of old abandoned railroad grades scattered around through the compartment. Otherwise, no listed sites are known to exist in this compartment.

Special Management Designations or Considerations:

The portions of Sections 13 and 24 east of Deward Road are part of the Deward Tract which is a special management area. Motorized vehicles are banned from entering the Deward Tract except upon roads that are designated and posted as open for use. Within the Deward Tract is a 42.5 acre area that was proposed as a Pine Stump Preserve to commemorate the 1900's white pine timber stands that once occupied this area. The very southwest portion (+/- 5 acres) of the Pine Stump Preserve falls in Compartment 106 (stand #82).

Watershed and Fisheries Considerations:

The Manistee River flows just to the east of compartment 106. North Blue Lake, Big Blue Lake and Bass Lake are within the compartment boundary, although they are not directly bordered by state forest land. North Blue and Big Blue Lakes are stocked with lake trout by the MDNR Fisheries Division. The Manistee River in the Deward Tract supports outstanding populations of wild brook and brown trout and is a blue ribbon trout stream.

Wildlife Habitat Considerations:

Compartment 106 is underlain by two different glacial landforms. The first is comprised of irregular ridges of well drained sands of moderately low fertility (LTA 3121). The second landform, situated between several ridge complexes, is a relatively flat outwash channel with well drained sandy soils. The current dominant cover type within this compartment is

aspen, followed closely by northern hardwoods. Wild fires where a recognized natural process in communities growing on these sandy soils. Hence a mixture of cover types and age classes is an appropriate management objective. Not only does this replicate a landscaped shaped by periodic wildfires, but it also helps to maintain habitat diversity by providing many different ecological niches.

Aspen cuts should be designed to increase age class diversity in order to maintain aspen stands of different habitat characteristics within a given area. Retention of mast/bud producing trees/shrubs, creation of downed logs during harvest operations, and increasing age class diversity among aspen stands are excellent ways to increase wildlife use of regenerating stands. Several cuts are planned to regenerate aspen needed by many wildlife species, including snowshoe hare, ruffed grouse, deer, woodcock, chestnut-sided warblers, and tiger salamanders. Hardwood treatments are typically designed to incorporate the preservation of within-stand tree species diversity, the retention of mature mast producing trees, and the protection of den, cavity, and downed trees. Species benefiting from hardwood forests include northern goshawk, wild turkey, gray squirrels, and eastern box turtles. Where possible, hardwoods should be encouraged within pine plantations for within stand diversity. When possible, a 2-5 acre island within a mature plantation could be left relatively un-thinned to provide winter roosting cover for turkeys.

Openings are scattered about this compartment and a variety of maintenance projects have been scheduled for this entry period, including, selective hand felling, planting of herbaceous ground cover, pruning of remnant apple trees, and some prescribed burning. Turkey, deer, eastern bluebirds, meadow jumping mice, and smooth green snakes are just a sample of the many species that use these openings.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of ice-contact and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 600 and 1,000 feet. Beneath the glacial drift is the Mississippian Coldwater Shale. The Coldwater does not have an economic use. The nearest gravel pit is located one mile to the west and potential is good on the uplands. This area is located in the Niagaran reef trend with many producing wells. The Antrim Shale gas play may be too deep to produce in this area. Most of the Compartment is currently leased for oil and gas development.

Vehicle Access:

The road system should be maintained as it is. Summit Road (bisecting sections 14 & 23) is essentially a two track trail but it is a certified county road that is classified as seasonal. New roads if needed for timber sale access should be closed upon completion of the sale.

Survey Needs:

A significant amount of private line will need to be run for sales this YOY. It is likely that some survey corners will be needed.

Recreational Facilities and Opportunities:

The Kalkaska 50 inch ORV trail, Kalkaska ORV Route, and Snowmobile trail #679 (Blue Bear Trail) are located within this compartment. The 50 inch trail will be re-routed in the area that goes through stand 24. This trail is heavily eroded in some areas so it will be moved to the east edge of the stand and will generally be a meandering trail. The old trail will be abolished with the timber sale in the area. Trail protection specifications should be considered if proposed treatments impact these trail systems. (T.N. 1/26/16).

Fire Protection:

The timber types in this compartment do not present the potential for a catastrophic fire occurrence. Natural fire breaks in the form of open spaces, lowland brush areas and closed canopy hardwood stands will aid in the control of wildfires. Travel time to the area for initial attack is rather lengthy for DNR equipment but the Blue Lake Township VFD is within 1/8th of a mile of stand 10 so their response time would be very quick.

Additional Compartment Information:

The following reports from the Inventory are attached:

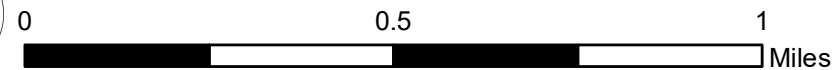
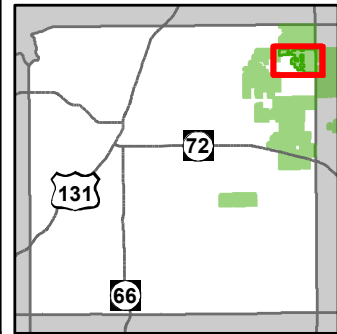
- Total Acres by Cover Type and Age Class**
- Cover Type by Harvest Method**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**
- Stand Details (Forested and Nonforested)**
- Dedicated and Proposed Special Conservation Areas**
- Site Condition Details**

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

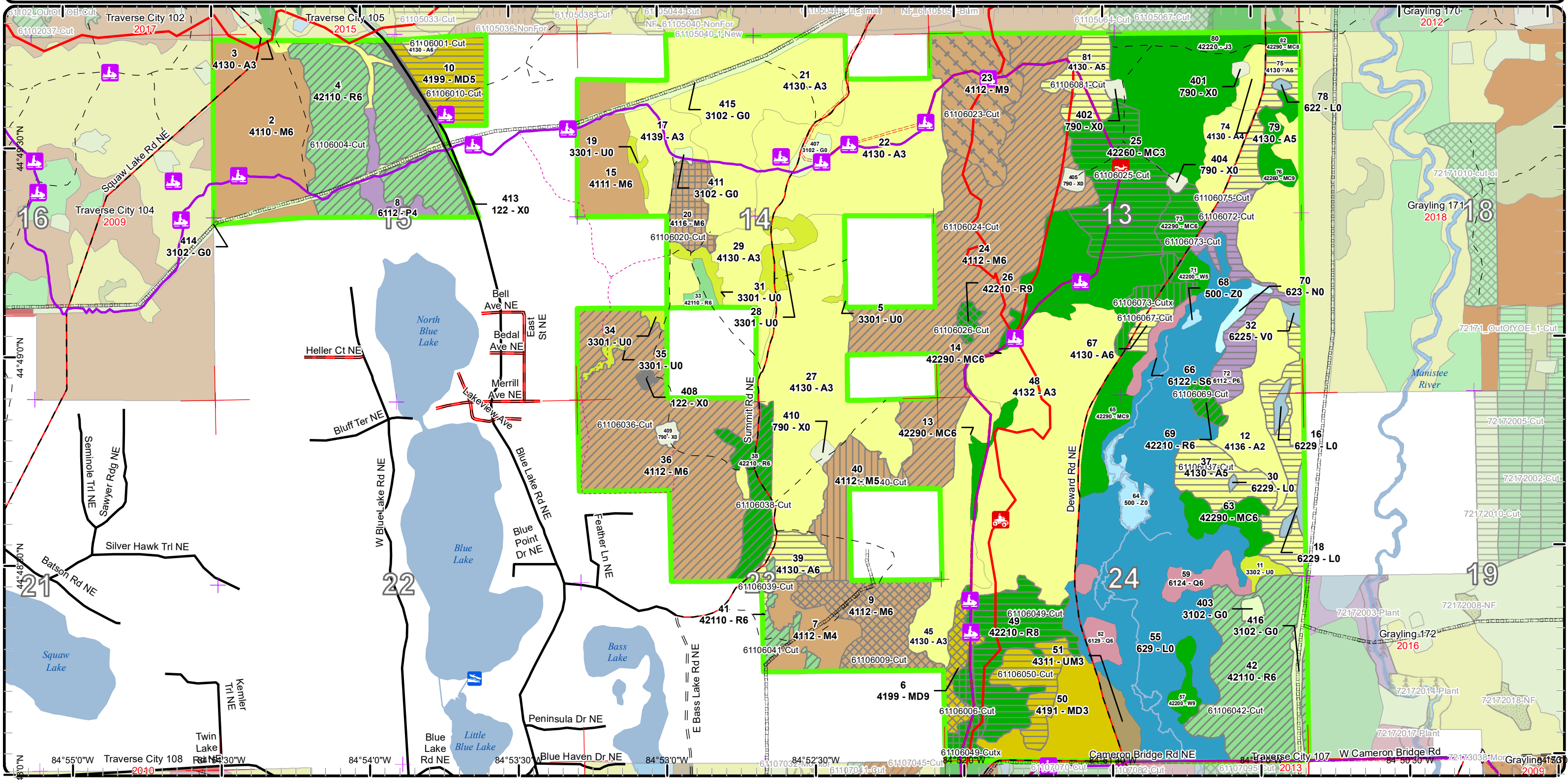
- Base feature information, stand boundaries, cover types, and numbers**
- Proposed treatments**
- Site condition boundaries**
- Details on the road access system**

Cover Type & Treatments Map

Compartment: 106
 T 28N R 05W Sec. 13-15, 23, 24
 County: Kalkaska
 Unit: Traverse City
 Mgmt Area: Grayling Ice Contact
 YOE: 2018
 Acres: 2296 GIS Calculated
 Examiner: Kelly Standerfer
 Map Revised: 6/7/2016
 Map Phase: Web - Post

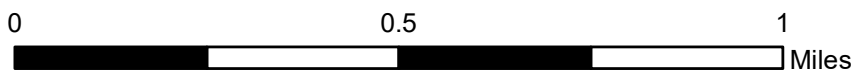
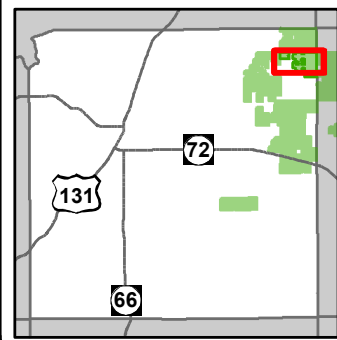


- Miris Corners
- + Remonumented Section Corners
- ◇ Field Grade GPS Corners
- Boating Access Site
- ORV Trails
- ORV Routes
- Snowmobile Trails
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Rivers
- Pipeline
- Powerline
- Compartment Boundary
- Selection (Group, Single Tree)
- Clearcut (w/Reserves)
- Salvage
- Thinning (Crown, Low, Systematic)
- Shelter Wood (w/Reserves)
- Seed Tree (w/Reserves)
- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- Trail (Non-Recreation)
- 422 - Natural Pines
- 430 - Upland Mixed Fores
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 122 - Roads/Parking Lot
- 310 - Herbaceous Openland
- 330 - Low Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 629 - Mixed non-forested wetland
- 790 - Other Bare/Sparsely Vegetated
- Lakes

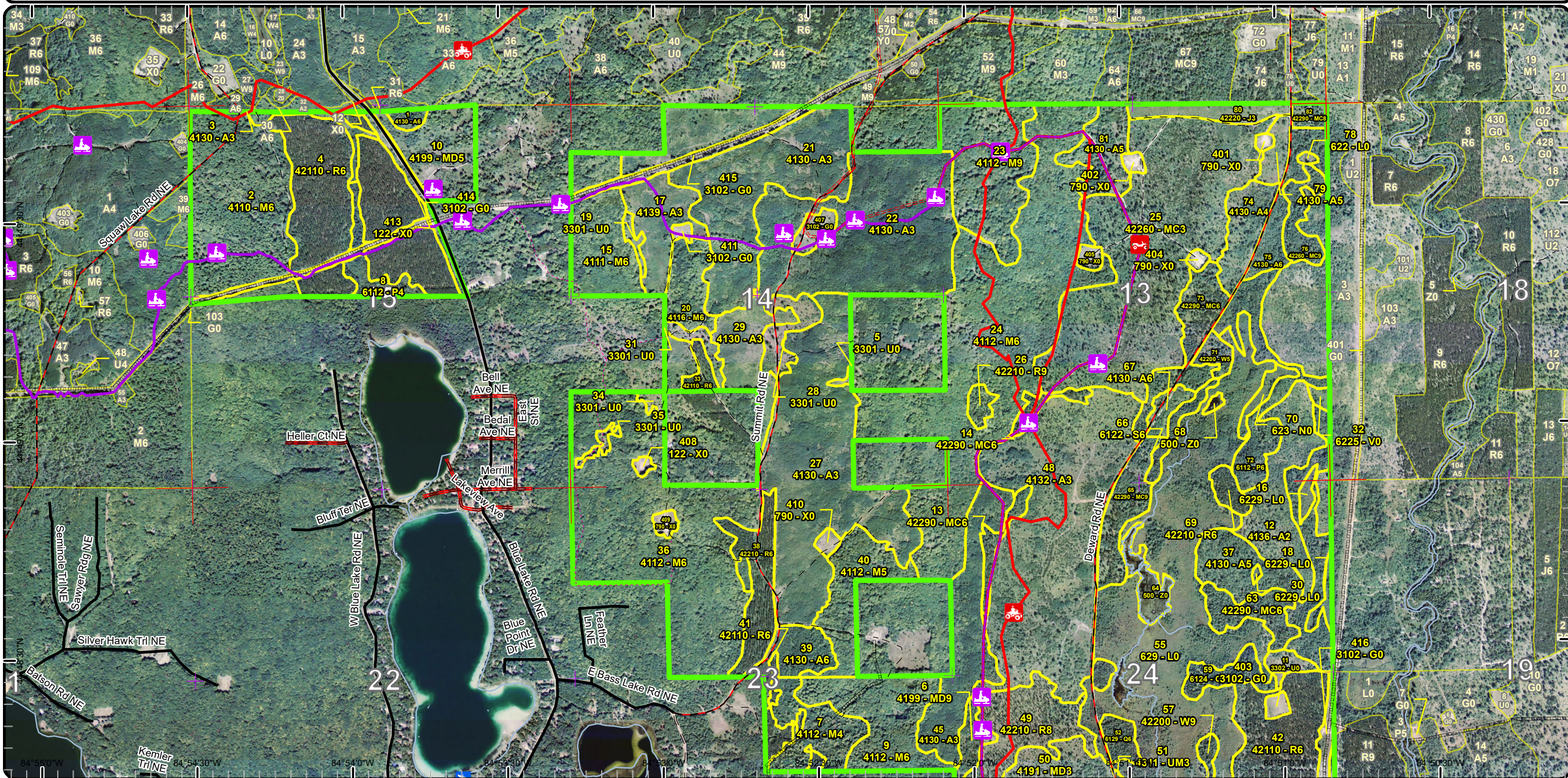


Stand Boundary Map

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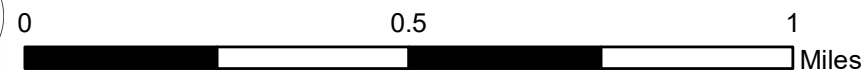
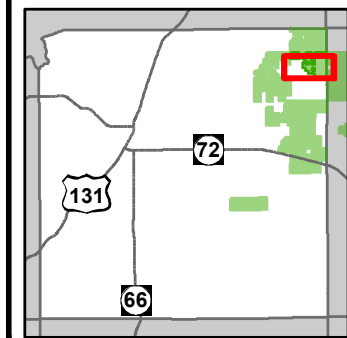


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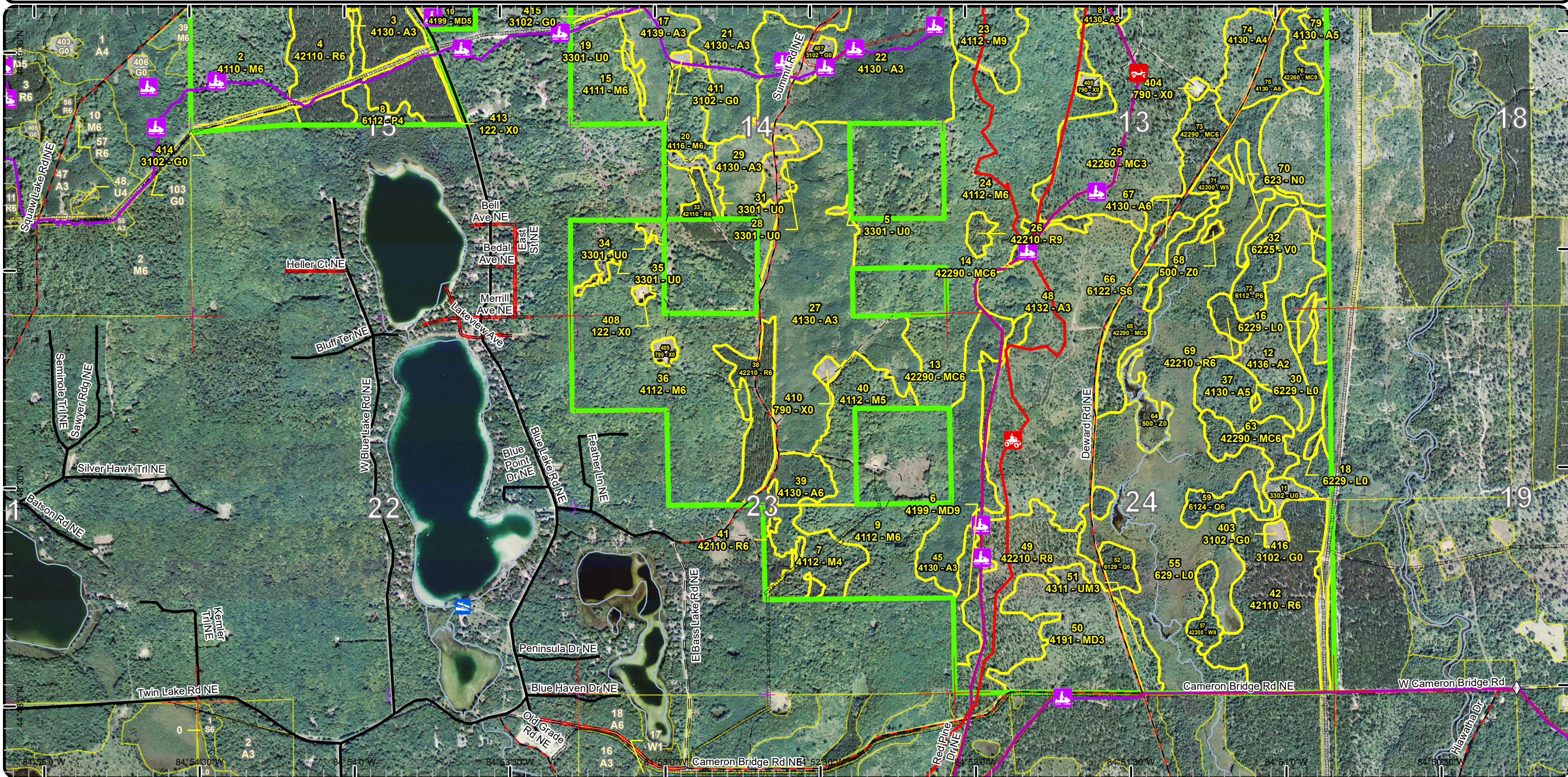


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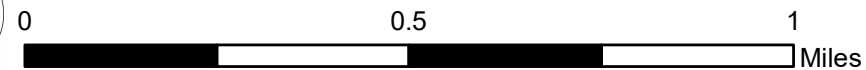
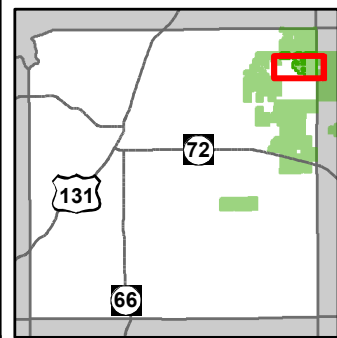
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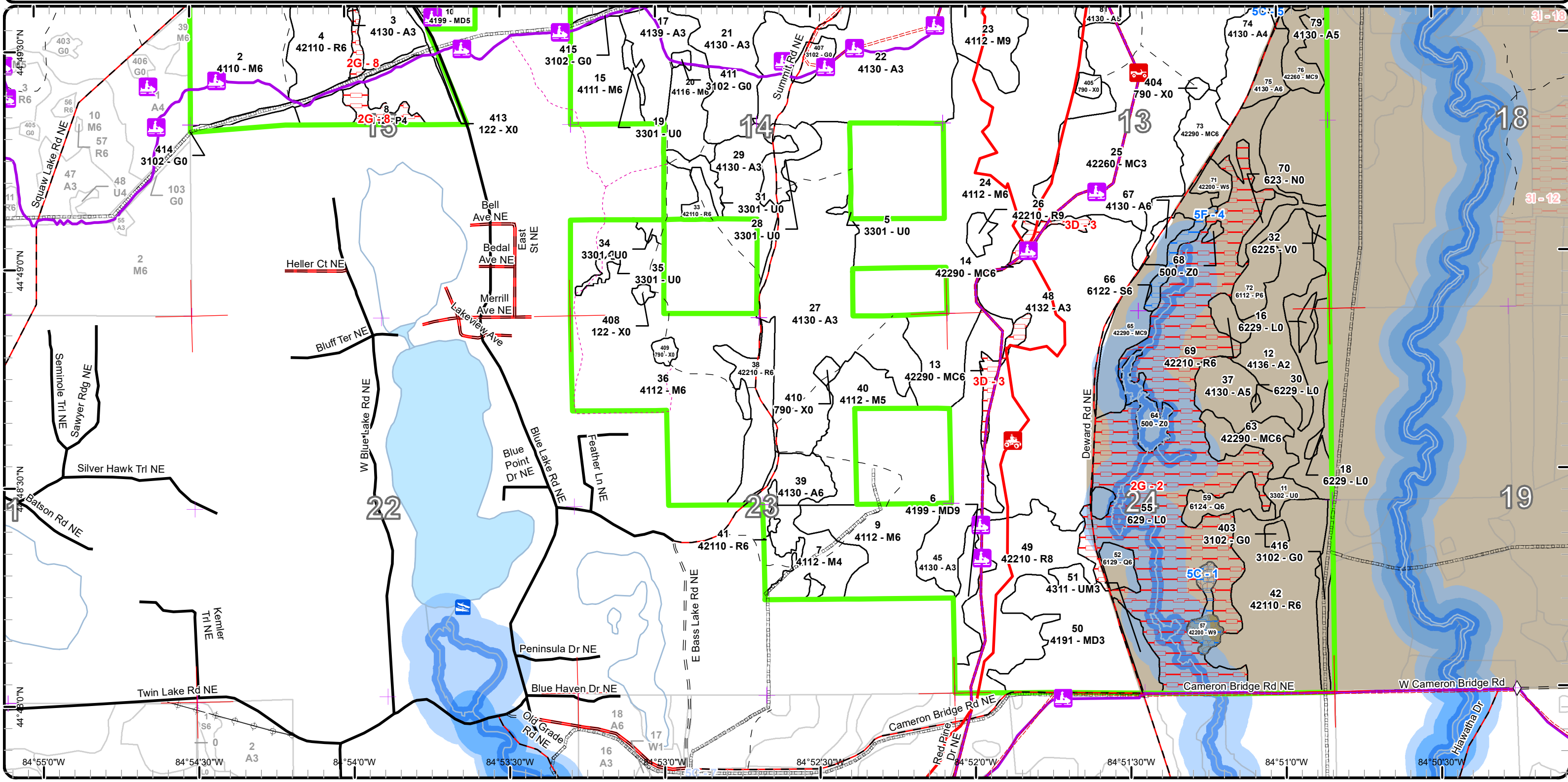
84° 55' 0" W 84° 54' 30" W 84° 54' 0" W 84° 53' 30" W 84° 53' 0" W 84° 52' 30" W 84° 52' 0" W 84° 51' 30" W 84° 51' 0" W

Special Conservation Areas & Site Conditions Map

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- Rivers
- Pipeline
- ⚡ Powerline
- ▭ Compartment Boundary
- ▭ Available w/ Constraints
- ▭ Unavailable
- 5C: Delay treatment for age/size class diversity or exceptional site quality
- 2G: Too wet (sensitive soils, does not include access issues)
- 3D: Recreational / Scenic values
- ▭ Stand Boundaries
- ▭ Special Conservation Areas
- ▭ Natural Rivers Vegetative Buffer
- ▭ Natural Rivers Zoning District
- ▭ Dedicated Management Areas
- ▭ Cold Water Streams
- ▭ Cold Water Lakes
- ▭ High Priority Trout Stream Buffer
- ▭ Potential Old Growth
- ▭ Other SCA (No Category Assigned)



Report 1 – Total Acres by Cover Type and Age Class



Age Class

	Non-Forest	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150+	Uneven-Aged	Total
Aspen	0	80	188	212	203	39	29	0	0	0	0	0	0	0	0	0	0	0	751
Bare/Sparsely Vegetated	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Bog	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Herbaceous Openland	34	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
Jack Pine	0	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Low-Density Trees	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
Lowland Aspen/Balsam Poplar	0	0	0	0	0	0	27	10	0	0	0	0	0	0	0	0	0	0	37
Lowland Conifers	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	19
Lowland Shrub	199	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	199
Lowland Spruce/Fir	0	0	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0	6
Marsh	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Mixed Upland Deciduous	0	0	0	53	28	0	0	0	11	0	0	0	0	0	0	0	0	0	92
Natural Mixed Pines	0	0	147	0	0	0	4	11	52	0	0	0	0	0	0	0	0	14	228
Northern Hardwood	0	0	0	0	0	0	52	243	39	244	0	0	0	0	0	0	0	0	578
Red Pine	0	0	0	0	0	0	194	0	4	55	5	0	0	0	0	0	0	0	258
Upland Mixed Forest	0	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Urban	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Water	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
White Pine	0	0	0	0	0	0	5	0	0	0	0	0	7	0	0	0	0	0	12
Total	295	99	335	265	231	39	311	264	112	299	5	0	0	7	0	0	0	33	2295



Report 2 – Treatment Summary

Traverse City Mgt. Unit
Year of Entry: 2018

Acres of Harvest

Compartment 106
Total Compartment Acres: 2,296

Commercial Harvest - 955
Harvests with Site Condition - 0
Next Step Harvest - 0
Habitat Cut - 0

Cover Type by Harvest Method

	Clearcut	Selection	Patch Clearcut	Seed Tree	Shelterwood	Thinning	Overstory Removal	Salvage	Other	Total Acres
Aspen	103	0	0	0	0	0	0	0	0	103
Lowland Aspen/Balsam Poplar	27	0	0	0	0	0	0	0	0	27
Mixed Upland Deciduous	47	11	0	0	0	0	0	0	0	58
Natural Mixed Pines	63	0	0	0	11	0	0	0	0	74
Northern Hardwood	0	39	0	16	27	310	0	48	0	441
Red Pine	41	4	0	14	0	194	0	0	0	253
Total	281	54	0	30	37	504	0	48	0	955

Proposed and Next Step Treatments by Method

	Harvest	Site Prep	Planting	Seeding	Burning	Pesticide	Monitoring	Other	Non-Forest Mgt.	Total Acres
Current	955	0	0	0	11	0	0	0	13	980
Next Step	0	247	123	0	0	123	526	0	11	1031
Total	955	247	123	0	11	123	526	0	24	2011



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
1	61106001-Cut	2.9	4130 - Aspen	Poletimber Well	51	81-110	Harvest	Clearcut	413 - Aspen	Even-Aged	Draft Field Boundary

Habitat Cut: No **Site Condition:**

Prescription Final harvest with adjacent compartment to the north, 105.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen and mixed hardwoods.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2014

4	61106004-Cut	87.2	42110 - Planted Red Pine	Poletimber Well	55	141-170	Harvest	Systematic Thinning	4211 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription lightly thin stand, mainly from below but ok to take out high risk larger trees as well. some wont need much marked and some will take some time to

Specs: mark.

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

Proposed Start Date: 10/01/2017

6	61106006-Cut	11.3	4199 - Other Mixed Upland Deciduous	Sawtimber Well	75	111-140	Harvest	Group Selection	4319 - Mixed Upland Forest	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription remove most of the short lived species and poke some holes in to restart mixed conifer with oak, maple and hopefully some birch. residual BA will

Specs: vary from 20BA to 70ish. if site can be scarified with the harvest it would be great.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable mixed oak, maple or conifer is ok post harvest.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2017

9	61106009-Cut	39.3	4112 - Maple, Beech, Cherry Association	Poletimber Well	75	141-170	Harvest	Group Selection	411 - Northern Hardwood	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription This is the thicker portion of the maple stand that doesn't look to have had any management. previous cut was an aspen removal looks like and this

Specs: area has very little aspen. some thicker areas of beech. thick beech and ironwood regen throughout much of stand. remove 97% of beech and ironwood and thin the rest down to 50-90BA. pretty marginal quality hardwood for the most part but some nice pole sized sugar maple is present. could possibly cut all but sugar maple and green tree leave some of the other species for seed, diversity and retention. or mark trees to come out, either way target 50-90BA residual except thicker beech areas will be more open.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable any mixed deciduous is OK post harvest as well as mixed conifer, expect beech competition to be pretty stiff.

Regen:

Other

Comment:

Proposed Start Date: 10/01/2017



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
10 61106010-Cut	27.5	4199 - Other Mixed Upland Deciduous	Poletimber Medium	35	1-50	Harvest	Clearcut with Retention	330 - Low-Density Trees		Proposal

Habitat Cut: No

Site Condition:

Prescription remove all species except save most or all sugar maple and save most or all white pine and green tree a few other trees for seed, retention and diversity. originally wanted to trench and plant to red pine but dropped at pre-review due to some sensitive sites. will still cut and let fill back in on its own, poor stocking post harvest is ok, its mostly open now and will function as nice mixed density opening post harvest. OK to let fill back in as well.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Regen: mixed deciduous and conifer is ok post harvest.... ok to keep more open post harvest to function as an opening

Other Comment:

Proposed Start Date: 10/01/2017

20 61106020-Cut	16.3	4116 - Mixed N. Hardwood - Aspen	Poletimber Well	55	111-140	Harvest	Seed Tree with Retention	4319 - Mixed Upland Forest	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription some nice advanced size maple poles. aspen areas leave less residual trees as to no to hinder aspen regen. maple areas ok to leave a bit thicker.

Specs: most of the larger maple is poor formed. possibly save all maple under 6" and mark to leave some of the larger maple for seed and structural diversity where there is not much aspen. save all pine.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Regen: any mix of current overstory. aspen areas will likely push to aspen, maple areas will fill in with mixed hardwoods.

Other Comment:

Proposed Start Date: 10/01/2017

23 61106023-Cut	48.3	4112 - Maple, Beech, Cherry Association	Sawtimber Well	85	51-80	Harvest	Salvage	411 - Northern Hardwood	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription Beech is almost white washed in here now :-/ cut all aspen, beech... some nice pockets of maple regen along edges of open areas, canopied areas seem to be more beech regen :-/ mostly big clumpy trees with lots of open areas filling in with maple, beech n ironwood. Possibly cut all trees over 4" or Possibly cut all multi stem trees and save single stem maple under 8" dbh? not very good quality stems overall. this will be a regen/ salvage cut, try to save as much advanced regen of desired species, red sugar, oak and cherry as possible. maybe a green trees marked to leave and save all sugar maple under 8".

Next Step
Treatments:

Acceptable Regen: northern hardwood mix as well as aspen or conifer is acceptable. expect stiff ironwood and beech competition.

Other Comment:

Proposed Start Date: 10/01/2017



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Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
24 61106024-Cut	173.1	4112 - Maple, Beech, Cherry Association	Poletimber Well	89	141-170	Harvest	Crown Thinning	4319 - Mixed Upland Forest	Even-Aged	Proposal

Habitat Cut: No

Site Condition:

Prescription Some is pretty steep but most looks to be operable, valleys should be skid-able but will need brushed for sure to minimize erosion potential. some areas of heavy beech that is getting pretty heavy scale :-), east 1/3 has some nicer white pine and red pine mixed in as well... mostly red maple at bottom of hill mixed with beech, yellow birch n ironwood, mixed maple and beech for the most of the rest. stem quality isn't that great overall but some nice poles present. probably cut all aspen, beech, ironwood and mark the rest either to cut or mark trees to leave. Most is a salvage on beech and aspen but take clumpy and poor formed maple. leave thicker along recreation trails if possible. ORV trail should probably be moved off the hilly portion of this stand... trail is ~4' below ground level due to washing out and poor trail layout.

Next Step
Treatments:

Acceptable any mix of overstory as well as mixed conifer or oak is ok post harvest. some will be a crown thinning but bigger gap areas should fill in with mixed species. aspen regen is ok in aspen areas, pretty nice quality aspen for the most part and would help to have a little stand diversity.

Other
Comment:

Proposed Start Date: 10/01/2017

25 61106025-Cut	51.8	42260 - Natural Pine, Mixed Deciduous	Sapling Well	17	1-50	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription this is the thicker portion of this stand in terms of large red pine. 2" spec stand, roller chop and herbicide if needed, trench and replant to red pine. Specs: excellent red pine ground and most has been converted in this area to other species. chip harvest stand if markets allow.

Next Step SitePrep, Roller Chopping; Pesticide, Aerial; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr)
Treatments:

Acceptable planted red pin mixed with some volunteers of variable species is ok post harvest but want the red pine generally free to grow without a ton of competition.

Other
Comment:

Proposed Start Date: 10/01/2017

26 61106026-Cut	3.8	42210 - Natural Red Pine	Sawtimber Well	71	81-110	Harvest	Single Tree Selection	4221 - Natural Red Pine	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription lightly thin through stand with surrounding maple type. ok to cut some big pine but save atleast half, skidding will likely be tricky and up and down slopes should be avoided if possible. brush in the trail through stand. cut most or all beech.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable mixed deciduous and conifer is ok post harvest... expect it to push more to deciduous.

Other
Comment:

Proposed Start Date: 10/01/2017



Stand Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
28 61106028-Burn	10.9	3301 - Low Density Deciduous Trees	Nonstocked		Unspecified	Burn	Opening	320 - Upland Shrub		Draft Proposal

Habitat Cut: No

Site Condition:

Prescription 1. The main treatment of this stand will be to burn it at least once per entry period in order to set back woody encroachment, increase species diversity, stimulate native herbaceous vegetation, promote berry production, and recycle nutrients.
Specs: 2. Selectively hand fell woody encroachment, or possibly do a small fire wood sale (?) to remove say red maple, to maintain upland brush/grassland community.

Next Step NonForestMgt, Herbaceous/Crop/Grass Planting
Treatments:

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/01/2017

31 61106031-NF	4.7	3301 - Low Density Deciduous Trees	Nonstocked		Unspecified	NonForestMgt	Brush Cutting	3205 - Mixed Upland Shrub		Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or
Specs: conifers for wildlife food and cover.

Next Step
Treatments:

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/01/2017

36 61106036-Cut	136.9	4112 - Maple, Beech, Cherry Association	Poletimber Well	63	111-140	Harvest	Crown Thinning	411 - Northern Hardwood	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription stand is borderline ready to thin but with some areas of heavy beech and some nicer aspen that we may loose over the next 10 years enter the stand
Specs: now. remove all beech and aspen and ironwood however mark some to save for retention and diversity either paint some out of the sale or scattered trees. Thin the remainder down to 70-100BA, some nice pole areas present. remove poor formed and high risk trees... generally follow the hardwood marker guidelines and retention guidelines but some will be more open where its thicker to aspen and beech. aspen areas OK to cut a bit heavier to allow aspen regen in pockets. likely include the U type stand 35 in the timber sale, ok if this is expanded or just worked around.

Next Step
Treatments:

Acceptable Regen: more of a crown thinning but hope to get some mixed hardwoods started as well. aspen areas will likely fill in with aspen.

Other Comment:

Proposed Start Date: 10/01/2017

37 61106037-Cut	45.3	4130 - Aspen	Poletimber Medium	36	51-80	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription final harvest but save most or all white pine and red pine. try to protect nicer advanced conifer regen. cut all aspen and red maple and all balsam fir
Specs: over 3" or so. save some aspen along edges or in island for retention especially along drain areas.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable Regen: any mix of aspen, mixed deciduous or conifer is ok, expect mainly aspen but would love to encourage conifer where possible

Other Comment:

Proposed Start Date: 10/01/2017



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
38	61106038-Cut	22.1	42210 - Natural Red Pine	Poletimber Well	55	111-140	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	Proposal

Habitat Cut: No Site Condition:

Prescription lightly thin stand while we are in the area... take 1/4-1/3 of volume, mark job.

Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

39	61106039-Cut	14.5	4130 - Aspen	Poletimber Well	38	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal
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Habitat Cut: No Site Condition:

Prescription final harvest but mark some less represented trees as well as aspen for retention and structural diversity. 2" spec the rest to encourage thick stem

Specs: density.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable aspen, mixed with any deciduous or conifer is ok post harvest. expect mainly aspen.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

40	61106040-Cut	26.8	4112 - Maple, Beech, Cherry Association	Poletimber Medium	69	111-140	Harvest	Shelterwood	4199 - Other Mixed Upland Deciduous	Even-Aged	Proposal
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Habitat Cut: No Site Condition:

Prescription cut all aspen and beech except save some for diversity and retention. aspen areas will be more open and some thicker beech areas will be pretty open post harvest. mark rest down to 30-70, save nicer maple poles...

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable any mix of overstory, aspen areas will push to aspen, maple and beech will likely push to beech and ironwood but hoping red and sugar maple will mix in as well.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

41	61106041-Cut	7.5	42110 - Planted Red Pine	Poletimber Well	55	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No Site Condition:

Prescription remove about 1/4- 1/3 while we are here.

Specs:

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017



Stand Name	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
42	61106042-Cut	72.5	42110 - Planted Red Pine	Poletimber Well	55	141-170	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	Proposal

Habitat Cut: No

Site Condition:

Prescription thinned last YOE. most is ready for another light thin to keep it growing good. cut out some of the mixed deciduous along flooded area to encourage
Specs: younger stem growth and will help increase habitat value for deer and other wildlife.

Next Step
Treatments:

Acceptable crown thinning, not expecting much regen.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

49	61106049-Cut	40.7	42210 - Natural Red Pine	Sawtimber Medium	81	1-50	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription final harvest all trees 2" and larger and replant back to red pine. area along snowmobile trail will be a seed tree cut and act as retention for stand. try
Specs: to include as much of 61106050-27-New in the planting and 2" spec sale as possible.

Next Step SitePrep, Roller Chopping; Pesticide, Aerial; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr)
Treatments:

Acceptable planted red pine that is free to grow. ok for some area s to have mixed species that are already present however would like the bulk of the red pine
Regen: free to grow.

Other
Comment:

Proposed Start Date: 10/01/2017

49	61106049-Cutx	13.8	42210 - Natural Red Pine	Sawtimber Medium	81	1-50	Harvest	Seed Tree with Retention	4221 - Natural Red Pine	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription stand has some advanced oak and pine regen... thin this area down to 10-30BA to help for visual break along snowmobile trail. save a mix of oak
Specs: and pine but cut most of the mixed deciduous. probably green tree trees to leave... ok to leave a bit thicker along trail.

Next Step Monitoring, Natural Regen (Re-Inventary)
Treatments:

Acceptable mixed conifer and deciduous but expect to push toward mainly oak and white pine which is ok. pockets of aspen are ok as well
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

50	61106050-Cut	19.3	4191 - Mixed Upland Deciduous with Conifer	Sapling Well	29	Immature	Harvest	Clearcut	4211 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No

Site Condition:

Prescription treat as much of this area as possible and restart back to red pine. may need to roller chop and/ or herbicide site to make sure red pine is free to
Specs: grow. 2" spec this area via chip harvest if possible. OK to save some scattered oak.

Next Step SitePrep, Roller Chopping; Pesticide, Aerial; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr)
Treatments:

Acceptable planted red pine along with mixed species that are already in place. goal is to have the bulk of the red pine free to grow.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
67	61106067-Cut	5.5	4130 - Aspen	Poletimber Well	44	81-110	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription Cut now to promote good thick stem density. save some or all pine and oak. OK to dip into spruce along the edge where possible to try to encourage
Specs: spruce regen.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable aspen mixed with deciduous or conifer species.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

69	61106069-Cut	5.1	42210 - Natural Red Pine	Poletimber Well	95	201+	Harvest	Crown Thinning	4221 - Natural Red Pine	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription stand has not been thinned... thin now taking overtopped trees, high risk trees and poor formed trees and then for general spacing. nice natural red
Specs: pine stand. cut most or all fir and deciduous to encourage pockets of regen diversity

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

72	61106072-Cut	26.6	6112 - Lowland Aspen	Poletimber Well	55	81-110	Harvest	Clearcut with Retention	613 - Lowland Mixed Forest	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription Some looks to be manageable and some is likely to wet. should regenerate nicely for areas that are dry enough to cut. treat as much of stand as we
Specs: can this YOE as aspen is getting in pretty rough shape. cut all aspen and red maple over 3 or 4 inches. south end has some upland edges that are more A type, north end more P type where winter or dry ground logging will be needed. save most or all pine and oak.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable any mixed aspen, deciduous and conifer.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

73	61106073-Cut	11.7	42290 - Natural Mixed Pine	Poletimber Well	73	111-140	Harvest	Clearcut with Retention	4211 - Planted Red Pine	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription north portion of stand more jack pine mixed in with red and white pine. none is in great shape. final harvest north portion of stand, roller chop (if
Specs: needed) and or herbicide (if needed) to get a well established red pine planting. will make a nice 60+ acre block of red pine to manage in the future in an area that is perfectly suited to red pine. do not trench across old rail road grade. retention will be southern portion of this stand that is being thinned. ok to leave some up here but mainly along edges to allow flying with helicopter if needed. chip harvest preferred to facilitate trenching and planting need.

Next Step SitePrep, Roller Chopping; Pesticide, Aerial; SitePrep, Trenching; Planting, Initial Plant; Monitoring, Artificial Regen(1yr)
Treatments:

Acceptable planted red pine with some volunteers of various currently present species but would like most of the red pine free to grow without much competition.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
73	61106073-Cutx	10.6	42290 - Natural Mixed Pine	Poletimber Well	73	111-140	Harvest	Shelterwood	429 - Mixed Upland Conifers	Even-Aged	Proposal

Habitat Cut: No **Site Condition:**

Prescription mark down to 30-70BA via green or orange whichever will work better. open up enough to get some regen starting but leave enough to make it worth
Specs: while to re-enter stand once regen is established.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable any mixed conifer as well as mixed deciduous.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

75	61106075-Cut	16.2	4130 - Aspen	Poletimber Well	49	81-110	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription cut most or all short lived species over 3 or 4" dbh. save most or all pine and oak. some may be to wet at north end to cut around the LO. save 3ish
Specs: % retention with either scattered trees or pockets around the areas that are to wet for treatment. take care to avoid smashing old pine stumps.

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable any mixed aspen, deciduous and conifer is acceptable. some will push to aspen but hoping some will push to conifer as well.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

81	61106081-Cut	18.7	4130 - Aspen	Poletimber Medium	58	51-80	Harvest	Clearcut with Retention	4319 - Mixed Upland Forest	Even-Aged	Proposal
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Habitat Cut: No **Site Condition:**

Prescription cut 97% of the aspen fir and red maple... save most or all sugar maple and try to save as much advanced maple and conifer regen as possible.
Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)
Treatments:

Acceptable mixed aspen, maple and conifer is expected and acceptable.
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

407	61106407-NF	5.3	3102 - Grass	Nonstocked	Unspec ified	NonForestMgt	Brush Cutting		3205 - Mixed Upland Shrub		Draft Proposal
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Habitat Cut: No **Site Condition:**

Prescription Old homestead. If apple trees are still alive prune them. Selectively hand fell woody encroachment to maintain upland brush/grassland community.
Specs: Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover.

Next Step
Treatments:

Acceptable
Regen:

Other Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Fertilize plantings and protect with wire cages or
Comment: tubex.

Proposed Start Date: 10/01/2017



S t a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
410	61106410-NF	2.0	790 - Other Bare/Sparsely Vegetated	Nonstocked		Unspecified	NonForestMgt	Herbaceous/Crop/Grass Planting	3105 - Mixed Upland Herbaceous		Draft Proposal

Habitat Cut: No

Site Condition:

Prescription Degraded old well site. Remove exotics either with herbicide or mechanically. Seed to site appropriate native grasses for wildlife food and cover, or
Specs: Forest Cert. approved annuals/perennials. Consider also seeding in native forbs.

Next Step
Treatments:

Acceptable
Regen:

Other
Comment:

Proposed Start Date: 10/01/2017

411	61106411-NF	1.3	3102 - Grass	Nonstocked		Unspecified	NonForestMgt	Herbaceous/Crop/Grass Planting	3105 - Mixed Upland Herbaceous		Draft Proposal
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Habitat Cut: No

Site Condition:

Prescription Degraded old well site. Remove exotics either with herbicide or mechanically. Seed to site appropriate native grasses for wildlife food and cover, or
Specs: Forest Cert. approved annuals/perennials. Consider also seeding in native forbs.

Next Step
Treatments:

Acceptable
Regen:

Other Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Fertilize plantings and protect with wire cages or
Comment: tubex.

Proposed Start Date: 10/01/2017

**Total Treatment
Acreage Proposed: 979.7**

Report 4 – Site Conditions

Traverse City Mgt. Unit
Kelly Standerfer : Examiner

Compartment: 106
Year of Entry: 2018

Availability for Management

Total Acres	Acres Available	Acres Avail		Dominant Site Conditions	5C	5F	2G	3D
		With Condition	Not Available					
752	745	7	0	Aspen	7			
11	11	0	0	Bare/Sparsely Vegetated				
2	2	0	0	Bog				
34	34	0	0	Herbaceous Openland				
11	11	0	0	Jack Pine				
27	27	0	0	Low-Density Trees				
37	27	0	10	Lowland Aspen/Balsam Poplar			10	
19	19	0	0	Lowland Conifers				
199	7	0	192	Lowland Shrub			192	
6	0	6	0	Lowland Spruce/Fir		6		
4	4	0	0	Marsh				
92	92	0	0	Mixed Upland Deciduous				
228	217	0	11	Natural Mixed Pines				11
578	578	0	0	Northern Hardwood				
257	257	0	0	Red Pine				
8	8	0	0	Upland Mixed Forest				
8	8	0	0	Urban				
10	10	0	0	Water				
12	5	7	0	White Pine	7			
2,296	2,063	20	213	Total Forested Acres	14	6	202	11
	90%	1%	9%	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
1	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
not potential old growth but it is a unique stand of large mature white pine intermixed with some other younger lived species. Manage for big tree management, most of the large white pine in this area has been removed and some of these are pretty large and old trees, relatively low basal area 40- 80 BA of the big white pine, most are pretty gnarly topped so not much timber value anyways. Southern half of stand could likely be cut in the future but fir and maple are just coming to pole size so no rush.							

Report 4 – Site Conditions

Traverse City Mgt. Unit
 Kelly Standerfer : Examiner

Compartment: 106
 Year of Entry: 2018

2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	192	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
3	Unavailable	3D: Recreational / Scenic values	11	Unspecified	Unspecified	Unspecified	Unspecified
Comments: Scenic buffer along trail.							
4	Available	5F: Evaluated for Forest Health Considerations	6	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
5	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	7	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							
8	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	10	Unspecified	Unspecified	Unspecified	Unspecified
Comments:							



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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
	Potential Old Growth		SCA Removal	5
Comments Already part of Deward Mgmt Area				
	Potential Old Growth		SCA Removal	2
Comments Part of Deward tract, vertical structure and diversity similar to 1900, SC 3A for biodiversity				
	Potential Old Growth		SCA Removal	4
Comments Part of Deward tract, vertical structure and diversity similar to 1900, SC 3A for biodiversity				



Report 6 – 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	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.
HCVA	Dedicated Management Areas	Such areas are dedicated by the DNR Director for specific management uses through the promulgation of rules, as governed by Part 5, Department of Natural Resources, of the NREPA (MCL 324.502(2) and 324.504). Section 38 of the Administrative Procedures Act (MCL 24.238) provides for public requests for the promulgation of rules. This is an active program, with one proposed site currently under review by the DNR.
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4130 - Aspen	Poletimber Well	2.9	51	81-110	small aspen stand that was adjacent to comp to north so this 2-3 acre stand was lumped in with it.
2	4110 - Sugar Maple Association	Poletimber Well	79.1	65	51-80	Some very nice pole areas and some more open... should be ready for a thin in 20ish years, likely not next YOE but most does have pretty good room to grow. OPIC - FMD: Stand treated under tsale contract 055-08-01, Reverse Pay Hdwds. Updated 6/2011-PC. 2005 kgr comments: Northern Hardwood stand featuring Sugar Maple. There is some Beech, Basswood and Aspen mixed in the stand. Lots of small dbh timber. Pockets with a fair amount of Aspen. It will be going to a lot of trouble to remove the aspen. Rolling terrain. Stand is bounded on the south by a pipeline and is bisected by a Snowmobile Trail. There is also a pipeline/trail road along the east edge of the stand. 1995 Comments: CUT THE ASPEN CLONES IN TEN YEARS
3	4130 - Aspen	Sapling Well	5.2	6	Immature	South end of stand transitions into wetter ground. some aspen areas left uncut due to wetness. most regenerated nicely to A3 but some is tag alder. OPIC - FMD: 2005 kgr comments: Quaking Aspen pocket growing in a low area between the plantations. Aspen is in poor condition and may regenerate if harvested now. Stand is wet and may flood more heavily once these trees are cut. Regenerating this stand could be a bit of a risk. There is good wildlife cover here now which is especially valuable since it is positioned between the plantations. The stand is bounded on the south by the pipeline/snowmobile trail. Old site index information was used. Ts# 056-08 completed 11-06-09 Resort Town Red dkj
4	42110 - Planted Red Pine	Poletimber Well	87.2	55	141-170	Thinned not to long ago but stand is still very dense in some areas... some is ready for a thin and some could wait.. Lightly thin this YOE to keep it growing good... aspen is mostly along county road and is in rough shape... cut all the short lived trees along blue lake road. OPIC - FMD: 2005 kgr Comments: This is a Red Pine plantation with North/South rows. The stand is bounded on the north side by the Snowmobile Trail/pipeline. Stand needs to be row thinned. Remove every third row. Ts# 056-08 completed 11-06-09 Resort Town Red dkj
6	4199 - Other Mixed Upland Deciduous	Sawtimber Well	11.3	75	111-140	this portion doesn't appear to have been cut with adjacent sale, mixed birch, oak, maple and pine. some large oak, good acorn producers in a pretty intensely managed area. leave some large oak for acorn production and diversity if stand is treated.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
7	4112 - Maple, Beech, Cherry Association	Poletimber Poor	22.8	81	1-50	<p>This area more M4/M5 over A2/A3. Site is mostly occupied some beech here and there but not worth chasing with adjacent hardwood stand. manage for regenerated aspen here. BA is 0-40 for the most part, aspen looks to be doing pretty good.</p> <p>OPIC - FMD: 2005 KGR stand exam comments: Northern Hardwood stand that appears to have had all the aspen and white birch removed during a recent cutting. Two aged and mixed composition now. Hard Maple dominates the stand but there is a significant amount of Beech here too. Understory is Beech and Maple. Ground cover is bracken fern. Areas of the stand probably will be ready for thinning in 10-20 years. At this time, nothing is needed. Many potential crop trees are developing. Nice stand. Some small pockets of A3 have developed since the cutting. Terrain is rolling. Site Index of record was used. Stand varies from M6 to M4A3.</p>
8	6112 - Lowland Aspen	Poletimber Poor	10.2	66	1-50	<p>area north of pipeline not treated as well due to wetness... looks to be a feeder drain that goes into Blue lake. to wet to cut scattered falling apart overstory with some thick areas of tag alder and mixed Q & E cover</p> <p>OPIC - FMD: 2010 dah comments: Stand is bounded on the north by pipeline and was not treated with adjacent timber sale. 2005 kgr comments: Quaking Aspen pocket growing in a low area between the plantations. Aspen is in poor condition and may regenerate if harvested now. Stand is wet and may flood more heavily once these trees are cut. Regenerating this stand could be a bit of a risk. There is good wildlife cover here now which is especially valuable since it is positioned between the plantations. The stand is bounded on the north by the pipeline/snowmobile trail and the south boundary is against private land. Old site index information was used.</p>
9	4112 - Maple, Beech, Cherry Association	Poletimber Well	39.3	75	141-170	<p>This is the thicker portion of the maple stand that doesn't look to have had any management. previous cut was an aspen removal looks like and this area has very little aspen. some thicker areas of beech. thick beech and ironwood regen throughout much of stand. remove 97% of beech and ironwood and thin the rest. pretty marginal quality hardwood for the most part but some nice pole sized sugar maple is present. could possibly cut all but sugar maple and green tree leave some of the other species for seed, diversity and retention.</p> <p>OPIC - FMD: 2005 KGR stand exam comments: Northern Hardwood stand that appears to have had all the aspen and white birch removed during a recent cutting. Two aged and mixed composition now. Hard Maple dominates the stand but there is a significant amount of Beech here too. Understory is Beech and Maple. Ground cover is bracken fern. Areas of the stand probably will be ready for thinning in 10-20 years. At this time, nothing is needed. Many potential crop trees are developing. Nice stand. Some small pockets of A3 have developed since the cutting. Terrain is rolling. Site Index of record was used. Stand varies from M6 to M4A3.</p>
10	4199 - Other Mixed Upland Deciduous	Poletimber Medium	27.5	35	1-50	<p>stand filling in with jack pine, aspen and maple. clearcut but save all sugar maple and some white pine... would grow red pine great but competition and terrain will make it tricky. NE end likely to hilly to plant and SE end will likely be to hilly to plant, green tree trees to leave in the more solid maple areas. at pre review decided not to plant to red pine and keep this stand open instead.</p> <p>OPIC - FMD: 2005 kgr stand exam comments: Mostly cherry and shrubs with scattered timber. Stand is bisected by a trail road.</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
12	4136 - Aspen, Mixed Conifer	Sapling Medium	72.3	26	1-50	Tried to split out some of the nicer aspen areas and wet areas. this stand is the upland portion of poor shape quaking aspen (A1/A2) mixed with balsam and white pine. most is in pretty rough shape :-/ may be a potential to plant some of this to red pine as it would be great pine ground and current growing stock is in terrible shape. OPIC - FMD: 2005 KGR stand exam comments: Site index estimated. Mixed stand of balsam fir, spruce, quaking aspen and tamarack. Wet site with lots of past wind throw. Small pockets of somewhat upland aspen. Generally, the stand appears to have been subject to beaver and natural periods of flooding. The stand is within the bounds of the Deward Tract.
13	42290 - Natural Mixed Pine	Poletimber Well	6.4	75	111-140	This portion along snow trail was left a lot thicker for visual break along snow trail. looks to be doing good... some jack mixed in but mainly white and red pine with maple and oak. if treated leave thicker along snow trail.
14	42290 - Natural Mixed Pine	Poletimber Well	4.7	75	111-140	this area was taken out of the larger sale area as a visual break along snowmobile trail. maturing jack pine mixed with red and white pine. eastern lobe is NICE red pine! SW end more mixed maturing pine. Save for visual break along snow trail and retention. Sale # 53-08 Deward Rd Red Pine, completed 8-25-2009 dkj
15	4111 - S.Maple, Hard Mast Association	Poletimber Well	35.2	53	81-110	Not much change since previous notes... there are a few stems of aspen here and there. overall still small diameters... let go for atleast 10 more to get good heights and then stand should be ready for a light thin. OPIC - FMD: 2005 KGR stand exam comments: Young Northern Hardwood stand. No Aspen here. Mostly Sugar Maple with some Beech mixed in. Small diameter. Stand may have been cut in the 50's. Terrain is Hilly.
17	4139 - Aspen, Mixed Deciduous	Sapling Well	45.5	5	1-50	Scattered residual hardwood. mostly thick A3/M2. stand 120 & 17 cut in same sale. hardwood areas don't look as thick but overall stand is fully stocked, some areas have more beech and ironwood regen. OPIC - FMD: Stand was treated under tsale contract 073-09-01. Updated 6/2011-PC. 2005 KGR stand exam comments: Snowmobile trail/pipeline is the south boundary the stand. North and west sides of the stand are private property. Stand contains plenty of Aspen in many areas. Clearcut these Aspen dominated areas. Leave pockets that are pure hardwoods. Stand varies considerably from mixed aspen/hardwood, to heavy hardwood, to heavy aspen. Lots of small dbh stems. Many places, the stand is not uniform spacing and there are lots of multiple stem clumps. Terrain is rolling to hilly.
20	4116 - Mixed N. Hardwood - Aspen	Poletimber Well	16.3	55	111-140	East 1/2 and south end more maple covertime with beech. western more aspen, sw end more open grown stuff. Some is pretty thick with aspen and some not so much... maybe clearcut but save all sugar maple under 6" dbh? some nice pole sugar maple areas. some thicker beech areas showing heavy scale :-/ OPIC - FMD: 2005 KGR stand exam comments: Snowmobile trail bisects the stand. Stand contains plenty of Aspen in many areas. Clearcut in ten years. Stand varies considerably from mixed aspen/hardwood, to heavy hardwood, to heavy aspen. Lots of small dbh stems. Many places, the stand is not uniform spacing and there are lots of multiple stem clumps. Terrain is rolling to hilly.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	4130 - Aspen	Sapling Well	73.8	17	Immature	<p>Stand looks to be in pretty good shape...</p> <p>OPIC - FMD: 2005 KGR stand exam comments: Clearcut in 1998. Big Tooth Aspen regenerating nicely. Ground Cover is bracken fern. Terrain is rolling to hilly. Retained site index of record. 1998 Post Timber Sale Update: This stand was part of a large timber sale (103-97-01). The sale was cut in August/September of 1998.</p>
22	4130 - Aspen	Sapling Well	101.7	38	51-80	<p>Still coming along good... some HILLS in there... some looks like it could be merchantable but most look sleek it needs atleast another 10 yrs.</p> <p>OPIC - FMD: 2005 KGR stand exam comments: Stand is doing fine after being harvested in the late 1970's. Stems are just approaching poles size. Several species mixed in but Big Tooth Aspen dominates. The Snowmobile/ORV trail bisects the stand. Rolling terrain.</p>
23	4112 - Maple, Beech, Cherry Association	Sawtimber Well	48.3	85	51-80	<p>Beech is almost white washed in here now :-/ cut all aspen, beech... some nice pockets of maple regen along edges of open areas, canopied areas seem to be more beech regen :-/ mostly big clumpy trees with lots of open areas filling in with maple, beech n ironwood. Cut all trees over 4" Possibly cut all multi stem trees and save single stem maple under 8" dbh? not very good quality stems overall. this will be a regen/ salvage cut, try to save as much advanced regen of desired species, red sugar, oak and cherry as possible.</p> <p>OPIC - FMD: 2005 KGR stand exam comments: A rather unique stand. Merchantable timber basically consists of scattered multi-stem clumps of Sugar Maple and Beech. Some Quaking Aspen is mixed in and a few small dbh single stem Maple/Beech are coming in the understory. There is lots of Northern Hardwood regeneration present. Pockets of open or semi-open areas with regeneration invading. No treatment needed here. Let the Aspen die out and wait for the hardwood regeneration develop further. Too much damage would occur to the hardwood regeneration if we attempted to get the aspen out now. The ORV trail/Snowmobile Trail bisect this stand. Terrain here is rolling.</p>
24	4112 - Maple, Beech, Cherry Association	Poletimber Well	173.1	89	141-170	<p>Some is pretty steep but most looks to be operable, valleys should be skiddable but will need brushed for sure. some areas of heavy beech that is getting pretty heavy scale :-/, east 1/3 has some nicer white pine and red pine mixed in as well... mostly red maple at bottom of hill mixed with beech, yellow birch n ironwood, mixed maple and beech for the most of the rest. stem quality isn't that great overall but some nice poles present. probably cut all aspen, beech, ironwood and mark the rest either to cut or mark trees to leave. mostly a salvage on beech and aspen but take clumpy and poor formed maple. leave thicker along recreation trails if possible. ORV trail should probably be moved off the hilly portion of this stand... trail is ~4' below ground level due to washing out and poor trail layout.</p> <p>OPIC - FMD: 2005 KGR stand exam comments: The ORV trail/Snowmobile Trail bisects this stand. Stand is generally located on a side slope with an Easterly aspect. The trees are small dbh in some areas and in places they are growing in clumps. There is a variety of species on the site, including ironwood, basswood, sugar maple, and beech. Hold for 10 years. Used site index that was on record. Terrain here is rolling.</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
25	42260 - Natural Pine, Mixed Deciduous	Sapling Well	146.8	17	1-50	<p>scattered large mature red pine over mainly jack pine and aspen, some red maple areas also. area was previously dominated by red pine, now pushing to mixed species. some areas may be able to be chip harvested in the future to try to push more back to red pine, excellent red pine ground! might be possible to 2" spec some this YOE and plant back to red pine. check out plan to see how much red pine needs restarted for this MA. mid section of stand has the bulk of the large red pine... final harvest all down to 2" dbh and possibly may still have to roller chop or spray, trench and replant to red pine. excellent red pi ground and most has been cut out of this compartment so this will be a start to get some re-established here.</p> <p>OPIC - FMD: 2005 stand exam KGR comments: The stand is regenerating nicely with Quaking Aspen dominating. Some areas of natural Jack Pine regeneration. Red Pine and White Pine regeneration is mixed in throughout the sale area. Residual Red Pine is very scattered or in small clumps. Leave the residual timber in place since it softens the visual impact yet and it adds to the diversity of the area. The stand may be split up once we get new air photos. ORV/Snowmobile trails bisect the stand.</p> <p>Old notes from previous stand examinations and updates: CUT THE STAND, LEAVE THE RED PINES OAK, TOTAL TREE HARVEST ONLY HEAVY W PINE WEEVIL DAMAGE. 1999 Update note - Sale completed in late winter / early spring of 1999. Not much residual anything. Not sure what we will have here. Need to monitor site for reproduction status. Red Pine is concentrated towards the south central area of the stand. The stand management objective is listed in OI as being Aspen. If that is the case, we are in trouble. High stumps were cut lower where they could be cut. Many large multiple stem stumps remain quite high.</p>
26	42210 - Natural Red Pine	Sawtimber Well	3.8	71	81-110	<p>Most of stand is pretty steep. nice pocket of maturing red pine mixed with deciduous. lightly thin through stand with surrounding maple type. ok to cut some big pine but save atleast half, skidding will likely be tricky and up and down slopes should be avoided if possible. brush in the trail through stand. cut most or all beech.</p> <p>OPIC - FMD: 2005 KGR stand exam comments: Pocket of conifer up on top of a hill with steep slopes. Old ORV trail leads up over the top. Nature is managing this stand just fine. Stand is unique and should be left because of the diversity that it adds to the area. A few Red Pine saplings are coming in. Much of the timber is growing on the sideslopes and would be difficult to harvest because of the terrain.</p>
27	4130 - Aspen	Sapling Well	114.4	17	Immature	<p>Mostly aspen but some cherry and maple and open areas mixed in as well. SE end has a small . 6 acre maple pocket that was left for diversity. it seems to be doing good, no need for a thin, very small pocket.</p> <p>OPIC - FMD: 2006 KGR stand exam comments: Stand is regenerating nicely with Big Tooth and Quaking Aspen. Terrain is rolling and hilly.</p> <p>1999 timber sale update comments: This stand was part of a large timber sale (103-97-01). This stand was shown in OI originally as being 88 acres. The sale indicates the stand to have been 120 acres. The sale acreage number looks to be more accurate.</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
29	4130 - Aspen	Sapling Well	29.8	6	Immature	<p>Most looks to have come back pretty good, areas without much aspen are more beech, ironwood and red maple... overall looks to be good stem density.</p> <p>OPIC - FMD: Stand was treated under tsale contract 073-09-01. Updated 6/2011-PC. 2005 KGR stand exam comments: Stand contains plenty of Aspen in many areas. Clearcut these Aspen dominated areas. Leave portion of stand that lays east of Summit Road for retention. Stand varies considerably from mixed aspen/hardwood, to heavy hardwood, to heavy aspen. Lots of small dbh stems. Many places, the stand is not uniform spacing and there are lots of multiple stem clumps. Terrain is rolling to hilly.</p>
33	42110 - Planted Red Pine	Poletimber Well	4.4	55	111-140	<p>Small stand, row thinned Isat YOE, look to treat again in 10 yrs... not quite ready for a thin</p> <p>OPIC - FMD: Stand was treated under tsale contract 073-09-01. Updated 6/2011-PC. 2005 kgr stand exam comments: Red Pine plantation that is mostly polesize now. A few sawlog size stems. Remove every third row now. Caution: The south end of the stand extends onto private land.</p>
36	4112 - Maple, Beech, Cherry Association	Poletimber Well	136.9	63	111-140	<p>Stand still doing ok. could sneak into and remove 97% of the beech and aspen and remove some of the larger and pole sized defect maple n bass trees... if thinned now likely wont be back in for at least another 20 years, but if we wait the beech and aspen will likely start to fall out of stand. overall nice quality maple stems. north end has some pockets of younger aspen around stand 35.</p> <p>OPIC - FMD: 2005 kgr stand exam comments: Northern Hardwood stand that appears to be developing a fair number of crop potentialtrees. Some Aspen and White Birch scattered through the stand. Check in ten years for treatment needs. Stand is dominated by Sugar Maple. Lots of small dbh stems now. A pipeline is located underground from the well site clearing northward through the stand.</p>
37	4130 - Aspen	Poletimber Medium	45.3	36	51-80	<p>This is the portion of previously mapped stand that has the better aspen volumes. aspen still isn't the best but appears to be better shape and is actually merchantable size for the most part. look to treat approximately 1/3-2/3 of this stand to break up the aspen in the area. pine ground growing marginal mixed aspen, maple, fir and white pine. if possible plant some adjacent really rough shape aspen back to red pine to re establish pine in an area once dominated by pine.</p> <p>OPIC - FMD: 2005 KGR stand exam comments: Site index estimated. Mixed stand of balsam fir, spruce, quaking aspen and tamarack. Wet site with lots of past wind throw. Small pockets of somewhat upland aspen. Generally, the stand appears to have been subject to beaver and natural periods of flooding. The stand is within the bounds of the Deward Tract.</p>
38	42210 - Natural Red Pine	Poletimber Well	22.1	55	111-140	<p>row thinned last YOE. looks good... hardwood competition is going to be pretty stiff and think this one will be lost to hardwood in the long haul. thin 1 or 2 more times as needed... stand will hold ok or could lightly thin now.</p> <p>OPIC - FMD: Stand was treated under tsale contract 073-09-01. Updated 6/2011-PC. 2005 kgr stand exam comments: Red Pine plantation that is mostly polesize now. A few sawlog size stems. Remove every third row now. Caution: The south end of the stand extends onto private land.</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
39	4130 - Aspen	Poletimber Well	14.5	38	81-110	<p>Stand could hold ok 10 years or could be cut now if needed for age class diversity and habitat needs. leaning towards cutting now as some is looking a bit rough.</p> <p>OPIC - FMD: 2005 KGR stand exam comments: Quaking Aspen stand is regenerating nicely after 1978 clearcut. Just beginning to reach polesize. Terrain is relatively flat.</p>
40	4112 - Maple, Beech, Cherry Association	Poletimber Medium	26.8	69	111-140	<p>Some areas thick with beech and some areas more open and sparse stocked... some nice pole areas of sugar maple and some pretty gnarly mixed in with big tooth aspen clones.</p> <p>OPIC - FMD: 2005 KGR stand exam comments: Northern Hardwood stand with some potential crop trees developing but there are lots of multiple stem clumps here too. Many small dbh stems. May be a stand to manage for fiber - or at least part of it. Pockets of better quality and higher density. Used site index of record. Terrain is rolling.</p>
41	42110 - Planted Red Pine	Poletimber Well	7.5	55	141-170	<p>Stand row thinned last YOE. Some areas could use another light thin and some are pretty open. another site that will be lost to understory hardwood.</p> <p>OPIC - FMD: Stand was treated under tsale contract 073-09-01. Updated 6/2011-PC. 2005 kgr stand exam comments: This stand is planted red pine on a rolling hilly site. A trail road bisects the stand and the west side of the stand bounds against private property. Very few sawbolts here, it is mostly pulpwood. Row thin this along with other nearby red pine stands. Rows are distinguishable but many places are confusing and may need judgement calls by the harvester or marker. Not sure that we have access rights on the existing trail road across the private land.</p>
42	42110 - Planted Red Pine	Poletimber Well	72.5	55	141-170	<p>original stand notes got deleted :-/ stand thinned last YOE. most appears ready for another light thin. west edge has some open grown red maple, aspen and white pine along the edge of the stand. cut red maple and aspen along wet edge to promote sprouting for deer browse and younger tree growth. lightly think from below but ok to cut from all size classes. overall a crown thinning.</p>
45	4130 - Aspen	Sapling Well	42.2	36	81-110	<p>Stand still doing good... some big tooth aspen some quaking, both in good shape... probably ready to start breaking up stand next YOE but most doesn't look to be ready yet. OPIC - FMD: 2005 KGR stand exam comments: Stand was clearcut around 1980. Good Quaking Aspen regeneration has developed. Red Pine and White Pine can be found in the form of poles, small sawlogs and saplings scattered throughout the stand. The stand is bisected by the Snowmobile/ORV Route/ORV trail.</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
48	4132 - Aspen, Jack Pine	Sapling Well	140.3	25	Immature	<p>Most red pine removed in 2009, scattered red pine and large oak here and there. all other species were cut back in late 80's. mixed jack pine, aspen, red pine maple and cherry regen. site should fill back in completely. jack mainly along disturbed skid trails and scarified areas, rest looks mainly like aspen. entire stand use to be mainly red pine... now growing marginally stocked mixed species stand.</p> <p>OPIC - FMD: 2005 KGR stand exam comments: Stand was cut in the late 1980's. All except Red Pine was cut. There is a good stocking of Quaking Aspen regeneration. Lots of Red Pine seedlings and saplings are coming in beneath the residual Red Pine log trees. Jack Pine, Oak and White Pine can be found in the stand in places. Some areas will convert to oak. Not attempting to manage for Red Pine due to the intense competition from aspen and other species that are already established. Remove the merchantable Red Pine now. Technically, this will be a "clearcut with reserves". Snowmobile Trail/ORV Trail & ORV Route all bisect this stand. Terrain within this stand is flat. Sale # 53-08 Deward Rd Red Pine, completed 8-25-2009 dkj</p>
49	42210 - Natural Red Pine	Sawtimber Medium	54.6	81	1-50	<p>stand was shelterwooded last YOE... 10-50 BA was left to release understory oak, maple and aspen. still nursing along good, red pine seems pretty healthy. manage stand for understory. ok to take the top off this YOE or will hold ok as well which would let the understory get a bit more advanced. either way save some along snowmobile trail for visual and snow break. might be able to chop and plant some back to red pine if needed. OPIC - FMD: 2005 KGR stand exam comments: Stand was cut in 1987 when all except Red Pine was removed. Some areas have good advanced oak regeneration beneath the Red Pine overstory. Lots of Red Maple sprouts too. Stand needs to be marked. Basal area varies from 160 - 20 square feet. Reduce residual Red Pine BA to about 40 square feet in an effort to promote more of the oak seedlings. It would be beneficial if the stand was harvested during periods when the ground is not frozen so that we can accomplish some scarification during the harvest operations. A classic example of the use of pine overstory to nurse along oak seedlings in the understory. Sale # 53-08 Deward Rd Red Pine, completed 8-25-2009 dkj</p>
50	4191 - Mixed Upland Deciduous with Conifer	Sapling Well	53.4	29	Immature	<p>came in last YOE to take our bulk of mature timber in stand so now some areas are 29 year old jack and aspen and rest is younger, maple oak and aspen, south end is quite a bit thicker, north end has some sparse areas... some might be ready for something in 10-20 yrs but doing ok for time being OPIC - FMD: 2006 KGR stand exam comments: Stand was cut in 1987. All was cut except Red Pine. There is good advanced oak regeneration in place along with some natural red pine regeneration in places. There is also a lot of stump sprouted Red Maple and Cherry and some scattered patches of Aspen regeneration. Some Jack Pine is mixed in too. Basal Area of merchantable timber varies from 70 - 10 square feet. Prescription = Clearcut with reserves. Stand could hold for 10 more years. Sale # 53-08 Deward Rd Red Pine, completed 8-25-2009 dkj</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
51	4311 - Pine, Aspen Mix	Sapling Well	8.2	8	1-50	<p>east edge is thicker white pine along swamp complex. rest is scattered trees over regenerating aspen, maple and jack pine. mixed upland covertype not sure if its going to go more deciduous or conifer yet... either way will likely be 30-40 years before anything is ready for treatment here.</p> <p>OPIC - FMD: 2005 KGR stand exam comments: This stand is difficult to type. Clearly, the jack pine is old and needs to come out. Prescription is to remove all jack pine, red maple and aspen now. Leave all other species. Some oak component and lots of Red Pine and White Pine along the East edge. Various species of regeneration in place now. New stand will be mixed and will evolve from the natural regeneration that is already in place and from the spouts and stump sprouts that will evolve after the harvest. A mixed composition will be acceptable as long as the stocking is at least in the medium category. The stand is within the Deward Tract. Sale # 47-08 Deer Fly Red completed 8-25-2009 dkj</p>
52	6129 - Mixed Coniferous Lowland Forest	Poletimber Well	8.7	65	81-110	<p>OPIC - FMD: 2006 KGR stand exam comments: Stand is upon a site with a high water table. Small patches of high ground. Mixed conifer species with Tamarack, spruce, balsam fir and other species. Some Red Maple and large White Pine and Red Pine trees are scattered and in pockets. A scattering of oak seedlings can be found. Nature is doing fine with her management of this stand. Stand is within the Deward Tract.</p>
57	42200 - Natural White Pine	Sawtimber Well	7.0	121	51-80	<p>Small pocket of maturing white pine over red maple, fir n pine. leave for good, in deward tract. most trees have pretty gnarly tops so large size but not nice log volumes. leave for big tree mgmt.</p> <p>OPIC - FMD: 2005 KGR stand exam comments: Potential Old Growth here. This stand is well on its way to resembling what the Deward area looked like in 1900. Stand is two-tiered with White Pine sawlogs dominating the upper canopy. Lower canopy is evolving with Red Maple, Balsam Fir, White Pine and Red Pine that are beginning to reach pole size. The perimeter of the stand is influenced by water levels controlled by beaver. The stand is within the Deward Tract.</p>
59	6124 - Lowland Spruce-Fir	Poletimber Well	10.1	50	51-80	<p>mainly fir, spruce, maple and aspen in the west 2/3. NE end more wet footed aspen. some may be treatable but looks to be in pretty good shape yet</p> <p>OPIC - FMD: 2006 KGR stand exam comments: This is an all aged stand that is dominated by swamp conifers but with some Quaking Aspen mixed in. The stand is more dry on the north and on the east sides. It appears more typical "Q" type as you go south and west. It appears that fires, flooding and beaver have shaped the fate of this stand over the centuries. Let nature continue. Ground cover includes some mosses. There are scattered cedar, white pine and red pine on the southeast edge. This stand is within the bounds of the Deward Tract.</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
63	42290 - Natural Mixed Pine	Poletimber Well	14.5	45	51-80	<p>mixed white pine and red pine stand filling in. much of the white pine appears to be multi stemmed tops. mixed with some aspen, red maple, fir. could probably treat the stand in 10-20 years. working on height development for now.</p> <p>OPIC - FMD: 2005 KGR stand exam comments: White Pine dominated stand with Balsam Fir Tamarack, Quaking Aspen and Red Pine mixed in. Lots of big old pine stump remain from the 1900 logging era. Stand is slightly elevated from the surrounding stand. Let nature continue managing this stand. A few big old White Pine seed trees scattered around. Stand is within the Deward Tract.</p>
65	42290 - Natural Mixed Pine	Sawtimber Well	18.7	71	51-80	<p>south end of stand more open, north end thicker red and white pine. looks like they removed most of the short lived species last YOE but some may have been missed. doing fine for now.. look to treat in 10-20.</p> <p>OPIC - FMD: 2005 KGR stand exam comments: This stand is difficult to type. Clearly, the jack pine is old and needs to come out. Prescription is to remove all jack pine, red maple and any aspen now. Leave all other species. Some oak component and lots of Red Pine and White Pine along the East edge. Various species of regeneration in place now. New stand will be mixed and will evolve from the natural regeneration that is already in place and from the spouts and stump sprouts that will evolve after the harvest. A mixed composition will be acceptable as long as the stocking is at least in the medium category. The stand is within the Deward Tract. Sale # 47-08 Deer Fly Red completed 8-25-2009 dkj</p>
66	6122 - Black Spruce	Poletimber Well	5.8	79	81-110	<p>spruce transition ground stand. within deward tract. could possibly cut spruce and fir over 4-6 inch dbh to minimize potential bud worm problems and release the understory. if cut leave some seed trees along edge and buffer water features. most appears pretty healthy.</p> <p>OPIC - FMD: 2005 KGR stand exam comments: Site is low and wet. Trees appear to be healthy. Thermal cover for deer. No treatment needed. Some scattered lowland brush in the understory. Ground cover = leatherleaf. Used site index of record. Stand is within the Deward Management Tract.</p>
67	4130 - Aspen	Poletimber Well	5.5	44	81-110	<p>Cut now to promote good thick stem density. save some or all pine and oak.</p> <p>OPIC - FMD: 2006 KGR stand exam comments: This is a Quaking Aspen stand that includes a mixture of various other species. Some places have lots of cherry in the understory. It would be wise to cut this in 10 years while it is still vigorous. Many stems are just reaching polesize. White Pine and Red Pine are scattered through the understory. This stand is within the Deward Tract.</p>
69	42210 - Natural Red Pine	Poletimber Well	5.1	95	201+	<p>OPIC - FMD: 2006 KGR stand exam comments: This is an all aged stand that is dominated by swamp conifers but with some Quaking Aspen mixed in. Typical "Q" type. It appears that fires, flooding and beaver have shaped the fate of this stand over the centuries. Let nature continue. Ground cover includes some mosses. There are scattered cedar, white pine and red pine. This stand is within the Deward Tract.</p>



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
71	42200 - Natural White Pine	Poletimber Medium	4.8	51	1-50	Aspen along east and NE edge, mostly open, filling in with white pine, and cherry brush. multi stemmed tops for the most part. OPIC - FMD: 2005 KGR stand exam comments: Semi-open area with some cherry and white pine poles scattered. White pine has weevil problems. Appears to be an old U-type stand that was somehow stocked with white pine. Small stand - no real reason to try and develop artificially by planting.
72	6112 - Lowland Aspen	Poletimber Well	26.6	55	81-110	Some looks to be manageable and some is likely to wet. should regenerate nicely for areas that are dry enough to cut. treat as much of stand as we can this YOY as aspen is getting in pretty rough shape. OPIC - FMD: 2006 KGR stand exam comments: Low wet site with various conditions present. Some areas of cattails, flooded areas w/ beaver dams, tag alder w/ mixed conifer scattered through it. Spruce, tamarack, balsam fir and other conifers can be found in the stand.
73	42290 - Natural Mixed Pine	Poletimber Well	22.3	73	111-140	OPIC - FMD: 2005 KGR stand exam comments: Appears to be somewhat low and wet. Stand is dominated by White Pine. Some Aspen is mixed in. Ground Cover = bracken fern and other. East side of road is lower & wetter site and falls inside the Deward Management Tract. Lots of small dbh poles (4-6").
74	4130 - Aspen	Poletimber Poor	16.7	45	1-50	OPIC - FMD: 2005 KGR stand exam comments: Stand is a mixture of semi-open areas and young aspen clones. Quaking Aspen and Big Tooth Aspen both here. Ground cover is mixed with bracken fern most plentiful. Scattered conifers on the site. Terrain is flat.
75	4130 - Aspen	Poletimber Well	16.2	49	81-110	More solid aspen south end, north end had white pine and fir mixed in around the small LO. OPIC - FMD: 2005 KGR stand exam comments: Quaking Aspen stand along Deward Road. Small pole size stems now. Upland site that tapers to a wet area along the east edge. Flat terrain. This stand is within the Deward Tract.
76	42260 - Natural Pine, Mixed Deciduous	Sawtimber Well	10.9	65	51-80	understory continuing to fill in. younger aspen, maple, fir and pine underneath larger white pine at the north end and red pine at the south end. mixed conifer log stand over mixed deciduous and conifer younger sapling/ pole size trees. understory overall to small to manage just yet. should hold good 10-20 yrs. OPIC - FMD: 2005 KGR stand exam comments: Stand consists of scattered Red Pine and other various species. Some Quaking Aspen regeneration, some Red Pine seedlings and saplings are coming in beneath the residual Red Pine log trees. Jack Pine, Oak and White Pine can be found in the stand in places. Stand is difficult to access due to heavy underbrush in adjacent stands. Terrain within this stand is flat and the site is within the Deward Tract Management Area. No need to manage via commercial manipulation. Good wildlife cover in places. Nature is doing fine with this one.



	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
79	4130 - Aspen	Poletimber Medium	6.8	55	1-50	<p>open areas filling in with jack pine, mixed pine throughout stand... not worth smashing the regeneration to chase the 20 or 30 cords of aspen that remain post harvest.</p> <p>OPIC - FMD: 1/11/2011 Stand harvested except for aspen. Stand is an A4/A5 'Stumpville Pine' (sc). 2005 KGR stand exam comments: Stand is mostly Red Pine and White Pine. Some stocking of Quaking Aspen regeneration. Red Pine seedlings and saplings are coming in beneath the residual Red Pine log trees. Jack Pine, Oak and White Pine can be found in the stand in places. Remove the merchantable Red Pine and White Pine now. Technically, this is a clearcut with reserves. Retention - Aspen. Terrain within this stand is flat.</p>
80	42220 - Natural Jack Pine	Sapling Well	10.9	5	Immature	<p>Looks to have mainly pushed to jack pine... site filled in pretty good post harvest. OPIC - FMD: 1/11/2011 Stand final harvested 'Stumpville Pine' (sc). 2005 KGR stand exam comments: Stand lies north of trail road. Some Red Pine seedlings and saplings are in place. Jack Pine, Oak and White Pine can be found in the stand in places. Some areas will convert to oak. Expected regeneration will be mixed stand of aspen, oak and various pine species. Terrain within this stand is flat.</p>
81	4130 - Aspen	Poletimber Medium	18.7	58	51-80	<p>Mostly sparse to scattered stand but some dense pockets as well</p> <p>OPIC - FMD: 2005 KGR stand exam comments: Mixed unevenaged stand of Aspen and Northern Hardwood. Quaking Aspen seems to dominate the stand. Cherry, Sugar Maple, Beech and Quaking Aspen are all found here. Lots of Northern Hardwood regeneration is present (mostly beech and sugar maple) as is some scattered white pine in sapling form. Some small aspen stems coming in too. Stand varies from semi-open pockets to some fairly dense timber areas. along Deward Road. Small pole size stems now. Upland site that tapers to a wet area along the east edge. Terrain slopes slightly towards the East. The stand is bisected by the ORV Trail/Snowmobile trail.</p>
82	42290 - Natural Mixed Pine	Sawtimber Medium	3.9	55	1-50	<p>Digging back it looks like the pine stump preserve was never officially designated. deward tract has a directors order to minimize orv and vehicle access. care should be taken to avoid damage to any historical sites and the cool old pine stumps. this stand is sparse W5-W7 filling in, pretty poor formed trees</p> <p>OPIC - FMD: 2005 KGR stand exam comments: Stand is designated as part of a Pine Stump Preserve (SCA) that extends a short way into Crawford County. Semi-open area with some merchantable Red Pine sawlog trees as well as some seedlings and saplings. Jack Pine, Oak and White Pine can be found in the stand in places. Terrain within this stand is flat. The East 2/3's (East of Deward Road) of this stand is within the special restrictions "Deward Tract" Management Area.</p>



Stand	Cover Type	Acres	Managed Site	General Comments:
5	3301 - Low Density Deciduous Trees	0.8	No	OPIC - FMD: 2006 KGR stand exam comments: Stand is regenerating nicely with Big Tooth and Quaking Aspen. Terrain is rolling and hilly. 1999 timber sale update comments: This stand was part of a large timber sale (103-97-01). This stand was shown in OI originally as being 88 acres. The sale indicates the stand to have been 120 acres. The sale acreage number looks to be more accurate.
11	3302 - Low Density Conifer Trees	4.4	No	Not much has changed, still mixed bag lowland with some areas of trees but mostly open OPIC - FMD: 2006 KGR stand exam comments: Low wet site with various conditions present. Some areas of cattails, flooded areas w/ beaver dams, tag alder w/ mixed conifer scattered through it. Spruce, tamarack, balsam fir and other conifers can be found in the stand. 1995 stand exam comments: POSSIBLE PRESCRIBED BURN
16	6229 - Mixed lowland shrub	2.4	No	
18	6229 - Mixed lowland shrub	3.7	No	OPIC - FMD: 2005 KGR stand exam comments: Site index estimated. Mixed stand of balsam fir, spruce, quaking aspen and tamarack. Wet site with lots of past wind throw. Small pockets of somewhat upland aspen. Generally, the stand appears to have been subject to beaver and natural periods of flooding. The stand is within the bounds of the Deward Tract.
19	3301 - Low Density Deciduous Trees	2.3	Yes	OPIC - FMD: 2005 kgr stand exam comments: Mostly cherry and shrubs with scattered timber.
28	3301 - Low Density Deciduous Trees	10.9	Yes	OPIC - FMD: 2005 kgr stand exam comments: Mostly cherry and shrubs with scattered timber.
30	6229 - Mixed lowland shrub	0.5	No	
31	3301 - Low Density Deciduous Trees	4.7	Yes	OPIC - FMD: 2005 kgr stand exam comments: Mostly cherry and shrubs with scattered timber.
32	6225 - Bog	1.8	No	OPIC - FMD: 2005 KGR stand exam comments: Site index estimated. Mixed stand of balsam fir, spruce, quaking aspen and tamarack. Wet site with lots of past wind throw. Small pockets of somewhat upland aspen. Generally, the stand appears to have been subject to beaver and natural periods of flooding. The stand is within the bounds of the Deward Tract.
34	3301 - Low Density Deciduous Trees	2.1	No	Not much has changed... filling in with trees OPIC - FMD: 2005 kgr stand exam comments: Mostly cherry and shrubs with scattered timber.
35	3301 - Low Density Deciduous Trees	2.2	No	OPIC - FMD: 2005 kgr stand exam comments: Mostly cherry and shrubs with scattered timber.



Stand	Cover Type	Acres	Managed Site	General Comments:
55	629 - Mixed non-forested wetland	192.1	No	Not much has changed, still mixed bag lowland with some areas of trees but mostly open OPIC - FMD: 2006 KGR stand exam comments: Low wet site with various conditions present. Some areas of cattails, flooded areas w/ beaver dams, tag alder w/ mixed conifer scattered through it. Spruce, tamarack, balsam fir and other conifers can be found in the stand. 1995 stand exam comments: POSSIBLE PRESCRIBED BURN
64	500 - Water	9.3	No	OPIC - FMD: 2005 kgr stand exam comments: Beaver ponds developed along drainages within the Deward Management Tract.
68	500 - Water	1.0	No	OPIC - FMD: 2005 kgr stand exam comments: Beaver ponds developed along drainages within the Deward Management Tract.
70	623 - Emergent Wetland	4.3	No	OPIC - FMD: 2005 kgr stand exam comments: Beaver ponds developed along drainages within the Deward Management Tract.
78	622 - Lowland Shrub	0.8	No	OPIC - FMD: 2006 KGR stand exam comments: Small pocket of low wet plants and brush. Tagalder & brush. Stand is within the Deward Management Unit.
401	790 - Other Bare/Sparsely Vegetate	1.2	No	inactive well pad OPIC - FMD: 2005 KGR stand exam comments: Well site with an operating well. State Frederick 2-7, KCS Michigan Resources. A power transformer is located on the North edge of the opening, east of the trail road. Ground cover here is grass with lots of knappweed.
402	790 - Other Bare/Sparsely Vegetate	1.8	No	Active well pad OPIC - FMD: 2005 KGR stand exam comments: Well site with an operating well. State Blue Lake 4-13A, KCS Michigan Resources. A power transformer is located on the SE corner of the opening. Ground cover here is grass and knappweed.
403	3102 - Grass	2.2	No	OPIC - FMD: 2005 KGR stand exam comments: Abandoned well site with gated road leading in through a red pine plantation from the pipeline. The ground cover consists of grass, knappweed, blackberry and some bracken fern. No equipment or evidence of pipes or facilities on the site at this time. Stand is within the Deward Tract.
404	790 - Other Bare/Sparsely Vegetate	1.5	No	Inactive well pad OPIC - FMD: 2005 KGR stand exam comments: Well site with operating well head. Grassy opening with lots of knappweed.
405	790 - Other Bare/Sparsely Vegetate	2.4	No	inactive well pad OPIC - FMD: 2005 KGR stand exam comments: Well site with operating well head. Grassy opening with lots of knappweed.
407	3102 - Grass	5.3	Yes	OPIC - FMD: 2005 KGR stand exam comments: Grassy opening with several old fruit trees and some earthen footings from old buildings located in it. Obviously, this was an old homestead. Stand is bisected by Summit Road (certified but not maintained county road). ORV Trail bisects the stand using Summit Road as its route and the snowmobile trail passes (E/W) through the south part of this stand.



Stand	Cover Type	Acres	Managed Site	General Comments:
408	122 - Road/Parking Lot	1.3	No	Pump jack is pulled but looks like still an active lease. not in production OPIC - FMD: 2005 KGR stand exam comments: Well site with operating well head. Two bulk propane tanks are located on the site. Permit # 48459, Merit Energy Company, State Blue Lake 1-14A. Emergency phone number 1-800-328-7430. SW/SW, Sec 14, 28N 5W. Grassy opening with lots of knappweed.
409	790 - Other Bare/Sparsely Vegetate	2.3	No	not active but plumbing still in ground. OPIC - FMD: 2005 KGR stand exam comments: Well site with operating well head. Two bulk propane tanks are located on the site. Permit # 34752, Merit Energy Company, State Blue Lake 3-23A. Emergency phone number 1-800-328-7430. NE/NW/NW, Sec 14, 28N 5W. Grassy opening with lots of knappweed - flat ground.
410	790 - Other Bare/Sparsely Vegetate	2.0	Yes	OPIC - FMD: 2005 KGR stand exam comments: Abandoned well site with a power transformer box located at the edge of the stand Mostly grass and knappweed. .
411	3102 - Grass	1.3	Yes	OPIC - FMD: 2005 KGR stand exam comments: Abandoned well site. Mostly grass and knappweed. .
413	122 - Road/Parking Lot	7.0	No	Blue Lake Road corridor which is wide and cleared beyond the road right of way. Mostly grass and knappweed. .
414	3102 - Grass	6.6	No	Nothings changed... pretty hilly. snow trail on pipeline for eastern 2/3 of this stand. OPIC - FMD: 2005 KGR stand exam comments: Pipeline corridor with Snowmobile trail/two track trail. Mostly grass and knappweed. .
415	3102 - Grass	9.8	No	No change... pretty hilly! OPIC - FMD: 2005 KGR stand exam comments: Pipeline corridor with Snowmobile trail/two track trail. Mostly grass and knappweed.
416	3102 - Grass	8.3	No	pipeline corridore