



Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 119

Entry Year 2016

Acreage: 2,446

County Kalkaska

Management Area: Grayling Outwash

Revision Date: 04/03/2014

Stand Examiner: Kelly Standerfer

Legal Description:

T27N R6W Sections 3 and 4; T27N R6W Sections 27, 28, 33, and 34

Identified Planning Goals:

Timber management in the Grayling Outwash management area will emphasize balancing the age class of aspen on suitable sites, thinning northern hardwoods, balancing age classes of red pine and jack pine, and regenerating the aging swamp hardwood and conifer resource where possible. Management will strive to sustainably produce various timber products, enhance game and non-game wildlife habitat, protect areas of unique character and provide for forest-based recreational uses. Management activities are constrained by poor access in the swampy portions of this area, some of which fall in the riparian zone of the Manistee River, a dedicated natural river. Expected trends within this 10-year planning period are increased recreational pressure, introduced pests and diseases and the difficulty in regenerating swamp types.

Soil and topography:

Level to rolling topography with the bulk of the compartment being Lupton Much swamp soil type. Much of the upland area also appears to have a significantly seasonally high water table which will likely make winter use of the roads for logging activity necessary.

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

Nearly 1,000 acres within this compartment were acquired since the area was last inventoried.

Unique Natural Features:

There is a great blue heron rookery within the compartment and at least one observed rare plant.

Archeological, Historical, and Cultural Features:

No Archeological, Historical, or Cultural Features known.

Special Management Designations or Considerations:

Several tributaries of the Manistee River flow through this compartment; these are protected by Natural Rivers designation. Significant restoration efforts have been done in this area with the assistance of the National Fish and Wildlife Foundation, Conservation Resource Alliance, Kalkaska Conservation District and the Michigan DNR.

Watershed and Fisheries Considerations:

Significant dam removal work has been done in this area to restore the Upper Manistee and Flowing Well Creek. Area was historically owned and managed by the Flowing Well Trout Farm.

Wildlife Habitat Considerations:

Featured wildlife species for this management area are: Eastern massasauga rattlesnake, pileated woodpecker, ruffed grouse, snowshoe hare, wild turkey, and white-tailed deer. Some of the most significant wildlife management issues will be maintenance of young forest and large open grassland complexes, the retention of large, over-mature trees and snags, and the maintenance and expansion of hard mast and mesic conifer components.

Mineral Resource and Development Concerns and/or Restrictions

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium and an end moraine of coarse-textured till. The glacial drift thickness varies between 200 and 600 feet. Beneath the glacial drift are the Mississippian Marshall Sandstone and Coldwater Shale. The Marshall was previously used as a building stone. The nearest gravel pit is located in Section 29 and there should be potential on the uplands. This area is located two miles southwest of the Niagaran reef trend. Section 28 is currently leased for oil and gas development.

Vehicle Access:

There is sufficient vehicle access to the compartment however many of the roads need some major maintenance and

several RDR's are within this compartment. It is recommended that this area have the roads fixed up so that they can be used for habitat/ timber management and keep them all closed when not in use.

Survey Needs:

The west side of this compartment needs significant survey work to help clear up some potential trespass'. The east side may need some as well.

Recreational Facilities and Opportunities:

There are no designated recreational trails or facilities within this compartment. Hunting, fishing and winter wildlife viewing are common recreational activities within this compartment. (T.M.N. 5/15/14)

Fire Protection:

There is limited wildfire potential in much of this compartment due to wet ground. Fire protection would be provided by the Kalkaska FRD office and Garfield Fire Department. Sections ____ are within Zone 5 zone dispatch area, meaning additional units would be dispatched from several surrounding DNR offices depending on fire danger rating.

Additional Compartment Information:

There is evidence of old lumber camps in the compartment.

The following reports from the Inventory are attached:

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

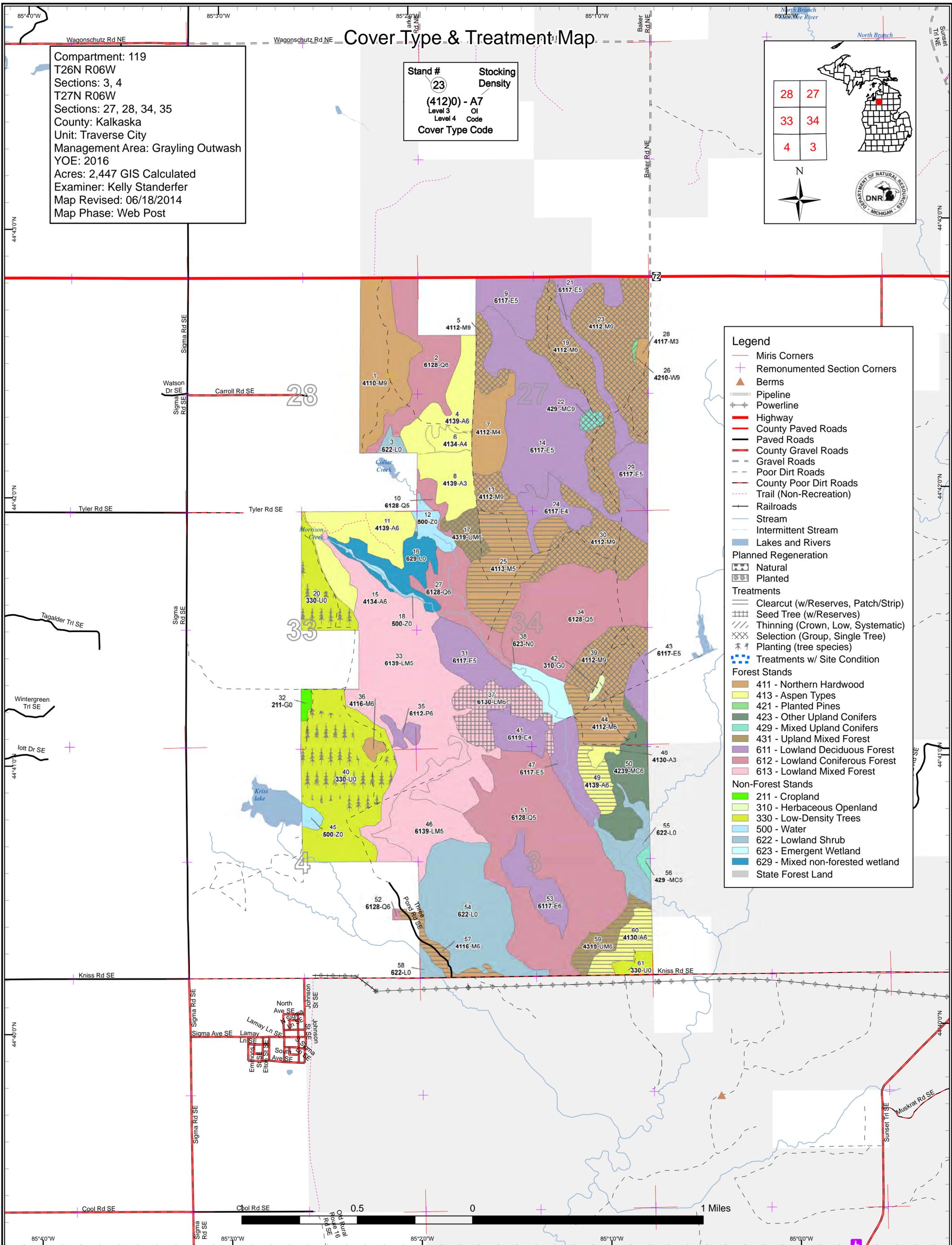
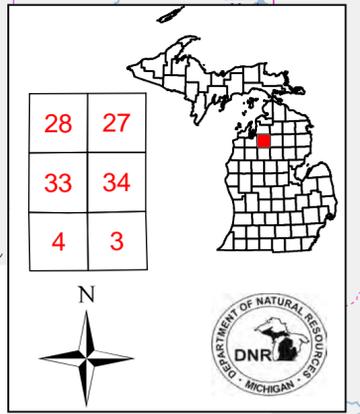
The following information is displayed, where pertinent, on the attached compartment maps:

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

Cover Type & Treatment Map

Compartment: 119
 T26N R06W
 Sections: 3, 4
 T27N R06W
 Sections: 27, 28, 34, 35
 County: Kalkaska
 Unit: Traverse City
 Management Area: Grayling Outwash
 YOE: 2016
 Acres: 2,447 GIS Calculated
 Examiner: Kelly Standerfer
 Map Revised: 06/18/2014
 Map Phase: Web Post

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



Legend

- Miris Corners
- Remonumented Section Corners
- Berms
- Pipeline
- Powerline
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Railroads
- Stream
- Intermittent Stream
- Lakes and Rivers

Planned Regeneration

- Natural
- Planted

Treatments

- Clearcut (w/Reserves, Patch/Strip)
- Seed Tree (w/Reserves)
- Thinning (Crown, Low, Systematic)
- Selection (Group, Single Tree)
- Planting (tree species)
- Treatments w/ Site Condition

Forest Stands

- 411 - Northern Hardwood
- 413 - Aspen Types
- 421 - Planted Pines
- 423 - Other Upland Conifers
- 429 - Mixed Upland Conifers
- 431 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

Non-Forest Stands

- 211 - Cropland
- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 623 - Emergent Wetland
- 629 - Mixed non-forested wetland
- State Forest Land

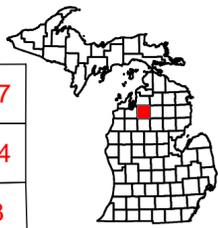


85°40'W 85°30'W 85°20'W 85°10'W 85°00'W
 44°40'N 44°30'N 44°20'N 44°10'N 44°00'N

Stand Boundary Map

Compartment: 119
 T26N R06W
 Sections: 3, 4
 T27N R06W
 Sections: 27, 28, 34, 35
 County: Kalkaska
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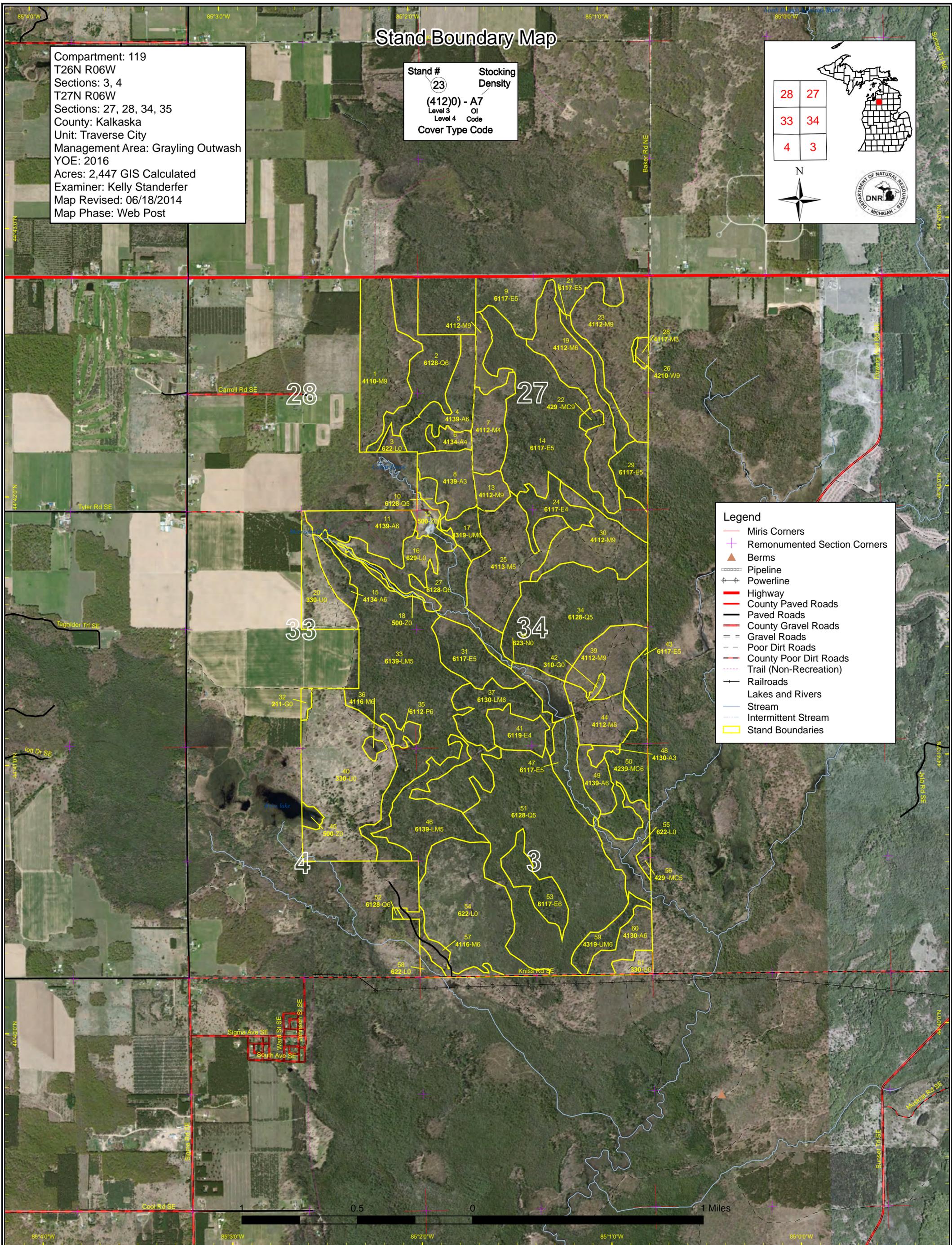
Stand #
 23
Stocking Density
 (412)0 - A7
 Level 3 OI
 Level 4 Code
Cover Type Code



28	27
33	34
4	3

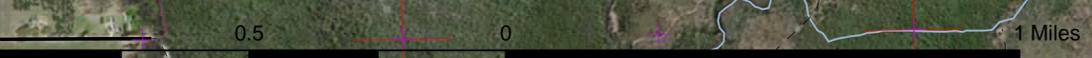
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Legend

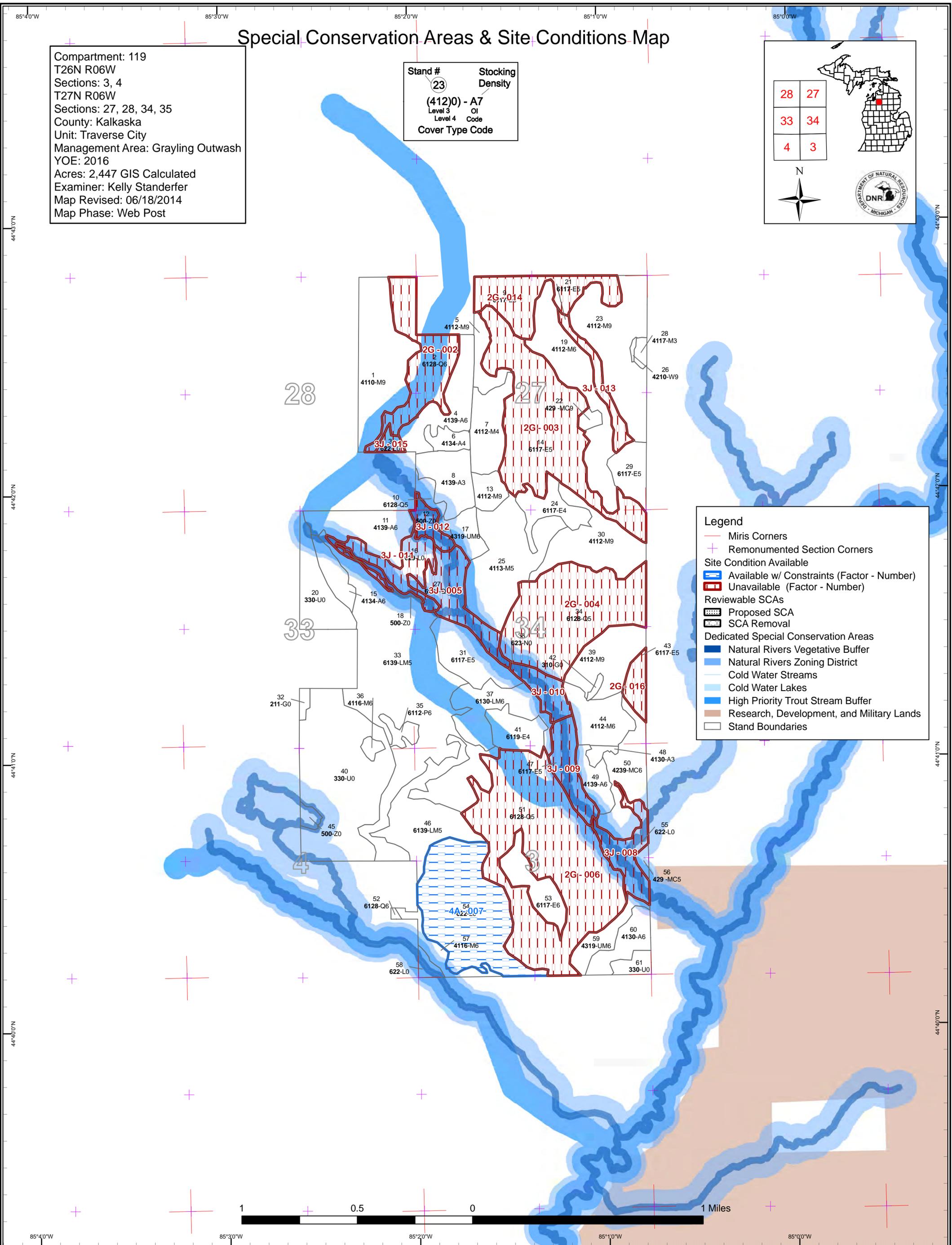
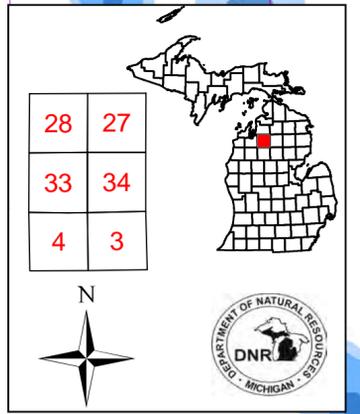
- Miris Corners
- Remonumented Section Corners
- Berms
- Pipeline
- Powerline
- Highway
- County Paved Roads
- Paved Roads
- County Gravel Roads
- Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Trail (Non-Recreation)
- Railroads
- Lakes and Rivers
- Stream
- Intermittent Stream
- Stand Boundaries



Special Conservation Areas & Site Conditions Map

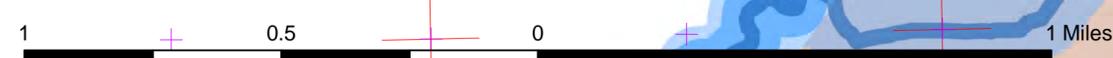
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 Map Phase: Web Post

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



Legend

- Miris Corners
- Remonumented Section Corners
- Site Condition Available
 - Available w/ Constraints (Factor - Number)
 - Unavailable (Factor - Number)
- Reviewable SCAs
 - Proposed SCA
 - SCA Removal
- Dedicated Special Conservation Areas
 - Natural Rivers Vegetative Buffer
 - Natural Rivers Zoning District
 - Cold Water Streams
 - Cold Water Lakes
 - High Priority Trout Stream Buffer
 - Research, Development, and Military Lands
 - Stand Boundaries



85°40'W 85°30'W 85°20'W 85°10'W 85°00'W

44°43'0"N 44°42'0"N 44°41'0"N 44°40'0"N

Report 1 – Total Acres by Cover Type and Age Class



	Age Class														Total
	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +	Uneven Age	
Aspen	0	33	4	10	124	18	0	0	0	0	0	0	0	0	189
Cropland	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Herbaceous Openland	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Low-Density Trees	189	0	0	0	0	0	0	0	0	0	0	0	0	0	189
Lowland Aspen/Balsam Poplar	0	0	0	0	8	0	0	0	0	0	0	0	0	0	8
Lowland Conifers	0	0	0	0	0	0	8	0	396	62	0	0	0	0	466
Lowland Deciduous	0	0	0	0	29	0	90	118	164	0	0	0	0	0	400
Lowland Mixed Forest	0	0	0	0	0	0	102	226	0	0	0	0	0	0	329
Lowland Shrub	193	0	0	0	0	0	0	0	0	0	0	0	0	0	193
Marsh	19	0	0	0	0	0	0	0	0	0	0	0	0	0	19
Northern Hardwood	0	4	0	0	0	0	50	120	221	56	86	0	0	0	537
Upland Conifers	0	0	0	0	0	0	0	4	0	5	44	0	0	0	52
Upland Mixed Forest	0	0	0	0	19	0	0	16	0	0	0	0	0	0	35
Water	22	0	0	0	0	0	0	0	0	0	0	0	0	0	22
White Pine	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	429	37	4	10	180	18	252	484	781	122	130	0	0	0	2447



Report 2 – Proposed Treatment Summaries

Traverse City Mgt. Unit
Year of Entry 2016

Compartment 119
Total Compartment Acres: 2,446

Acres by Treatment Type

Commercial Harvest - 540 Tree Planting - 101 Other - 0
Habitat Cut - 0 Opening Maintenance - 9

Cover Type by Harvest Method

	<i>Clearcut</i>	<i>Selection</i>	<i>Seed Tree</i>	<i>Shelterwood</i>	<i>Thinning</i>	<i>Other - Specify</i>	<i>Total Acres</i>
Aspen Types	41	0	0	0	0	0	41
Lowland Mixed Forest	0	0	43	0	0	0	43
Mixed Upland Conifers	0	5	0	0	0	0	5
Northern Hardwood	131	284	0	0	0	0	415
Planted Pines	0	0	0	0	1	0	1
Upland Mixed Forest	19	16	0	0	0	0	35
Total	191	304	43	0	1	0	540



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
5	61119005-Cut	15.0	4112 - Maple, Beech, Cherry Association	High Density Log	85	171-200	Harvest	Group Selection	411 - Northern Hardwood	Cmpt. Review Proposal
<p><u>Prescription</u> Nice high density stand. Good heights. Orange tree mark down to ~60-90 BA Try to put some regen gaps in to promote cherry regen and recruitment. Nice cherry in areas. take out high risk trees first then for spacing and desired future stand spacing. Trail @ SW edge of stand is WET!!!</p> <p><u>Specs:</u> likely winter cut only due to access route.</p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 10/01/2015</p>										
13	61119013-Cut	13.1	4112 - Maple, Beech, Cherry Association	High Density Log	85	141-170	Harvest	Group Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal
<p><u>Prescription</u> Nice dense stand. Green tree shelterwood mark stand. Cherry is getting big and old. OK to leave a bit thicker in nice pole size areas but goal for the harvest is to regenerate stand mid tolerants via shelterwood. May want to leave residual thicker in some areas to increase windfirmness so would be more of a large gap opening. Target residual BA of 30-70 but as mentioned some large gaps are OK to encourage cherry, birch and maple regen.</p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 10/01/2015</p>										
17	61119017-Cut	16.0	4319 - Mixed Upland Forest	High Density Pole	70	111-140	Harvest	Group Selection	4319 - Mixed Upland Forest	Cmpt. Review Proposal
<p><u>Prescription</u> nice mixed stand. Some more white pine and some more birch, maple, aspen fir mix. green tree mix bag of species for shelterwood/ seed tree harvest. Any mix of current overstory would be acceptable regeneration. stand will likely maintain a conifer/ deciduous mix. OKto put some pretty big holes in stand to encourage birch, maple and aspen regen in areas without thicker pine. May be able to cut all fir over 3 or 4" Dbh to save marking time. Grass opening at south end would make nice landing area. Humicky stand. Leave tops unchipped as much as possible to provide horizontal habitat component for wildlife. Please leave tops in scattered piles for wildlife habitat as much as possible.</p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 10/01/2015</p>										
19	61119019-Cut	70.9	4112 - Maple, Beech, Cherry Association	High Density Pole	85	141-170	Harvest	Group Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal
<p><u>Prescription</u> Some very nice log cherry and red maple in areas. Some is pretty pulpy. Select cut this YOE focusing on removal of high risk trees. Thin to roughly 70-90. OK to leave nice pole areas a little thicker and ok to put some regen gaps in as well. Road through stand has some very wet areas. should be usable in the winter time. Best access which would make it class A is out through landowner to the east. Could possibly improve two track through stand and use it during break up as well however approach on 72 would need some significant gravel put in. Leave tops unchipped as much as possible to provide horizontal habitat component for wildlife. Please leave tops in scattered piles for wildlife habitat as much as possible.</p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 10/01/2015</p>										



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
22 61119022-Cut	4.6	429 - Mixed Upland Conifers	High Density Log	90	141-170	Harvest	Single Tree Selection	429 - Mixed Upland Conifers	Cmpt. Review Proposal

Prescription nice mixed hemlock and larger white pine with mixed deciduous and fir. lightly thin to increase browse potential of the stand. OK to cut some of the higher risk pine but save most of it. target removal of short lived species and leave thicker hemlock areas intact for thermal cover.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2015

23 61119023-Cut	85.7	4112 - Maple, Beech, Cherry Association	High Density Log	105	111-140	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal
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Prescription stand thinned by previous landowner Stand could hold or could use a light thin. nicely managed stand but some is pretty open and west edge is a bit thicker with more red maple and cherry. Very nice logs in some areas. Also some nice sugar maple and cherry regen in areas. Could do a very light thin this YOE and remove some high risk trees and try to release already started regeneration. west edge has more red maple and cherry and is a bit thicker. OK to put in some openings for canopy gaps but overall a thin taking high risk trees out. Leave tops unchipped as much as possible to provide horizontal habitat component for wildlife. Please leave tops in scattered piles for wildlife habitat as much as possible.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2015

25 61119025-Cut	82.7	4113 - R.Maple, Conifer	Medium Density Pole	70	51-80	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
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Prescription Leave 3-10% retention islands along edges or as islands where not much aspen is in place for some canopy structure diversity in the area. Some aspen will have to be run over but try to protect the bulk of it. Site should re-flush well post harvest but should have greater species diversity in the sapling stage post harvest. Save most or all of the pine in the stand to increase species diversity. may want to cut all fir over 4" dbh. Please include CWD (drumming log spec) in sale. Leave tops unchipped as much as possible to provide horizontal habitat component for wildlife. Please leave tops in scattered piles for wildlife habitat as much as possible. Any aspen cuts that are adjacent to a lowland stand please at conclusion of the sale have the logger fell the marked boundary trees in the adjoining lowland stand for hare habitat.

Other Comments: Stand looks to have had all (or at least most) of the aspen removed by previous landowner. Manage stand for understory aspen and mixed deciduous. This stand left thick enough where residual red maple, confier, and cherry may hinder aspen regen as the crowns continue to expand out. Re-enter stand this YOE and cut most or all of the deciduous residual that was left over the regenerating aspen.

Next Steps:

Proposed Start Date: 10/01/2015

26 61119026-Cut	1.0	42100 - Planted White Pine	High Density Log	65	200+	Harvest	Crown Thinning	4210 - Planted White Pine	Cmpt. Review Proposal
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Prescription very small white pine stand. thin this YOE if adjacent maple is thinned. either take a row out or mark it. OK to cut it a bit heavier and use the pine as a shelter for hopefully maple regen recruitment.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2015



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
30 61119030-Cut	55.8	4112 - Maple, Beech, Cherry Association	High Density Log	95	141-170	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription West end has some very nice black cherry logs. Some of stand was previously thinned and some was not. some advanced sugar maple and red maple present. Thin stand this YOY. OK to leave nice pole areas a bit thicker, more of a thinning but overall try to do a heavy select cut with gaps to promote cherry and maple regeneration. OK to dip into adjacent Qtypes where ground and timber will allow it. Leave tops unchipped as much as possible to provide horizontal habitat component for wildlife. Please leave tops in scattered piles for wildlife habitat as much as possible.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2015

37 61119037-Cut	43.5	6130 - Fir, Aspen, Maple	High Density Pole	68	111-140	Harvest	Seed Tree with Reserves	6130 - Fir, Aspen, Maple	Cmpt. Review Proposal
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Prescription access is very tricky with bridges being pulled. Nice mixed fir, spruce, maple, birch and aspen stand. If we can get access cut all trees 4" and up but mark clumps of seed trees to leave along edge. South end gets pretty wet. some is upland but most appears to be pretty wet. Winter cut only. shortwood only so tops are on site to hold up equipment. Temp bridge would likely be needed for access so may not be worth chasing the stand. Looks like we may be able to put temporary skid trail form the west along odl grade into the southwest end of this stand but we will still need permission from private landowners to gain access, if not will have to be factor limited. Could be doable in a very cold winter

Other Comments: 51% sure we can get to the stand so i didnt factor limit it.

Next Steps:

Proposed Start Date: 10/01/2015

39 61119039-Cut	43.4	4112 - Maple, Beech, Cherry Association	High Density Log	85	141-170	Harvest	Group Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal
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Prescription Target removal of poor formed hazard trees and mark from all species and size classes to desired density. OK to put in some regen gaps to try to recruit cherry regeneration. Overall goal 50-90BA. poor quality areas can cut a bit harder and nice pole areas leave a bit thicker. South of the grade looks to have some areas where aspen was removed. Leave tops unchipped as much as possible to provide horizontal habitat component for wildlife. Please leave tops in scattered piles for wildlife habitat as much as possible.

Other Comments: Some M9ish and Some M6. Nice mixed stand. Ready for a thin.

Next Steps:

Proposed Start Date: 10/01/2015

44 61119044-Cut	33.6	4112 - Maple, Beech, Cherry Association	High Density Pole	75	51-80	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
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Prescription stand looks to have had aspen cut out about 7-10 years ago. some areas still pretty thick overstory of maple & cherry. Final harvest all species to encourage mixed early succession covertype. green tree some seed trees for diversity and retention. Line some corners/ edges out for retention as well. Save most or all balsam under 3 or 4 inches and most or all pine to increase species diversity. Try to save as much advanced aspen regen as possible however some is expected to be smashed. Please include CWD (drumming log spec) in sale. Leave tops unchipped as much as possible to provide horizontal habitat component for wildlife. Please leave tops in scattered piles for wildlife habitat as much as possible. Any aspen cuts that are adjacent to a lowland stand please at conclusion of the sale have the logger fell the marked boundary trees in the adjoining lowland stand for hare habitat.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2015



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
49 61119049-Cut	17.7	4139 - Aspen, Mixed Deciduous	High Density Pole	55	111-140	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal

Prescription Maybe cut all balsam over ~4" dbh, and all other species over 3" dbh to promote early succession coverytype in heavy deer yard. OK to green tree
Specs: some seed trees where there isnt much aspen. Please include CWD (drumming log spec) in sale. Leave tops unchipped as much as possible to provide horizontal habitat component for wildlife. Please leave tops in scattered piles for wildlife habitat as much as possible. Any aspen cuts that are adjacent to a lowland stand please at conclusion of the sale have the logger fell the marked boundary trees in the adjoining lowland stand for hare habitat.

Other nice mixed stand. some lookes to be pretty wet. winter ground cut would likely be best but very dry summer may work, depending on road condition.
Comments: OK to dip into the surrounding stands where there is workable ground do cut some mixed deciduous to increase sprouting in the deer yard vacinity. May want to put a time limit where the sale must be cut within 6 months of start date to help offset deer browse.

Next
Steps:

Proposed
Start Date: 10/01/2015

57 61119057-Cut	15.0	4116 - Mixed N. Hardwood - Aspen	High Density Pole	65	141-170	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
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Prescription South 1/3 of the stand is heavier to aspen. North 2/3 is mixed red maple, cherry and aspen. Green tree leave 30-50 BA in heavy red maple and
Specs: cherry areas of nicer single stem trees and clear cut aspen areas for habitat improvement and regeneration. Cut with stand to the east and the stand in the compartment to the south to increase disturbance size to hopefully spread deer browse. Heavy deer yard area. Push into P-type edge along NE edge of sale as mush as possible to increase stem density in the area. Save oak, I saw one.

Other this stand will likely be lumped with stands to the east that will likely have to be chip harvested due to the quality and size of some of the wood. So this
Comments: stand may be chip harvested but try to encourage CWD along red line and scattered in piles if possible.

Next
Steps:

Proposed
Start Date: 10/01/2015

59 61119059-Cut	19.1	4319 - Mixed Upland Forest	High Density Pole	43	81-110	Harvest	Clearcut with Reserves	4319 - Mixed Upland Forest	Cmpt. Review Proposal
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Prescription Some of the stand is low and wet but most looks to be upland. cut all trees 3" and up. OK to green tree some as well for seed and retention. Creat
Specs: brush piles for hare habitat through timber sale. Please include CWD (drumming log spec) in sale. Please leave tops in scattered piles for wildlife habitat as much as possible. Any aspen cuts that are adjacent to a lowland stand please at conclusion of the sale have the logger fell the marked boundary trees in the adjoining lowland stand for hare habitat.

Other this stand will likely need to be chipped harvested due to poor size and quality of some of the surrounding wood. try to encourage CWD especially
Comments: along red line and scattered in piles throughout sale.

Next
Steps:

Proposed
Start Date: 10/01/2015

60 61119060-Cut	23.3	4130 - Aspen	High Density Pole	43	81-110	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal
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Prescription Nice mixed stand. some looks to be a bit younger but overall most is merchantable. Treat with stand to the south in comp 243 and stand to the west.
Specs: Please include CWD (drumming log spec) in sale. Leave tops unchipped as much as possible to provide horizontal habitat component for wildlife. Please leave tops in scattered piles for wildlife habitat as much as possible. Any aspen cuts that are adjacent to a lowland stand please at conclusion of the sale have the logger fell the marked boundary trees in the adjoining lowland stand for hare habitat.

Other
Comments:

Next
Steps:

Proposed
Start Date: 10/01/2015



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
20 NF_61119020-Plant1	24.6	3301 - Low Density Deciduous Trees				Tree Planting	Hand Plant	4211 - Planted Red Pine	Cmpt. Review Proposal

Prescription If access can be gained trench and plant southern ~60% of the stand with red pine. Area has a significant amount of open areas with local agriculture activity. Mechanical or chemical site prep will be OK but save some scattered trees and brush mainly in clumps as opposed to scattered throughout stand.

Other
Comments:

Next
Steps:

Proposed
Start Date: 08/01/2014

40 NF_61119040-Plant	76.5	3303 - Mixed Low Density Trees				Tree Planting	Hand Plant	4211 - Planted Red Pine	Cmpt. Review Proposal
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Prescription Mixed opening with mainly red maple and cherry brush. fringes fillinn in with fir and white pine. Trench and plant approximatley 50-60% of the stand at north end and mid section. Avoid planting around kniss lake. roller chop or brush hogging or herbicid may be used to establish a good successful planting.

Other
Comments:

Next
Steps:

Proposed
Start Date: Unspecified

61 NF_61119061-NonFor	9.0	330 - Low-Density Trees				Non-Forest Management	Brush Cutting	310 - Herbaceous Openland	Cmpt. Review Proposal
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Prescription If FRD agrees, include this stand in adjacent timber sale and, harvest some of the timber to maintain upland brush/grassland community. WLD can mark trees. Work around some of the existing beneficial vegetation to create a wildlife food plot of appropriate herbaceous species suited to site and soil conditions, with fertilization.

Other
Comments:

Next Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment.
Steps:

Proposed
Start Date: 10/01/2015

**Total Treatment
Acreage Proposed: 650.3**



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

Prescription Specs:

Other Comment:

Next Steps:

Proposed Start Date: #Type!

Limiting Factor

Total Treatment Acreage Proposed: 0.0

Report 5 – Site Conditions

Traverse City Mgt. Unit
Kelly Standerfer : Examiner

Compartment 119
Year of Entry 2016

Availability for Management

Availability for Management			Dominant Site Conditions			
Total Acres	Acres Available	Acres Not Available				
Acres	Available	Not Available	No	3J	2G	
189	189		Aspen	189		
8	8		Lowland Aspen/Balsam Poplar	8		
466	9	457	Lowland Conifers	9	42	415
400	137	263	Lowland Deciduous	137	45	218
329	329		Lowland Mixed Forest	329		
537	537		Northern Hardwood	537		
52	52		Upland Conifers	52		
35	35		Upland Mixed Forest	35		
1	1		White Pine	1		
2,017	1,297	720	Total Forested Acres	1,297	87	633
	64%	36%	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
002	Not Available	2G: Too wet (sensitive soils, does not include access issues)	62	3J: Water quality / BMPs (stream, river, or lake)			
Comments:							
003	Not Available	2G: Too wet (sensitive soils, does not include access issues)	151	3H: Deer Wintering Areas			
Comments:							
004	Not Available	2G: Too wet (sensitive soils, does not include access issues)	130	4A: No merchantable products (see product standards)			
Comments:							

Report 5 – Site Conditions

Traverse City Mgt. Unit
 Kelly Standerfer : Examiner

Compartment 119
 Year of Entry 2016

005	Not Available	3J: Water quality / BMPs (stream, river, or lake)	42	2G: Too wet (sensitive soils, does not include access issues)	
Comments:					
006	Not Available	2G: Too wet (sensitive soils, does not include access issues)	224	4A: No merchantable products (see product standards)	
Comments:					
007	Available	4A: No merchantable products (see product standards)	118	2G: Too wet (sensitive soils, does not include access issues)	
Comments:					
008	Not Available	3J: Water quality / BMPs (stream, river, or lake)	30		
Comments:					
009	Not Available	3J: Water quality / BMPs (stream, river, or lake)	28		
Comments:					
010	Not Available	3J: Water quality / BMPs (stream, river, or lake)	19		
Comments:					

Report 5 – Site Conditions

Traverse City Mgt. Unit
Kelly Standerfer : Examiner

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011	Not Available	3J: Water quality / BMPs (stream, river, or lake)	34
Comments:			
012	Not Available	3J: Water quality / BMPs (stream, river, or lake)	13
Comments:			
013	Not Available	3J: Water quality / BMPs (stream, river, or lake)	17
Comments:			
014	Not Available	2G: Too wet (sensitive soils, does not include access issues)	54
Comments:			
015	Not Available	3J: Water quality / BMPs (stream, river, or lake)	5
Comments:			
016	Not Available	2G: Too wet (sensitive soils, does not include access issues)	13
Comments:			



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

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

SCA Name	SCA Category	Detail Type	Recommendation	Acres
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Comments



Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS

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

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

Conservation Area	Type	Description
SCA	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	Research and Military Areas	These areas provide facilities and lands specifically dedicated for research, or other purposes. They include the 5,847 acre Forest Fire Experiment Station, the 12,000 acre Houghton Lake Wildlife Research Area, the Beaver Islands Archipelago Wildlife Research Area (that includes most of Garden Island, all of High and Hog Islands, all state owned land on Beaver, South Fox and North Fox Islands), the Cusino Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research Station, the 125 acre Wyman Nursery, and over 144,000 acres of Military Lands.
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	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.



S t a n d	Traverse City Mgt. Unit		Report 8 – Forested Stands			Compartment: 119 Year of Entry: 2016
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4110 - Sugar Maple Association	High Density Log	79.1	80	81-110	
2	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	62.0	94	141-170	
4	4139 - Aspen, Mixed Deciduous	High Density Pole	41.5	40	81-110	
5	4112 - Maple, Beech, Cherry Association	High Density Log	15.0	85	171-200	
6	4134 - Aspen, Spruce/Fir	Low Density Pole	10.2	39	1-50	
7	4112 - Maple, Beech, Cherry Association	Low Density Pole	35.0	65	1-50	
8	4139 - Aspen, Mixed Deciduous	High Density Sapling	32.7	19		
9	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	54.4	75	1-50	
10	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Pole	8.4	65	1-50	
11	4139 - Aspen, Mixed Deciduous	High Density Pole	43.2	45	141-170	
13	4112 - Maple, Beech, Cherry Association	High Density Log	13.1	85	141-170	
14	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	150.5	85	1-50	
15	4134 - Aspen, Spruce/Fir	High Density Pole	15.9	44	111-140	
17	4319 - Mixed Upland Forest	High Density Pole	16.0	70	111-140	
19	4112 - Maple, Beech, Cherry Association	High Density Pole	70.9	85	141-170	
21	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	16.9	75	51-80	
22	429 - Mixed Upland Conifers	High Density Log	4.6	90	141-170	

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Traverse City Mgt. Unit

Report 8 – Forested Stands

Compartment: 119
Year of Entry: 2016

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
23	4112 - Maple, Beech, Cherry Association	High Density Log	85.7	105	111-140	
24	6117 - Lowland Deciduous, Mixed Coniferous	Low Density Pole	24.5	75	1-50	
25	4113 - R.Maple, Conifer	Medium Density Pole	82.7	70	51-80	
26	42100 - Planted White Pine	High Density Log	1.0	65	200+	
27	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	41.8	85	81-110	
28	4117 - Mixed N. Hardwood - Pine	High Density Sapling	4.1	10		
29	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	21.7	75	51-80	
30	4112 - Maple, Beech, Cherry Association	High Density Log	55.8	95	141-170	
31	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	38.5	65	1-50	
33	6139 - Mixed Lowland Forest	Medium Density Pole	226.2	70	51-80	
34	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Pole	129.6	85	1-50	
35	6112 - Lowland Aspen	High Density Pole	7.6	40	1-50	
36	4116 - Mixed N. Hardwood - Aspen	High Density Pole	4.0	75	111-140	
37	6130 - Fir, Aspen, Maple	High Density Pole	43.5	68	111-140	
39	4112 - Maple, Beech, Cherry Association	High Density Log	43.4	85	141-170	
41	6119 - Mixed Lowland Deciduous Forest	Low Density Pole	23.5	65	1-50	
43	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	13.1	85	51-80	

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Traverse City Mgt. Unit

Report 8 – Forested Stands

Compartment: 119
Year of Entry: 2016

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
44	4112 - Maple, Beech, Cherry Association	High Density Pole	33.6	75	51-80	
46	6139 - Mixed Lowland Forest	Medium Density Pole	58.9	65	1-50	
47	6117 - Lowland Deciduous, Mixed Coniferous	Medium Density Pole	28.1	65	51-80	
48	4130 - Aspen	High Density Sapling	4.3	25		
49	4139 - Aspen, Mixed Deciduous	High Density Pole	17.7	55	111-140	
50	42390 - Mixed Non-Pine Upland Conifers	High Density Pole	44.0	105	171-200	
51	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Pole	223.7	85	1-50	
52	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	1.0	85	51-80	
53	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	29.0	45	51-80	
56	429 - Mixed Upland Conifers	Medium Density Pole	3.5	75	1-50	
57	4116 - Mixed N. Hardwood - Aspen	High Density Pole	15.0	65	141-170	
59	4319 - Mixed Upland Forest	High Density Pole	19.1	43	81-110	
60	4130 - Aspen	High Density Pole	23.3	43	81-110	



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
3	622 - Lowland Shrub	5.1	No	Unspecified	
12	50 - Water	12.8	No	Unspecified	
16	629 - Mixed non-forested wetland	34.4	No	Unspecified	
18	50 - Water	4.3	No	Unspecified	
20	3301 - Low Density Deciduous Trees	36.9	Yes	Medium	If access can be gained trench and plant southern 60% of the stand with red pine. Area has a significant amount of open areas with local agriculture activity.
32	2114 - Other Cropland	3.4	No	Unspecified	
38	623 - Emergent Wetland	19.2	No	Unspecified	
40	3303 - Mixed Low Density Trees	143.3	Yes	Red Pine	
42	310 - Herbaceous Openland	2.0	No	Unspecified	will likely be used as landing. OK to cut out encroaching vegetation to keep it open
45	50 - Water	4.8	No	Unspecified	
54	6229 - Mixed lowland shrub	118.4	No	Unspecified	Some LO, Some VO, Some E4. All is very wet and low density trees at best. Factor limit will never be productive forest land.
55	6229 - Mixed lowland shrub	30.1	No	Unspecified	some LO Some VO.
58	6229 - Mixed lowland shrub	5.4	No	Unspecified	
61	330 - Low-Density Trees	9.0	Yes	Unspecified	