

# **Compartment Review Presentation**

**Traverse City Forest Management Unit** 

Compartment 61169
Entry Year 2018
Acreage: 2,272
County Kalkaska

Management Area: Boardman Plains

Revision Date: 2016-05-04

Stand Examiner: Steve Crigier

**Legal Description:** 

T27N, R06W, Sec. 6,7; T27N, R07W, Sec. 1,12; T28N, R06W, Sec. 30,31;

T28N, R07W, Sec. 25,26

#### **Identified Planning Goals:**

Vegetation management in the Boardman Plains management area will provide forest products; maintain or enhance wildlife habitat; protect areas of unique character including the Boardman River (a designated natural river), threatened, endangered and special concern species; and provide for forest-based recreational uses. Timber management objectives for this 10-year planning period include improving the age-class structure of aspen; increasing regeneration of oak; working toward balancing the red pine age-class structure; continuing emphasis on managing the northern hardwood resource for stand quality, age, and species diversity; wildlife values; and continued production of wood products. Wildlife habitat management objectives include perpetuating early-successional communities for species adapted to young forests for hunting and other wildlife-related recreation opportunity. Expected trends within this 10-year planning period are: increased recreational pressure, especially on the Muncie Lakes pathway, North Country and other established trails; increased oil and gas development; an increased wildland/urban interface; a need to restore oak/pine barrens communities; invasive plant control; and the conversion of poor oaks sites to mixed pine/oak sites.

#### Soil and topography:

Ranges from Rifle Peat to Emmet Sands. Topography ranges from low wet to gentle rolling hills.

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

To the West and North is State Land and to the South and East is private property. Forestry, oil and gas and recreation are the primary uses of the land in this area.

#### **Unique Natural Features:**

Red Shouldered Hawk and Northern Goshawk have been sighted in this compartment. There is also an Osprey nest to the west of the compartment and potential for Little Brown Bat in the area. Wheeler Lake, Little Wheeler Lake, The Headwaters of the Boardman River, the North Branch of the Boardman River and the Mayham Swamp are all located in the compartment.

#### Archeological, Historical, and Cultural Features:

None listed.

#### **Special Management Designations or Considerations:**

The Headwaters of the Boardman are a part of the Natural Rivers and is a Type 1 Trout Stream.

#### Watershed and Fisheries Considerations:

The Rapid River, the North Branch of the Boardman River, and Wheeler Lake, can be found within this compartment. Reasonable buffers (as outlined in Water Quality Management Practices on Forest Land) should be adhered to around all streams in this compartment. These stream are all naturally reproducing, are Type 1 designated trout streams; existing buffers appear to be appropriate for the proposed treatments.

#### Wildlife Habitat Considerations:

A large wetland complex can be found running up through the middle of compartment 169. Of which approximately half falls on State Forest ownership. Well over half of this state owned lowland is a lowland coniferous forest. This makes this area important for wintering deer. These deer yards extend well beyond state ownership. Management of these yarding areas should be to ensure winter thermal cover through the perpetuation of mature lowland conifers, chiefly northern white cedar. Other wetland communities found here include several large expanses of lowland brush and open water and minor acreage of lowland hardwoods.

The western edge of the compartment us underlain by excessively drained sandy soils, most of which is covered with a matrix of aspen and upland brush communities. Several pine and hardwood stands are also found here. Aspen has a strong presence here and is managed to provide a variety of age classes. Retention of mast/bud producing trees/shrubs, creation of downed logs during harvest operations, leaving tops un-chipped, and protection of fruiting shrubs are excellent ways to increase wildlife use of regenerating aspen. 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. The flush of regenerating aspen will benefit many early successional dependant wildlife species.

Along the north and eastern edges of this compartment are several large stands of northern hardwoods underlain by well drained sandy loam. Wildlife considerations for northern hardwood stands involve maintaining tree species diversity, the protection of den/nesting trees & snags, protection and/or creation of coarse woody debris (CWD), and maintaining a scattering of any mast-producing trees/shrubs. This will insure use by many species of wildlife. Examples of species found include downy woodpecker, porcupine, northern goshawk, spotted salamander, wild turkey, and white-tailed deer. Many species of raptors may nest in hardwoods such as these and any timber work contracts should include clauses for protecting nesting raptors.

Wildlife opening maintenance has been prescribed for several stands in compartment 169. Scheduled treatments include prescribed burning of several stands, selective hand felling of encroachment, and various herbaceous plantings. Deer, turkey, badgers, hog-nosed snakes, are blue birds some of the many species that will benefit from these openings.

## 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 400 and 800 feet. Beneath the glacial drift is the Mississippian Coldwater Shale. The Coldwater does not have an economic use. The nearest gravel pit is located two miles to the east and potential is good on the uplands. This area is located in the Niagaran reef trend with many producing wells. Underground Gas Storage (UGS) operations are also located in the Compartment. 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 and some for UGS.

#### **Vehicle Access:**

Access in and around the compartment is on gravel and poor dirt roads.

#### **Survey Needs:**

Survey work will need to be done in Sections 1, 2, 25, 30, 31, 36 for the prescribed treatments.

#### **Recreational Facilities and Opportunities:**

The Leetsville to Kalkaska Michigan Cross Country Cycle (MCCCT) ORV trail, the Leetsville 50 inch ORV trail, and non-motorized Shore to Shore equestrian/hiking trail are located within this compartment. Trail protection specifications should be considered if forest treatments impact these trails. (T.N. 1/28/16)

#### Fire Protection:

Fire Protection is provided by Michigan DNR, Cold Springs Township Fire Department, Excelsior Township Fire Department and Rapid River Township Fire Department.

#### **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

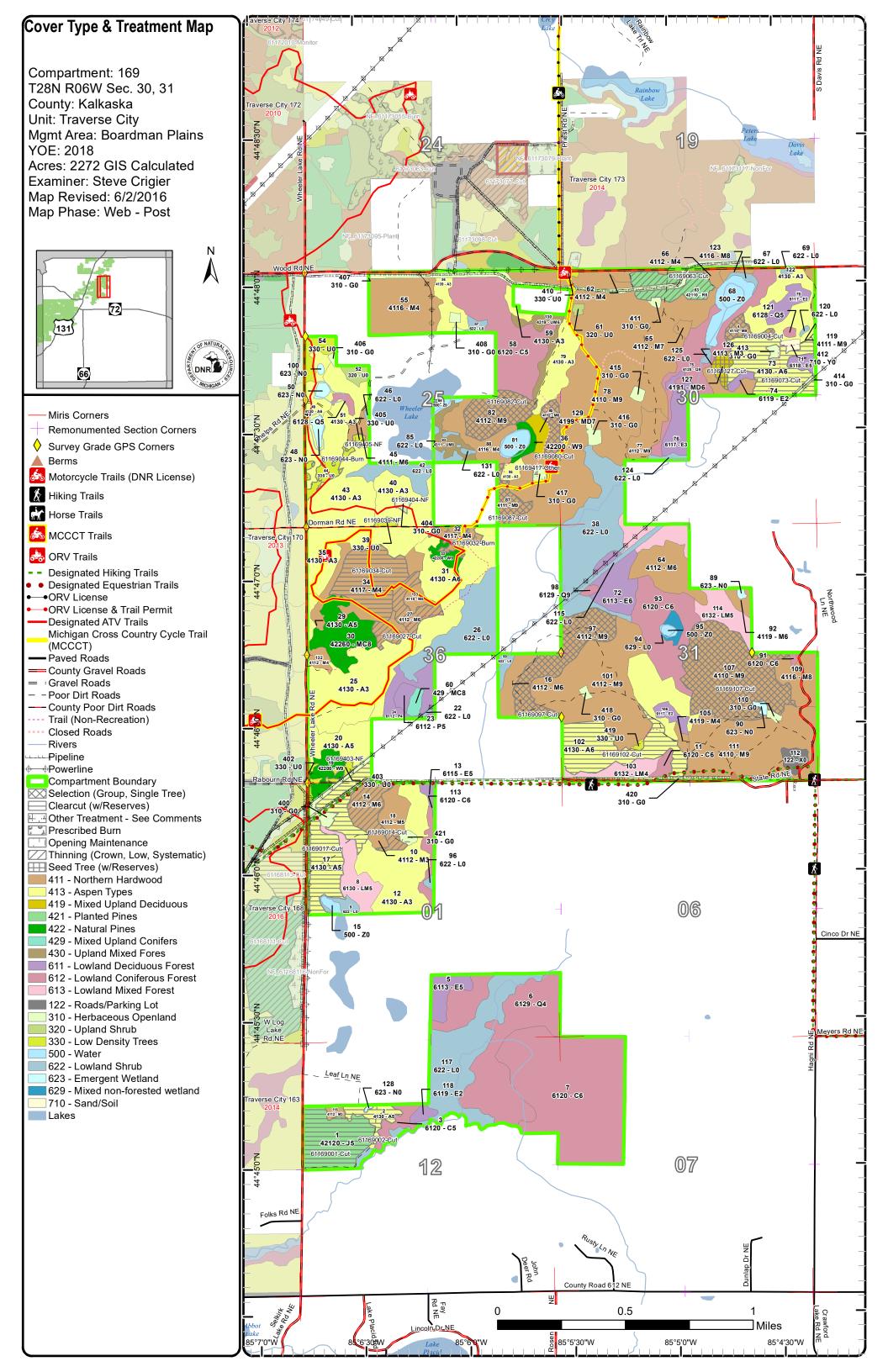
The following information is displayed, where pertinent, on the attached compartment maps:

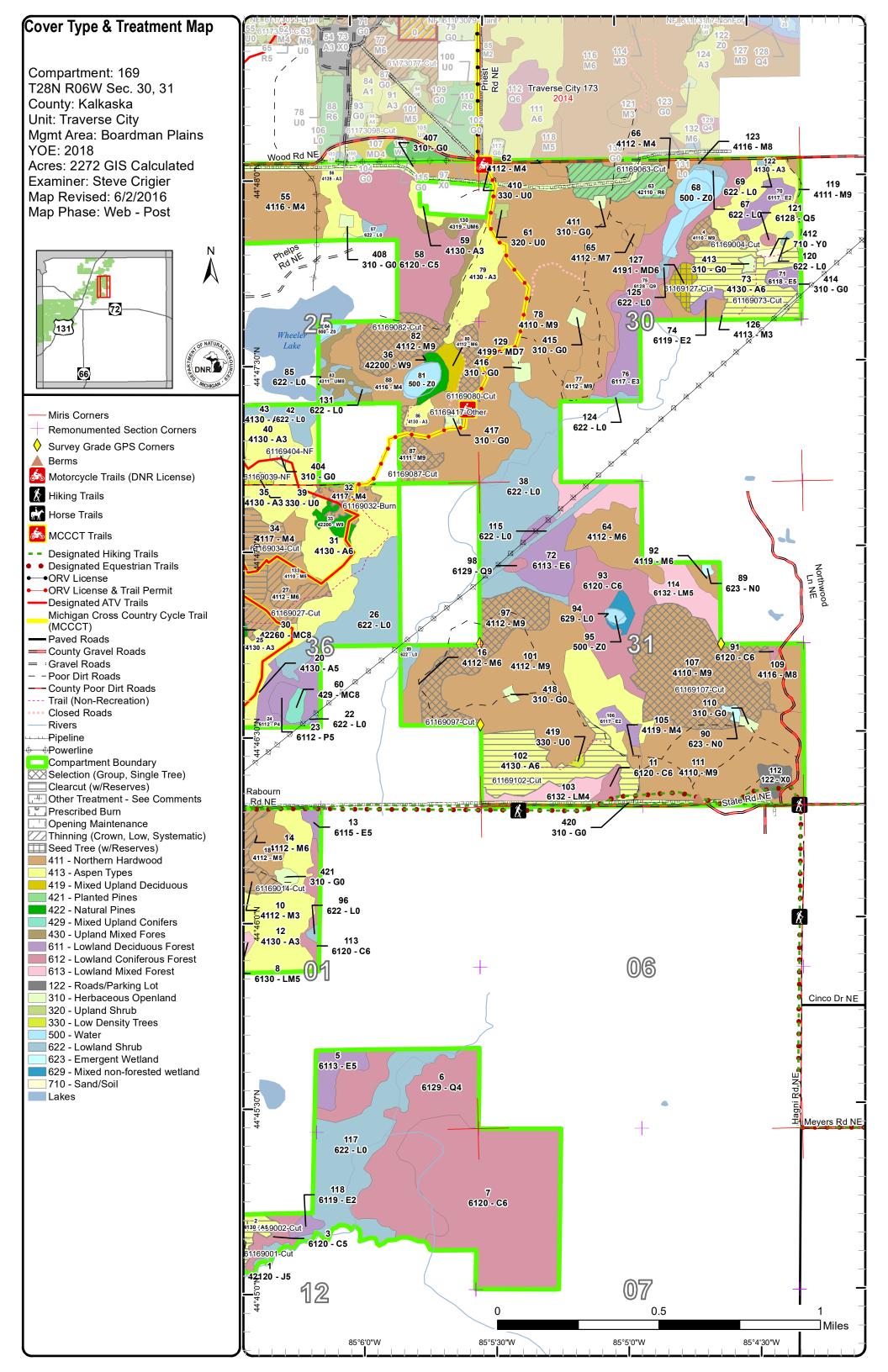
Base feature information, stand boundaries, cover types, and numbers

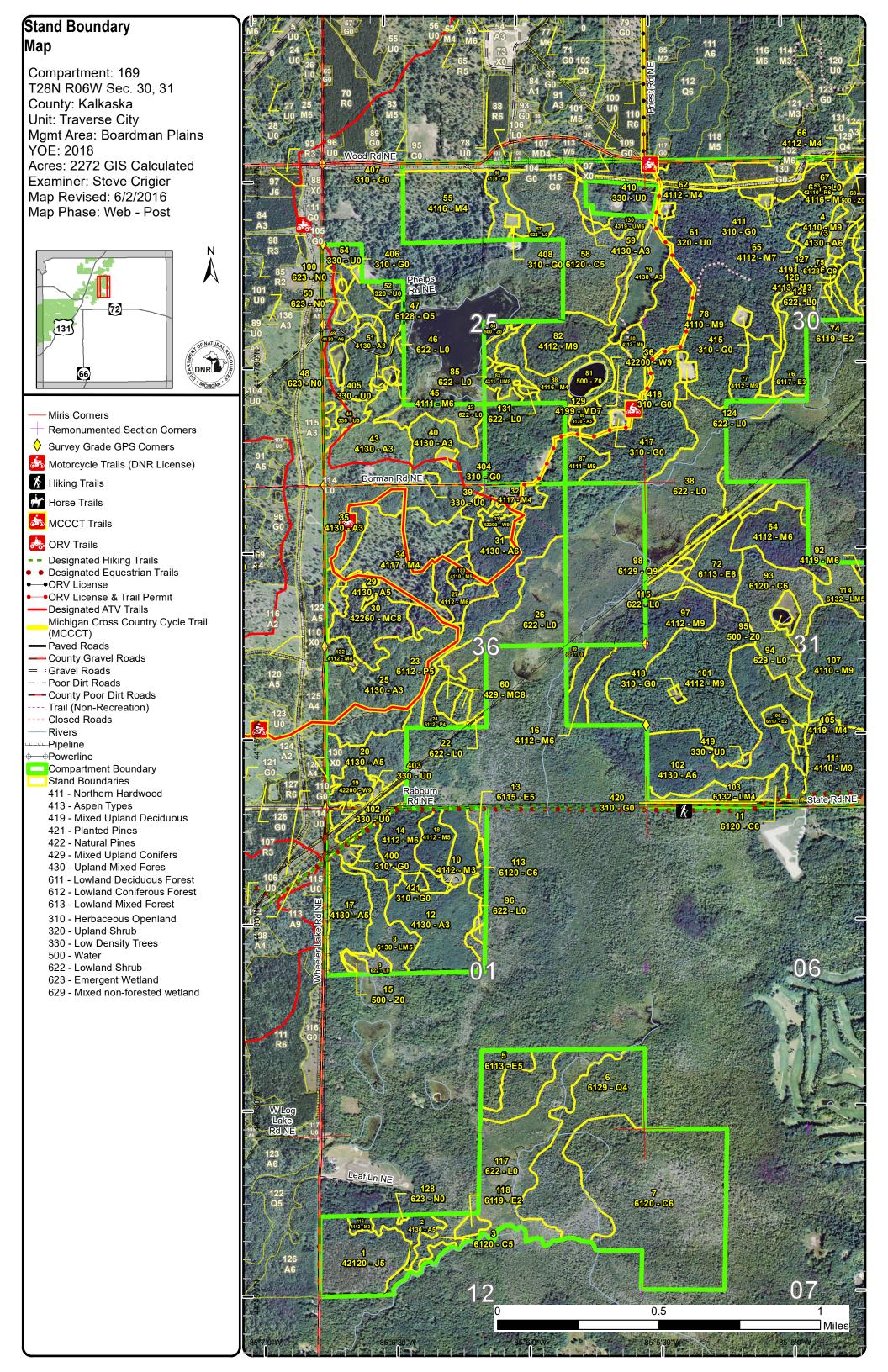
**Proposed treatments** 

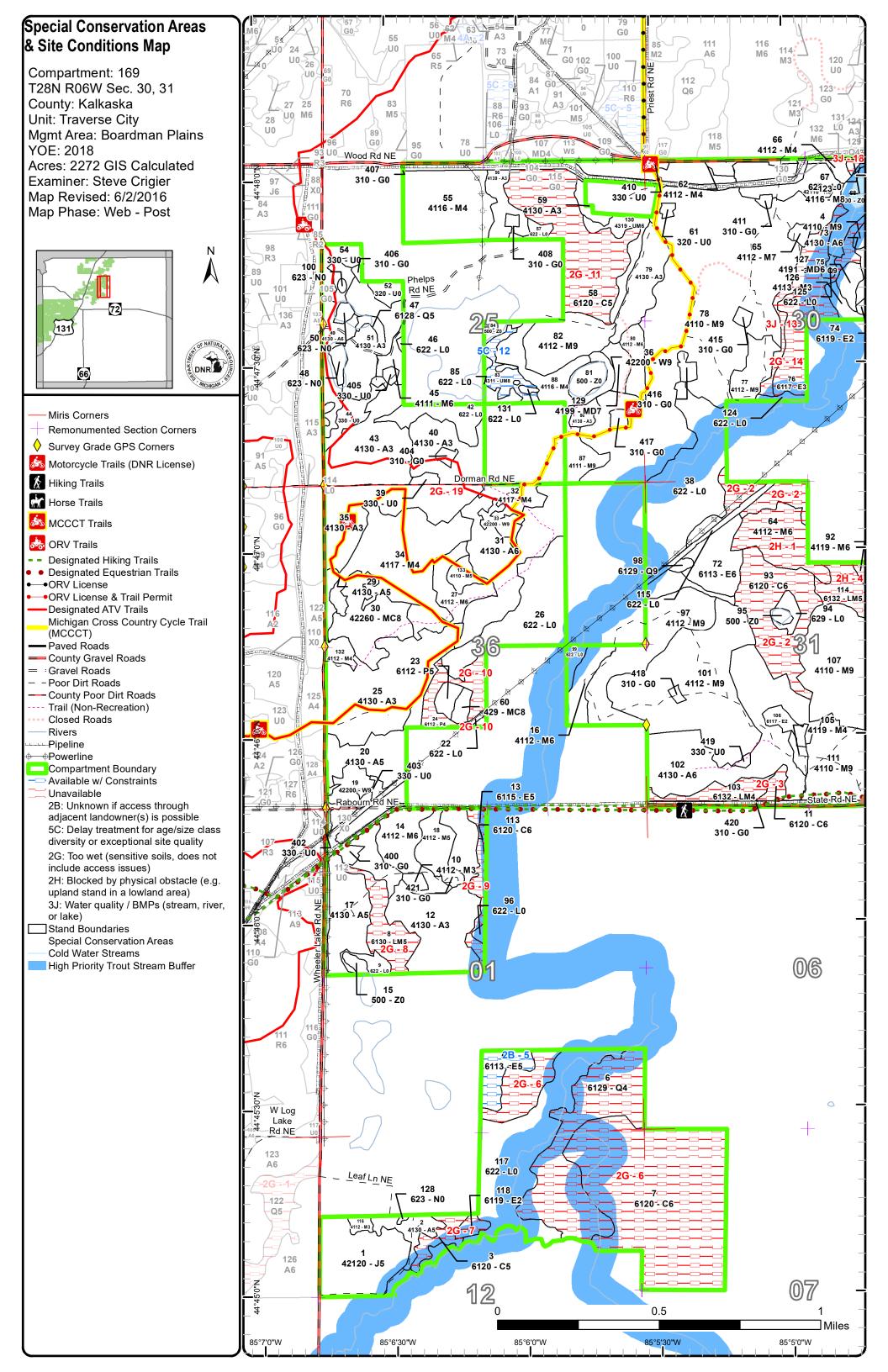
Site condition boundaries

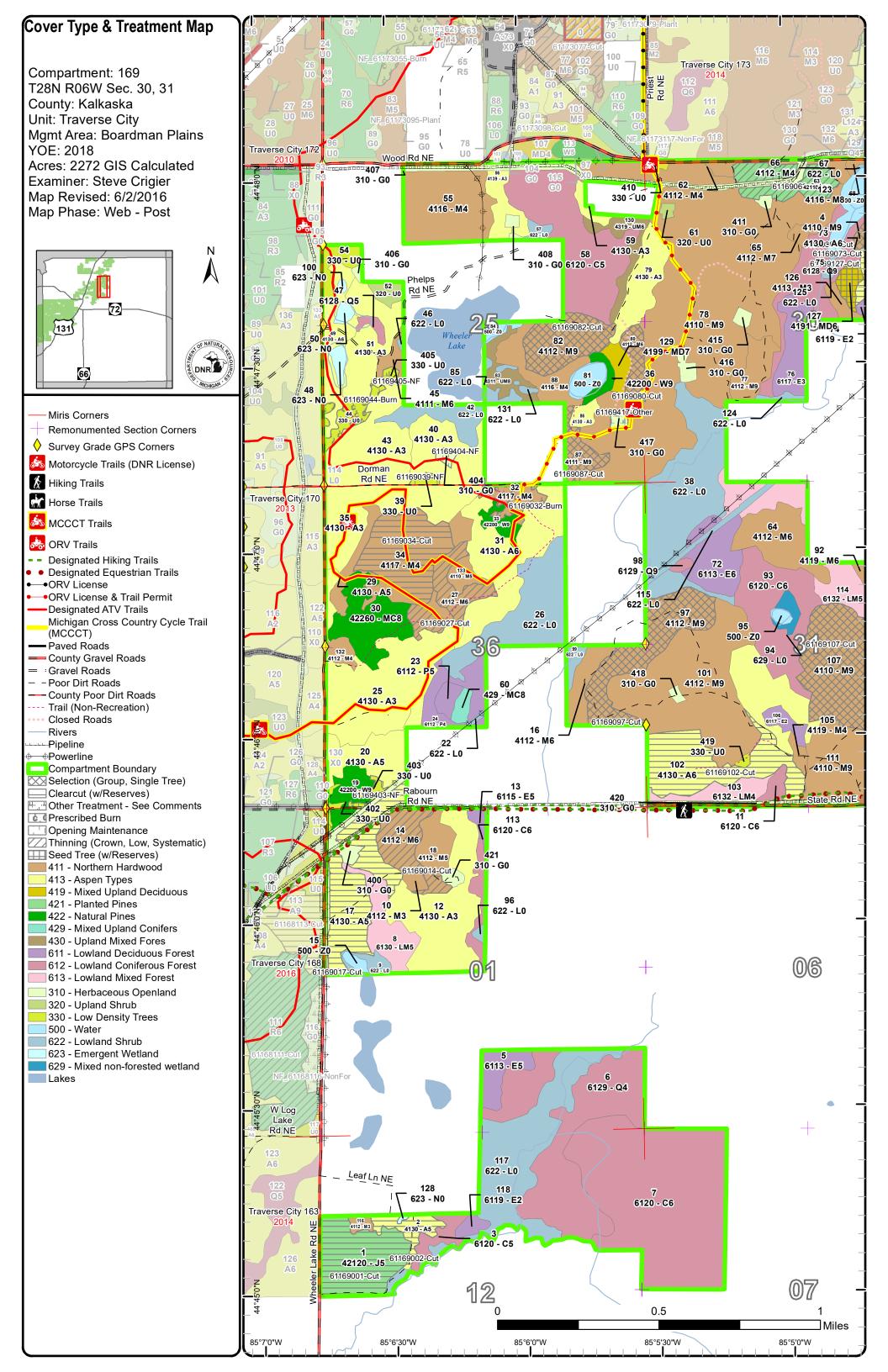
Details on the road access system

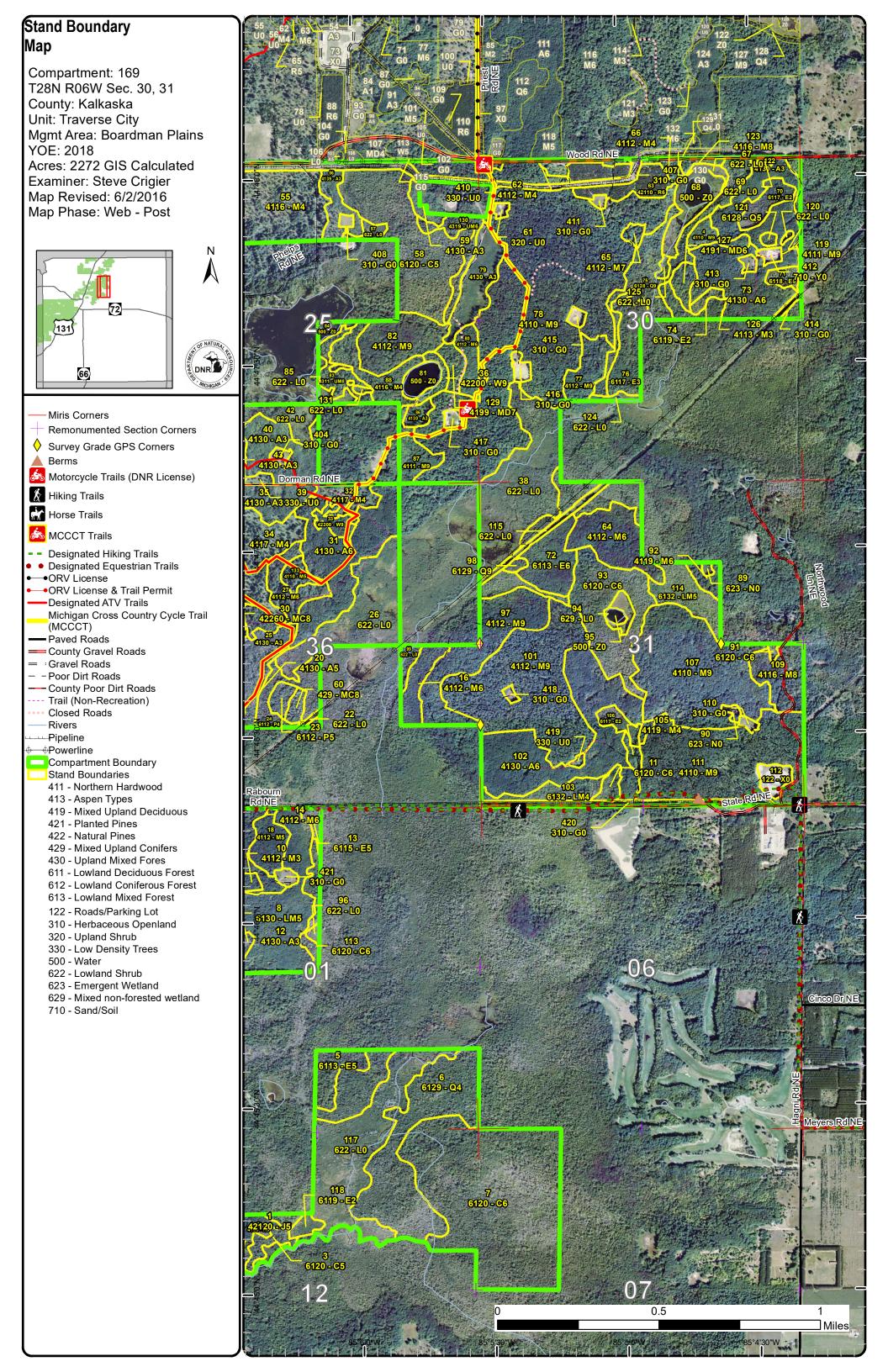


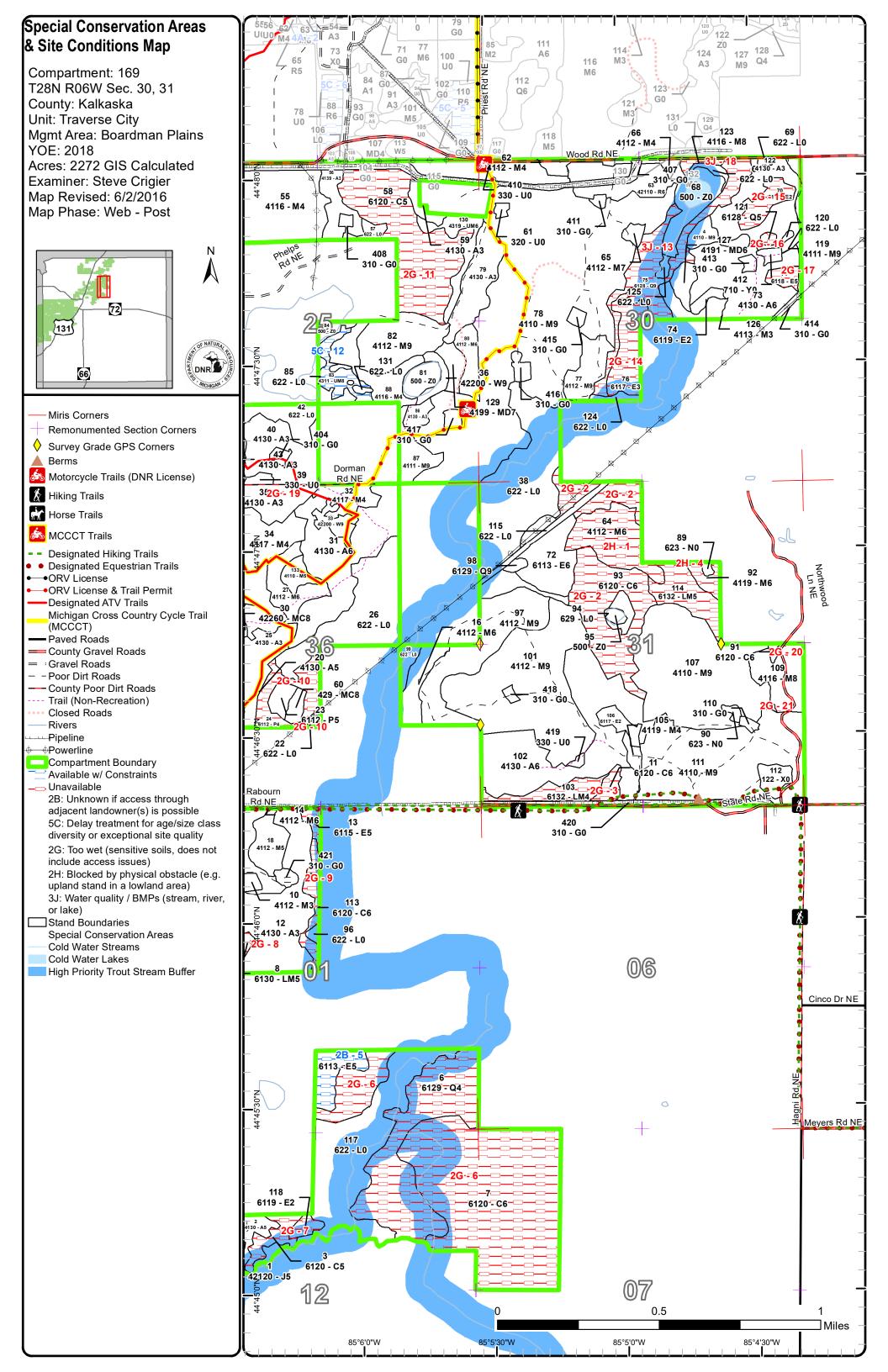












Traverse City Mgt. Unit
Steve Crigier: Examiner



#### Age Class

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	No.	A STAN					8 / 8 / 8 / 8 / 8 / 8 / 8 / 8 / 8 / 8 /	, } /&		/ \$ <sup>8</sup> /\$			70, 70,	(2) /N			y the /	Dr Jue	Non Law
Aspen	0	58	84	140	0	195	39	0	0	0	0	0	0	0	0	0	0	0	516
Cedar	0	0	0	0	0	0	0	0	0	190	49	0	0	0	0	0	0	1	240
Herbaceous Openland	59	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59
Jack Pine	0	0	0	0	0	0	35	0	0	0	0	0	0	0	0	0	0	0	35
Low-Density Trees	25	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	25
Lowland Aspen/Balsam Poplar	0	0	0	0	4	15	0	0	0	0	0	0	0	0	0	0	0	0	19
Lowland Conifers	0	0	0	0	0	0	0	0	1	78	35	0	0	0	0	0	0	0	114
Lowland Deciduous	0	0	0	5	29	0	21	11	6	0	0	0	0	0	0	0	0	0	72
Lowland Mixed Forest	0	0	0	0	0	0	0	29	27	0	0	0	0	0	0	0	0	0	56
Lowland Shrub	206	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	206
Marsh	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Mixed Upland Deciduous	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	5	10
Natural Mixed Pines	0	0	0	0	0	0	0	0	26	0	0	0	0	0	0	0	0	0	26
Northern Hardwood	0	0	0	11	14	21	11	17	222	6	0	0	0	0	0	0	0	488	790
Red Pine	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	0	0	0	17
Sand, Soil	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Upland Conifers	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3
Upland Mixed Forest	0	0	0	0	0	0	0	10	9	0	0	0	0	0	0	0	0	0	19
Upland Shrub	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Urban	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Water	27	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	27
White Pine	0	0	0	0	0	0	10	5	0	4	0	0	0	0	0	0	0	0	19
Total	337	58	84	156	47	231	136	72	296	278	84	0	0	0	0	0	0	494	2273



# **Report 2 – Treatment Summary**

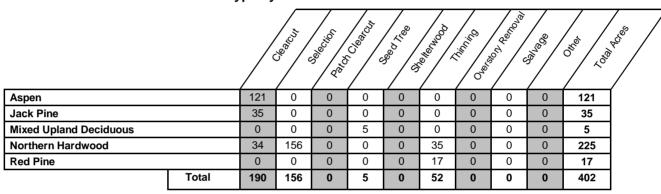
# Traverse City Mgt. Unit Year of Entry:

#### **Acres of Harvest**

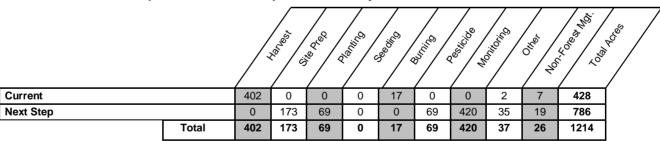
Compartment 169
Total Compartment Acres: 2,272

Commercial Harvest - 402 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

#### **Cover Type by Harvest Method**



## **Proposed and Next Step Treatments by Method**





Compartment: 169

Year of Entry: 2018

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**Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Approval n Age Density Method Objective Name Structure **Status** d CoverType Age Range Type 61169001-Cut 42120 - Planted 4211 - Planted 34.8 Poletimber 56 51-80 Harvest Clearcut Even-Aged Proposal Jack Pine Red Pine Medium

**Habitat Cut: No Site Condition:** 

Prescription Clear cut with no retention due to site preparation for planting. Will want to chip harvest the stand and have to stumps cut low for planting. Trench

Specs: and plant red pine.

Next Step SitePrep, Trenching; Other, Other; Planting, Initial Plant; Monitoring, Artificial Regen(1yr); Monitoring, Artificial Regen(3yr)

Treatments:

Acceptable red pine, jack pine.

Regen:

Other There is lots of blow down in the stand. Will likely need to do some herbicide to control the red maple.

Haven't looked for private corners yet. Comment:

Proposed Start Date: 10/01/2017

61169002-Cut 8.3 4130 - Aspen Poletimber 51-80 Harvest Clearcut with 413 - Aspen Even-Aged Proposal

Medium Retention

Site Condition: **Habitat Cut: No** 

Prescription Final harvest stand. Work around sugar maple regen. Retention around the vernal pond. Dont cut fir less than 4" for bird cover.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

<u>Acceptable</u> aspen, maple, fir.

Regen:

Other Will need to establish private line. Also buffer the creek appropriately.

Comment:

**Proposed Start Date:** 10/01/2017

61169004-Cut 5.6 4110 - Sugar Maple Sawtimber 111-Harvest Single Tree 411 - Northern Uneven-Proposal Association Well 140 Selection Hardwood Aged

**Habitat Cut: No Site Condition:** Prescription Select cut stand, remove most of the beech. Create some regen gaps where possible.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

<u>Acceptable</u> Mixed hardwoods.

Regen:

Other Comment:

**Proposed Start Date:** 10/01/2017

61169014-Cut 18.0 4112 - Maple, Poletimber 74 81-110 Harvest Crown Thinning 411 - Northern Uneven-Proposal

Beech, Cherry Well Hardwood Aged

Association

**Habitat Cut: No Site Condition:** 

**Prescription** Thin the stand down to about 70BA. Remove most of the aspen.

Specs: Will need to establish north property line.

Next Step Treatments:

Acceptable maple, aspen, basswood.

Regen:

Clumpy red maple of medium quality. Pockets of log sized red maple. Stocking is variable. Eastern part of stand transitions into a younger red Other

Comment: maple stand.

10/01/2017 Proposed Start Date:

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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
17	61169017-Cut	38.9	4130 - Aspen	Poletimber Medium	54	51-80	Harvest	Clearcut with	413 - Aspen	Even-Aged	Proposal

**Habitat Cut: No Site Condition:** 

Prescription Clear cut stand, buffer the drainage appropriately. Leave balsam fir less than 4" in dbh. Mark a few cherry and white pine to leave.

Specs:

s

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable aspen, cherry, maple, fir

Regen:

Other Include st 113 of compartment 168 with harvest. Some scattered white pine. Some pockets of Cherry and red maple (M7) pockets along Wheeler

Lake Road. North part of stand has some wetter ground and a bit more white pine. Comment:

Proposed Start Date: 10/01/2017

61169027-Cut 17.0 4112 - Maple. Poletimber 111-Harvest Crown Thinning 411 - Northern Uneven-Proposal Beech, Cherry Well 140 Hardwood Aged

Association

**Habitat Cut: No Site Condition:** 

**Prescription** Crown thinning/TSI type of cut. Get rid of as much ironwood as we can and try to open up around some of the nicer quality trees. Remove most of

Specs: the aspen.

Next Step **Treatments:** 

Acceptable maple, white pine, aspen

Regen:

Other Comment:

**Proposed Start Date:** 10/01/2017

32 61169032-4117 - Mixed N. Poletimber 45 Unspec Burn Opening 320 - Upland Proposal Burn Hardwood - Pine Poor ified Shrub

**Site Condition: Habitat Cut: No** 

Prescription Burn this stand at least once per entry period in order to set back woody encroachment, increase species diversity, stimulate native herbaceous Specs: vegetation, promote berry production, and recycle nutrients. The timing and frequency of the burns will be based on currents needs of restoration

such as reducing woody encroachment or promoting grasses versus forbs.

NonForestMgt, Herbaceous/Crop/Grass Planting Next Step

Treatments:

Acceptable

Regen:

Other Comment:

10/01/2017 Proposed Start Date:

4117 - Mixed N. 61169034-Cut 34.5 Poletimber 50 1-50 Harvest Clearcut 4211 - Planted Even-Aged Proposal Red Pine

Hardwood - Pine Poor

**Habitat Cut:** No **Site Condition:** 

Prescription Chip harvest and trench an plant red pine. Re route ORV trail to the north and east boundary of the treatment.

Specs:

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

**Treatments:** 

Acceptable red pine

Regen:

Other Stand might need to have a post harvest roller chop or herbicide to knock down the aspen and hardwood sprouts.

Comment:

Traverse City Mgt. Unit Report 3 -- Treatments Compartment: 169 s Year of Entry: 2018 а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Approval n Age Method Objective Name Density Structure **Status** d CoverType Age Range Type 39 61169039-NF 1.7 330 - Low-Density Nonstocked Unspec NonForestMat Herbaceous/Crop/ 310 -Proposal Herbaceous Trees ified **Grass Planting** Openland **Habitat Cut: No Site Condition:** Prescription Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment. Specs: Next Step Treatments: <u>Acceptable</u> Regen: Other Comment: Proposed Start Date: 10/01/2017 44 61169044-8.1 330 - Low-Density Nonstocked Burn Opening 310 -Proposal Unspec Burn Trees ified Herbaceous Openland **Habitat Cut: No Site Condition:** Prescription Burn this stand 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. The timing and frequency of the burns will be based on currents needs of restoration Specs: such as reducing woody encroachment or promoting grasses versus forbs. Next Step NonForestMgt, Herbaceous/Crop/Grass Planting Treatments: Acceptable Regen: Other Comment: **Proposed Start Date:** 10/01/2017 61169063-Cut 16.8 42110 - Planted 141-4211 - Planted Poletimber Harvest Crown Thinning Even-Aged Proposal Red Pine Well 170 Red Pine **Habitat Cut: No Site Condition:** Prescription Open up the canopy a bit by thinning stand down to a BA of 120-140. Specs: Next Step Treatments: **Acceptable** Regen: Other Comment: Proposed Start Date: 10/01/2017

61169073-Cut 34.2 4130 - Aspen 81-110 Clearcut with Poletimber Harvest 413 - Aspen Even-Aged Proposal Well Retention

Habitat Cut: No **Site Condition:** 

Final harvest stand make some retention pockets around vernal pones. Try to leave the sugar maple understory undamaged. Leave fir less than 4" Prescription Specs:

for bird cover. Also may want to mark a few sugar maple or cherry to leave.

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

aspen, maple, birch, fir, basswood, cherry. <u>Acceptable</u>

Regen:

A few vernal ponds in the stand. Some aren't mapped out. South west part of the stand has more red maple and fir. Other

WLD 4/22/16 - Please include drumming log spec. Comment:

Compartment: 169	TOF NATUR
Year of Entry: 2018	DNR
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**Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Approval n Age Density Method Objective Status Name Range Structure d CoverType Age Type 80 61169080-Cut 7.8 4112 - Maple, Poletimber 79 141-Harvest Single Tree 411 - Northern Uneven-Proposal Beech, Cherry Well 170 Selection Hardwood Aged Association

**Habitat Cut: No Site Condition:** 

Prescription Thin stand to 80 BA. Remove most of the beech and aspen. Open up around crop trees and create a few regen gaps.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable maple, aspen, basswood, cherry.

Regen:

Other Comment:

Proposed Start Date: 10/01/2017

61169082-Cut 23.0 4112 - Maple, Sawtimber 79 111-Harvest Single Tree 411 - Northern Uneven-Proposal Selection Beech, Cherry Well 140 Hardwood Aged

Association

**Habitat Cut: No** Site Condition:

Prescription Select cut stand, remove the high risk trees. Shoot for 80 BA residual but create a few regen gaps too.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable maple, cherry, basswood, white pine, fir, aspen.

Regen:

Other Medium quality red maple, pretty clumpy. Decent amount of high risk trees. Some scattered beech, white pine and oak. Some sparse areas.

WLD 4/22/16 - Please leave some beech and oak. Comment:

**Proposed Start Date:** 10/01/2017

61169087-Cut 4111 - S.Maple, Sawtimber 79 Single Tree 411 - Northern Proposal 111-Harvest Uneven-Hard Mast Well 140 Selection Hardwood Aged

Association

**Habitat Cut: No Site Condition:** 

Prescription Select cut stand down to 80BA or so. Remove most of the beech and work lightly around the drainage. Create a few regen gaps.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable maple, basswood, cherry, etc...

Regen:

Other North part of stand is more of an M6. Medium to good quality timber. Seasonal drain runs through the middle of the stand. BBD is present.

Comment:

Proposed Start Date: 10/01/2017

61169097-Cut 36.1 4112 - Maple, Sawtimber 79 111-Harvest Single Tree 411 - Northern Uneven-Proposal Beech, Cherry Well 140 Selection Hardwood Aged

Association

**Habitat Cut: No Site Condition:** 

Prescription Select cut stand. Remove most of the beech and other high risk trees. Create some canopy gaps as it looks as though sugar maple will seed in. Try Specs:

to leave hemlock in the northern part of the stand undamaged. I found a couple of the property corners.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable maple, cherry, basswood, birch.

Regen:

Other Comment:

Traverse City Mgt. Unit Report 3 -- Treatments Compartment: 169 s Year of Entry: 2018 а Approval **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age n Method Objective Structure **Status** d Name CoverType Density Age Range Type 102 61169102-Cut 39.2 4130 - Aspen Poletimber 40 81-110 Harvest Clearcut with 413 - Aspen Even-Aged Proposal Well Retention **Habitat Cut: No** Site Condition: Prescription Clear cut western portion of the stand. Try to leave the young hard maple undamaged. Leave fir less than 4". Mark a few hard maple to leave for Specs: seed source. Next Step Monitoring, Natural Regen (Re-Inventory) Treatments: Acceptable aspen, maple, cherry, basswood. Regen: Other Found private corner in the northwest for the blue line. Comment: Proposed Start Date: 10/01/2017 107 61169107-Cut 73.8 4110 - Sugar Maple Sawtimber 111-Harvest Single Tree 411 - Northern Uneven-Proposal Association Well 140 Selection Hardwood Aged **Habitat Cut: No Site Condition:** Prescription Select cut stand. Create some regen gaps. Harvest most of the beech. Leave a bit of a buffer around the drainage and the vernal pond. Try to Specs: protect the sugar maple regen. Next Step Monitoring, Natural Regen (Re-Inventory) Treatments: <u>Acceptable</u> maple, basswood, cherry, birch. Regen: Some M3 pockets. Sugar maple in the understory!! Some scattered hemlock. BBD present. South eastern part of stand is more of an M6. Other Drainage along the south eastern part of the stand. I found the western private corner. Comment: **Proposed Start Date:** 10/01/2017 127 61169127-Cut 4.8 4191 - Mixed Poletimber 51-80 Harvest Seed Tree with 4199 - Other Even-Aged Proposal Mixed Upland Upland Deciduous Well Retention with Conifer Deciduous **Habitat Cut: No Site Condition:** Prescription Seed tree harvest stand. Mark some birch and red maple for a seed source and don't cut the balsam fir less than 2" also leave any hemlock. Specs: Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable maple, fir, aspen, birch, hemlock.

Regen:

Other Comment:

**Proposed Start Date:** 10/01/2017

310 -403 61169403-NF 2.2 330 - Low-Density Nonstocked Unspec NonForestMgt Herbaceous/Crop/ Proposal Trees ified **Grass Planting** Herbaceous

Openland

**Habitat Cut: No Site Condition:** 

Remove exotics as needed by herbiciding, or other methods. Seed in annual crop for soil building for several years then convert to appropriate native <u>Prescription</u> mix for site location and seasonal (i.e. summer vs. winter forage) wildlife uses. May want/need to work around existing beneficial vegetation (i.e. Specs:

blackberry). Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment.

Next Step NonForestMgt, Herbaceous/Crop/Grass Planting

Treatments:

<u>Acceptable</u> Regen: Other

Comment:

Traverse City Mgt. Unit Report 3 -- Treatments Compartment: 169 s Year of Entry: 2018 а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age Approval n Range Method Objective Status Name CoverType Density Structure d Age **Type** 61169404-NF 1.6 310 - Herbaceous NonForestMgt 310 -404 Nonstocked Unspec Herbaceous/Crop/ Proposal Openland Grass Planting Herbaceous ified Openland **Habitat Cut: No Site Condition:** Prescription Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment. Specs: Next Step Treatments: Acceptable Regen: **Other** Comment: **Proposed Start Date:** 10/01/2017 61169405-NF 1.3 330 - Low-Density Nonstocked Unspec NonForestMgt Other - Specify 310 -Proposal Trees ified Herbaceous Openland **Habitat Cut: No Site Condition:** Prescription Burn this stand 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. The timing and frequency of the burns will be based on currents needs of restoration Specs: such as reducing woody encroachment or promoting grasses versus forbs. Next Step Treatments: <u>Acceptable</u> Regen: Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment. Other Comment:

**Proposed Start Date:** 

10/01/2017

417 61169417-Other

1.9 310 - Herbaceous Nonstocked

Openland

Unspec ified

Other

Other

330 - Low-**Density Trees**  Proposal

**Habitat Cut: No Site Condition:** 

Prescription Could plant some white spruce or other species in pockets for cover near forage crop.

Plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Fertilize plantings and protect with wire cages or tubex. Specs:

Next Step **Treatments:** 

**Acceptable** 

Regen:

Other Comment:

**Proposed Start Date:** 

**Total Treatment** Acreage Proposed: 10/01/2017 428.4

# **Report 4 – Site Conditions**

Compartment: 169

Traverse City Mgt. Unit

21%

78%

1%

Steve Crigier : Examiner Year of Entry: 2018

Availa	Availability for Management												
Total	Acres	Acres Avail	Acres	D	omina	nt Site	e Con	dition	S				
Acres	Available	With Condition	Not Available		2B	5C	2G	2H	3J				
516	516	0	0	Aspen			0						
240	1	0	239	Cedar			239						
59	59	0	0	Herbaceous Openland									
35	35	0	0	Jack Pine									
25	25	0	0	Low-Density Trees									
19	4	0	15	Lowland Aspen/Balsam Poplar			15						
114	4	0	111	Lowland Conifers			79		32				
73	28	11	34	Lowland Deciduous	11		34						
56	0	0	56	Lowland Mixed Forest			56						
206	206	0	0	Lowland Shrub									
8	8	0	0	Marsh									
10	10	0	0	Mixed Upland Deciduous									
26	26	0	0	Natural Mixed Pines									
789	758	0	31	Northern Hardwood			1	28	2				
17	17	0	0	Red Pine									
2	2	0	0	Sand, Soil									
3	3	0	0	Upland Conifers									
19	10	9	0	Upland Mixed Forest		9							
5	5	0	0	Upland Shrub									
5	5	0	0	Urban									
27	27	0	0	Water									
18	18	0	0	White Pine									
2,272	1,766	20	486	Total Forested Acres	11	9	424	28	34				

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.

	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	24	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

# Report 4 – Site Conditions

Traverse City Mgt. Unit
Steve Crigier: Examiner

2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	68	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
3	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	13	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
4	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	4	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Available	2B: Unknown if access through adjacent landowner(s) is possible	11	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	205	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
7	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	10	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Report 4 - Site	<b>Conditions</b>
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Compartment: 169

Traverse City Mgt. Unit

		Crigier : Examiner				Year of Entry: 20	
8	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	17	Unspecified	Unspecified	Unspecified	Unspecified
(	Comments:						
9	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	10	Unspecified	Unspecified	Unspecified	Unspecified
(	Comments:						
10	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	15	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
11	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	55	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
12	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	9	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
13	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	32	5F: Evaluated for Forest Health Considerations	Unspecified	Unspecified	Unspecified
•	Comments:						

# Report 4 – Site Conditions

Traverse City Mgt. Unit

Steve Crigier : Examiner

14	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	16	Unspecified	Unspecified	Unspecified	Unspecified
C	comments:						
15	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	8	Unspecified	Unspecified	Unspecified	Unspecified
C	comments:						
16	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	1	Unspecified	Unspecified	Unspecified	Unspecified
C	comments:						
17	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	4	Unspecified	Unspecified	Unspecified	Unspecified
C	comments:						
18	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	2	Unspecified	Unspecified	Unspecified	Unspecified
C	comments:						
19	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	0	Unspecified	Unspecified	Unspecified	Unspecified
C	comments:						

Report 4 – Site Conditions
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**Traverse City Mgt. Unit** 

**Steve Crigier: Examiner** 20 Unavailable 2G: Too wet (sensitive 0 Unspecified Unspecified Unspecified Unspecified soils, does not include access issues) **Comments:** Unspecified Unspecified 21 Unavailable 2G: Too wet (sensitive 0 Unspecified Unspecified soils, does not include access issues) Comments:

Mgt. Unit

Compartment: #Type! Year of Entry:



## 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
Comments				

Traverse City Mgt. Unit Compartment: 169
Year of Entry 2018



## 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.

Conservation Area	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area						
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 cond stocked trout populations and those of other coldwater fish spec year to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such streams designated as trout resources by Fisheries Order 210.	ies (e.g., slimy sculpin) to persist from se conditions due to substantial						
SCA	Riparian Area	A transitional area between aquatic and terrestrial ecosystems in influences the aquatic ecosystem and vice-versa. Because of the streams and open water wetlands, riparian areas harbor a high communities are ecologically and socially significant in their effects as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, diversity of plants and wildlife. Riparian cts on water quality and quantity, as well						

S t	Traverse City	Mgt. Unit		Report 7	- Forested	Stands Compartment: 169 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42120 - Planted Jack Pine	Poletimber Medium	34.8	56	51-80	Lots of mortality, lots of windthrow. Mostly 5 stick jack pine at least the stuff that is still standing. Heavy slash on the ground.  Lots of red maple coming in the understory.
2	4130 - Aspen	Poletimber Medium	8.5	40	51-80	Part looks like old Jack pine plantation. Mostly 4-6 stick aspen. East finger is an A6 made up of bigtooth.
3	6120 - Lowland Cedar	Poletimber Medium	7.3	83	51-80	Pockets of black ash (E4) looking stuff. Creek corridor. There are a few wooded drains running through the stand.
4	4110 - Sugar Maple Association	Sawtimber Well	5.6	85	111-140	Mature hardwoods with some high risk trees. Medium quality.  Beech and ironwood in the understory.
5	6113 - Lowland Maple	Poletimber Medium	11.0	60	51-80	Clumpy red maple with quite a bit of fir. BAs around 60sqft/ac but stocking is quite variable. Soft ground.
6	6129 - Mixed Coniferous Lowland Forest	Poletimber Poor	77.5	83	1-50	Areas of L type in this stand also. Choloratic looking cedar, filling in with a mix of fir and birch. Lots of dead cedar, I assume it is a water table issue due to the beaver activity on the creek.
7	6120 - Lowland Cedar	Poletimber Well	127.5	83	81-110	Creek running along the west end. Stocking is variable. Some C5 pockets. North west end has some spruce pockets. A decent amount of blow downs.
8	6130 - Fir, Aspen, Maple	Poletimber Medium	17.0	70	Unspecified	
10	4112 - Maple, Beech, Cherry Association	Sapling Well	2.2	28	Immature	OPIC - FMD: OI Stand Year Origin was 1988  Trees are now about 25'-30' tall and is well stocked.
11	6120 - Lowland Cedar	Poletimber Well	3.6	90	81-110	Nice patch of cedar.
12	4130 - Aspen	Sapling Well	48.0	17	Immature	OPIC - FMD: TS# 27-99-1Tress are about 15' tall and is well stocked. Looks like there is a few wet spots in the southern part of the stand.
13	6115 - Lowland Ash	Poletimber Medium	2.9	70	1-50	Black ash is mostly dead but is resprouting. Very wet ground.
14	4112 - Maple, Beech, Cherry Association	Poletimber Well	18.0	74	81-110	Clumpy red maple of medium quality. Pockets of log sized red maple. Stocking is variable. Eastern part of stand transitions into

4112 - Maple, Beech,

Cherry Association

16

Poletimber

Well

10.3

39

51-80

a younger red maple stand.

Mostly young red maple although there are pockets of larger sized trees (10-12")?? Some pockets of aspen. BAs are around 60-70.

s t	Traverse City	y Mgt. Unit		Report 7	- Forested	Stands Compartment: 169 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
17	4130 - Aspen	Poletimber Medium	38.9	54	51-80	Aspen is starting to deteriorate. Some scattered white pine. Some pockets of Cherry and red maple (M7) pockets along Wheeler Lake Road. North part of stand has some wetter ground and a bit more white pine.
18	4112 - Maple, Beech, Cherry Association	Poletimber Medium	10.5	54	51-80	Stand is mostly younger red maple, but with a good amount of 8-9" cherry of poor quality. Looks like mostly stump sprout origin.
19	42200 - Natural White Pine	Sawtimber Well	9.6	59	111-140	Decent quality white pine a mix of logs and poles. Pockets of sugar maple in the understory. Stocking is a bit variable. Some A5 and M5 pockets within stand.
20	4130 - Aspen	Poletimber Medium	23.2	42	51-80	Ok quality stand. Mostly 5 stick aspen, with lots of red maple in the understory. Some scattered fir. Southeast end looks flooded, also a small windthrow patch here too.
23	6112 - Lowland Aspen	Poletimber Medium	3.9	39	51-80	Flooded ground, stocking is variable.
24	6112 - Lowland Aspen	Poletimber Poor	14.7	42	Unspecified	Lots of standing water in stand. Scattered aspen and white pine. Some birch and aspen starting to come in understory as well.
25	4130 - Aspen	Sapling Well	53.7	24	Immature	OPIC - FMD: Sale #29-88.Stand converting to pole timber. Stocking is a bit sparse in areas. Not the best quality aspen.
27	4112 - Maple, Beech, Cherry Association	Poletimber Well	17.0	68	111-140	Medium to poor quality stand, mostly clumpy red maple. Good quality in the white pine. Stocking is pretty variable. Decent logs scattered throughout. A good amount of ironwood already in the understory. BAs 120, 130, 140.
29	4130 - Aspen	Poletimber Medium	3.5	40	51-80	Small finger of medium quality aspen.
30	42260 - Natural Pine, Mixed Deciduous	Sawtimber Medium	26.1	74	51-80	Stand is mostly white pine but there are there are pockets of aspen. Stocking is patchy. Aspen is about 5 sticks tall. Medium to poor quality white pine, most of it is open grown. BAs 70, 110, 60.
31	4130 - Aspen	Poletimber Well	45.0	42	81-110	Nice stand of aspen, 5-6 stick trees with lots of maple in the understory. Healthy looking stand.
-						_

Unspecified

111-140

1-50

4117 - Mixed N.

Hardwood - Pine

42200 - Natural White

Pine

4117 - Mixed N.

Hardwood - Pine

32

33

34

Poletimber

Poor

Sawtimber

Well

Poletimber

Poor

9.1

5.1

51.7

45

68

50

Opening that is filling in with white pine and cherry.

Decent quality white pine with lots of maple in the understory.

BAs ran around 140ish.

Boarderline a forested stand. West end is more open and east

end has a bit more timber. Scattered crooked cherry with open grown white pine and some pockets of maple and aspen.

S t				Report 7	– Forested	Stands Compartment: 169 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
35	4130 - Aspen	Sapling Well	37.6	24	Immature	OPIC - FMD: Sale #29-88.Trees are 30-40' tall, stand is converting to a pole sized stand. East end seems to be more of an A6 type but with a decent amount of saplings.
36	42200 - Natural White Pine	Sawtimber Well	3.6	88	81-110	Some hemlock and pine around Little Wheeler Lake.
40	4130 - Aspen	Sapling Well	23.2	15	Immature	Trees are 20-25' tall. Some cherry pole timber was scattered throughout. Dense stocking. Old sale 61-024-99-01.
43	4130 - Aspen	Sapling Well	36.7	5	Immature	OPIC - FMD: Stand was clearcut in 2011 and is regenerating well (61-046-08-01). Trees are about 10' tall and is well stocked. Scattered white pine pole timber. There is a bit of wet ground in the north finger of the stand.
<b>45</b>	4111 - S.Maple, Hard Mast Association	Poletimber Well	4.3	72	81-110	Medium quality timber. Mostly open grown trees. Stocking is variable.
47	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Medium	2.3	91	51-80	Cedar looks very chloratic. Scattered large white pine.
49	4130 - Aspen	Poletimber Well	16.9	40	51-80	Stand is mostly aspen but more of a mix of hardwoods around the vernal ponds.
51	4130 - Aspen	Sapling Well	23.7	27	Immature	OPIC - FMD: Sale #30-88.
						Stand is converting to a pole sized stand. Eastern part of the stand has a decent amount of large oak that was left.
55	4116 - Mixed N. Hardwood - Aspen	Poletimber Poor	38.0	50	1-50	Opening that is filling in. Poor quality A5 pockets and scattered red maple and cherry pole timber with red maple and aspen saplings filling in the open areas. Some scattered white pine saplings.
56	4139 - Aspen, Mixed Deciduous	Sapling Well	9.7	17	Immature	Stand cut in 99. The aspen is ~ 25' tall and is well stocked. The southwestern part of the stand is more red maple and cherry that is 10-15' tall.
58	6120 - Lowland Cedar	Poletimber Medium	55.1	81	51-80	Stocking is variable. Seems to be generally less dense and smaller trees to the west. Some solid pockets of C6.
59	4130 - Aspen	Sapling Well	3.4	17	Immature	Cut in 1999. Trees are ~20' tall, good TPA.
60	429 - Mixed Upland Conifers	Sawtimber Medium	3.0	59	51-80	Large white pine with a mix of pole timber underneath. Parts of the stand look flooded.
62	4112 - Maple, Beech, Cherry Association	Poletimber Poor	4.1	38	1-50	OPIC - FMD: Larger hardwood to the east, north of red pine stand.

s t	Traverse City	/ Mgt. Unit		Report 7	– Forested	Stands Compartment: 169 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
63	42110 - Planted Red Pine	Poletimber Well	16.8	54	141-170	OPIC - FMD: 3/17/2011 Stand row thinned, Wood Rd Red (sc). There is some scattered cherry. Mostly 5 stick trees. A bit of hardwood in the understory, mostly along the edge of the st 78. Canopy is still pretty closed in. BAs 200, 150, 130, 150.
64	4112 - Maple, Beech, Cherry Association	Poletimber Well	23.7	79	111-140	Medium quality stand. Several M3 pockets of 3-4" red maple. Balsam fir on the edges of the stand. Looks like part of the stand was cut before?
65	4112 - Maple, Beech, Cherry Association	Sawtimber Poor	2.2	79	51-80	OPIC - FMD: Semi-open areas with hardwood.  Some hemlock and fir present. Scattered hardwoods logs with maple in the understory. Poor quality/open grown log trees.
66	4112 - Maple, Beech, Cherry Association	Poletimber Poor	3.1	43	1-50	OPIC - FMD: Stand was cut and getting some aspen sprouting (61-046-08-01) 10/21/13.  Stand had just the aspen removed. Scattered hardwood poles in the overstory. M4 over and A3.
70	6117 - Lowland Deciduous, Mixed Coniferous	Sapling Medium	8.3	36	1-50	OPIC - FMD: Some water in areas.  Mostly birch and red maple with scattered white pine and a small pocket of tamarack.
71	6118 - Lowland Deciduous with Cedar	Poletimber Medium	3.6	76	1-50	Most of the ash is dead. Balsam fir and birch filling in.
72	6113 - Lowland Maple	Poletimber Well	20.5	50	51-80	Very Hummocky ground. Red maple is pretty young yet. Patch of aspen, hemlock and fir. Northwest corner has the bulk of the cedar.
73	4130 - Aspen	Poletimber Well	34.2	45	81-110	Good quality aspen, mostly 5-6 sticks. A few vernal ponds in the stand. Some aren't mapped out. South west part of the stand has more red maple and fir.
74	6119 - Mixed Lowland Deciduous Forest	Sapling Medium	2.3	28	Immature	Drainage running through stand. Good amount of birch in the stand.
75	6128 - Lowland Coniferous, Mixed Deciduous	Sawtimber Well	32.1	91	81-110	Windthrow pockets are filling in with fir and red maple. Some pockets of large diameter cedar and hemlock. Dense canopy in the creek corridor. Western fringe is more of an C5. Scattered white pine log sized trees.

6117 - Lowland

Deciduous, Mixed Coniferous

4112 - Maple, Beech, Cherry Association

76

77

Sapling Well

Sawtimber

Well

16.3

11.6

30

89

Immature

81-110

Drainage running through stand. Most of the ash looks dead, lots of birch coming in. Trees are 20-30' tall. Scattered cedar pole timber. South end has more of a fir component.

Mature hardwood stand with some yellow birch and scattered

hemlock in the east end. Some solid M3 pockets with sugar maple. BAs 130, 70, 80.

S t	Traverse City	/ Mgt. Unit		Report 7	– Forested	Stands Compartment: 169 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
78	4110 - Sugar Maple Association	Sawtimber Well	215.1	79	81-110	OPIC - FMD: 9/6/11 stand thinned down to 80sqft 'Bit up Hwds'.
	Association	vv Gii				Some scattered hemlock, mostly on the eastern edge. Good quality timber. Some heavy wind damage on the hills in the north part of the stand (estimated a couple of 2-3 acres pockets) Some cherry and sugar maple in the understory but mostly a heavy flush of beech ironwood and blackberry.
79	4130 - Aspen	Sapling Well	18.1	5	Immature	OPIC - FMD: 10-21-13 stand was cut in 2011 and is regenerating well. The north end seems to be progressing slower (61-046-08-01.)Trees are coming along well, ~ 10' tall
80	4112 - Maple, Beech, Cherry Association	Poletimber Well	7.8	79	141-170	Good quality hardwoods. Looks like it was missed when stand 78 was thinned.
82	4112 - Maple, Beech, Cherry Association	Sawtimber Well	23.0	79	111-140	Medium quality red maple, pretty clumpy. Decent amount of high risk trees. Some scattered beech, white pine and oak. Some sparse areas.
83	4311 - Pine, Aspen Mix	Sawtimber Medium	9.0	79	51-80	Mixed stand, looks like the red maple and aspen was cut out sometime in the last 20-30 years. Can't find any records. Lots of M3/M4 pockets with large white pine in the overstory.
86	4130 - Aspen	Sapling Well	3.4	5	Immature	OPIC - FMD: 10-21-13 Stand was cut in 2011 and is regenerating ok (61-046-08-01).
						Trees are 10-15' tall, well stocked.
87	4111 - S.Maple, Hard Mast Association	Sawtimber Well	9.7	79	111-140	Stand was thinned in 88, except for the north part of stand which is more of an M6. Medium to good quality timber. Seasonal drain runs through the middle of the stand. BBD is present.
88	4116 - Mixed N. Hardwood - Aspen	Poletimber Poor	15.5	45	51-80	Stand is converting to a pole sized stand. Most of the red maple is 3"-5" aspen is a bit larger. Some scattered log timber.
91	6120 - Lowland Cedar	Poletimber Well	0.9	89	51-80	OPIC - FMD: OI Stand Year Origin was 555
92	4119 - Mixed Northern Hardwoods	Poletimber Well	4.4	79	81-110	5 Acres of hardwoods that has private property on one side and swamp on the other. We might be able to do a select cut if the neighbors harvest their property.
93	6120 - Lowland Cedar	Poletimber Well	38.4	90	81-110	Nice dense cedar on the exterior part of the stand. More of a tamarack and spruce mix closer to the pond.
97	4112 - Maple, Beech, Cherry Association	Sawtimber Well	36.1	79	111-140	Hemlock along the northern edge where is adjacent to the swamp. Looks like stand was thinned before but can't find any record of harvest. Nice species diversity. Some sugar maple in the understory:) BAs 130, 110, 140.
98	6129 - Mixed Coniferous Lowland Forest	Sawtimber Well	1.3	90	81-110	Hemlock pocket, mostly log size trees. Some scattered birch too.

S Traverse C		/ Mgt. Unit		Report 7	- Forested	Stands Compartment: 169 Year of Entry: 2018
t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
101	4112 - Maple, Beech, Cherry Association	Sawtimber Well	77.9	79	51-80	OPIC - FMD: Stand was a selection harvest in the Mojave Hardwoods in 2013. Nice quality Hardwoods on rolling terrain. Getting some cherry to develop in the understory. BAs are consistently 60-80.
102	4130 - Aspen	Poletimber Well	63.9	40	81-110	4-6 stick aspen, with hardwoods in the understory. West end is mostly big tooth while the eastern 2/3 is dominantly quaking. Quite a bit of sugar maple in the understory in the west end. Southern fringe has a good amount of fir underneath the canopy. Southeast end is more of an open grown A9 that is deteriorating. North east part of stand has a few wet spots/V0s.
103	6132 - Mixed Lowland Forest with Cedar	Poletimber Poor	9.7	75	1-50	
105	4119 - Mixed Northern Hardwoods	Poletimber Poor	2.6	40	51-80	a few clones of aspen. Some scattered hemlock. Stand is still trying to make the full conversion over to a well stocked pole stand.
106	6117 - Lowland Deciduous, Mixed Coniferous	Sapling Medium	4.8	34	Unspecified	OPIC - FMD: Cattails in areas with the ash.  good density to the birch in areas.
107	4110 - Sugar Maple Association	Sawtimber Well	73.8	79	111-140	Looks like stand was thinned before. Southern part of stand was thinned in 88. Medium to high quality maple. Some M3 pockets. Sugar maple in the understory!! Some scattered hemlock. BBD present. South eastern part of stand is more of an M6. Drainage along the south eastern part of the stand.
109	4116 - Mixed N. Hardwood - Aspen	Sawtimber Medium	16.9	79	51-80	Stand looks 2 aged but cann't find any record of harvest. Lots of 1-3" sugar maple in understory and pockets of A3. Scattered hemlock pockets. Medium quality overstory. Pockets of mature aspen that would be nice to harvest.
111	4110 - Sugar Maple Association	Sawtimber Well	73.0	79	81-110	OPIC - FMD: Stand was a selective harvest in part of Mojave Hardwoods in 2013.  High quality stand on rolling terrain. There is a seep in the north central part of the stand. There is a 1-2 acre pocket of decline that was salvaged during the last harvest in the central part of the stand off the east-west 2 track. Mostly filling in with blackberry now but will hopefully be and M3 pockets. BAs. 90, 110, 90.
113	6120 - Lowland Cedar	Poletimber Well	7.3	91	81-110	Dense vein of cedar.
114	6132 - Mixed Lowland Forest with Cedar	Poletimber Medium	29.4	60	51-80	Black ash is resprouting. Stocking is variable depending on how much water is present.
116	4112 - Maple, Beech, Cherry Association	Sapling Well	2.2	27	Immature	Some scattered red maple and cherry logs. Trees are about 30' tall.
118	6119 - Mixed Lowland Deciduous Forest	Sapling Medium	3.1	20	Immature	scattered cedar pole timber. Almost looks like an old cut.

S t	Traverse City Mgt. Unit			Report 7	- Forested	Stands Compartment: 169 Year of Entry: 2018
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
119	4111 - S.Maple, Hard Mast Association	Sawtimber Well	2.2	79	51-80	South end is more of an E type
121	6128 - Lowland Coniferous, Mixed Deciduous	Poletimber Medium	1.1	76	Unspecified	
122	4130 - Aspen	Sapling Well	24.6	27	Immature	OPIC - FMD: Sale #64-87.  Stand is converting to a poles stand. Will be an A6 next time around. Bigtooth in spots is 30-40' tall and has merchantable timber but still lots of A3 pockets throughout.
123	4116 - Mixed N. Hardwood - Aspen	Sawtimber Medium	2.2	73	81-110	Some hemlock and fir present too. Stand is a nice buffer for the Lake.
126	4113 - R.Maple, Conifer	Sapling Well	6.5	28	Immature	Trees are about 20-30' tall. Scattered hemlock and cedar. Ground seems to be mostly upland but there are several wet spots and the western edge looks to be more lowland.
127	4191 - Mixed Upland Deciduous with Conifer	Poletimber Well	4.8	76	51-80	Quite of bit of scattered log sized red maple. Understory filling in with balsam fir.
129	4199 - Other Mixed Upland Deciduous	Sawtimber Poor	5.2	68	1-50	Stand is on a slope down towards the lake. Real mixed stand. Looks like the red maple was harvested out of the stand 20 years ago or so. Can't find any record of the cutting. Heavy red maple understory with a mix of aspen and hardwoods in the overstory.
130	4319 - Mixed Upland Forest	Poletimber Well	9.7	61	51-80	Transition ground into the swamp. Typed as upland but there is a decent amount of low ground. Lots of fir in the understory.
132	4112 - Maple, Beech, Cherry Association	Poletimber Poor	4.2	56	1-50	Scattered cherry and aspen. Opening filling in.

4110 - Sugar Maple Association

133

Poletimber Medium

4.8

52

1-50

Open grown hardwoods with red maple filling in the understory.



Cover Type	Acres	Managed Site	General Comments:
622 - Lowland Shrub	3.6	No	
500 - Water	2.0	No	
622 - Lowland Shrub	0.8	No	OPIC - FMD: Electric line runs through. Area is flooded out.
622 - Lowland Shrub	39.1	No	OPIC - FMD: A combination of L and Z.
622 - Lowland Shrub	61.3	No	OPIC - FMD: Combination of water and L type.
330 - Low-Density Trees	1.7	No	OPIC - FMD: OI Stand Year Origin was
622 - Lowland Shrub	12.5	No	
330 - Low-Density Trees	8.1	Yes	
622 - Lowland Shrub	0.5	No	
623 - Emergent Wetland	2.7	No	
623 - Emergent Wetland	1.8	No	
320 - Upland Shrub	4.0	No	Scattered cherry and red maple.
330 - Low-Density Trees	7.7	No	Semi open aea with red maple, cherry and aspen in areas.
622 - Lowland Shrub	2.4	No	
320 - Upland Shrub	1.2	No	OPIC - FMD: Old well site that has been planted to Autumn Olive.
622 - Lowland Shrub	1.8	No	OPIC - FMD: Northern edge of Farrar Lake - Headwaters of N. Branch of Boardman River. Some dead trees.
500 - Water	14.4	No	OPIC - FMD: Farrar Lake - Headwaters of N. Branch of Boardman River
622 - Lowland Shrub	0.7	No	
	622 - Lowland Shrub  500 - Water  622 - Lowland Shrub  622 - Lowland Shrub  330 - Low-Density Trees  622 - Lowland Shrub  330 - Low-Density Trees  622 - Lowland Shrub  623 - Emergent Wetland  623 - Emergent Wetland  320 - Upland Shrub  320 - Upland Shrub  320 - Low-Density Trees  622 - Lowland Shrub	622 - Lowland Shrub       3.6         500 - Water       2.0         622 - Lowland Shrub       0.8         622 - Lowland Shrub       39.1         622 - Lowland Shrub       61.3         330 - Low-Density Trees       1.7         622 - Lowland Shrub       12.5         330 - Low-Density Trees       8.1         622 - Lowland Shrub       0.5         623 - Emergent Wetland       2.7         623 - Emergent Wetland       1.8         320 - Upland Shrub       4.0         330 - Low-Density Trees       7.7         622 - Lowland Shrub       2.4         320 - Upland Shrub       1.2         622 - Lowland Shrub       1.8         500 - Water       14.4	Cover Type         Acres         Site           622 - Lowland Shrub         3.6         No           500 - Water         2.0         No           622 - Lowland Shrub         0.8         No           622 - Lowland Shrub         39.1         No           622 - Lowland Shrub         61.3         No           330 - Low-Density Trees         1.7         No           622 - Lowland Shrub         12.5         No           622 - Lowland Shrub         0.5         No           623 - Emergent Wetland         2.7         No           623 - Emergent Wetland         1.8         No           320 - Upland Shrub         4.0         No           330 - Low-Density Trees         7.7         No           622 - Lowland Shrub         2.4         No           320 - Upland Shrub         1.2         No           622 - Lowland Shrub         1.8         No           622 - Lowland Shrub         1.8         No



Stand	Cover Type	Acres	Managed Site	General Comments:
81	500 - Water	6.1	No	OPIC - FMD: Little Wheeler Lake.
84	500 - Water	2.7	No	OPIC - FMD: South east part of Wheeler Lake.
85	622 - Lowland Shrub	2.7	No	OPIC - FMD: South east part of Wheeler Lake.
89	623 - Emergent Wetland	0.8	No	
90	623 - Emergent Wetland	1.3	No	vernal pond
94	629 - Mixed non-forested wetland	3.4	No	
95	500 - Water	1.6	No	
96	622 - Lowland Shrub	1.1	No	
99	622 - Lowland Shrub	3.4	No	
100	623 - Emergent Wetland	0.6	No	
110	310 - Herbaceous Openland	1.2	No	Cleared well pad. Doesn't look to be active.
112	122 - Road/Parking Lot	5.2	No	OPIC - FMD: ANR Pipeline Coldsprings 31 Storage Field. Some grass as groundcover otherwise mainly sand.
115	622 - Lowland Shrub	5.0	No	Powerline ROW but it is flooded out.
117	622 - Lowland Shrub	62.5	No	
120	622 - Lowland Shrub	0.5	No	
124	622 - Lowland Shrub	2.0	No	Creek running through st.
125	622 - Lowland Shrub	1.3	No	OPIC - FMD: OI Stand Year Origin was 1925
128	623 - Emergent Wetland	0.4	No	



Stand	Cover Type	Acres	Managed Site	General Comments:
131	622 - Lowland Shrub	2.0	No	
400	310 - Herbaceous Openland	11.7	No	OPIC - FMD: Along Wheeler Lake Road. Both a pipeline and electric line run through.
402	330 - Low-Density Trees	1.7	No	
403	330 - Low-Density Trees	2.2	Yes	
404	310 - Herbaceous Openland	1.6	Yes	
405	330 - Low-Density Trees	1.3	No	
406	310 - Herbaceous Openland	0.8	Yes	
407	310 - Herbaceous Openland	17.6	No	OPIC - FMD: Pipeline. Goes from G to Z to G.
408	310 - Herbaceous Openland	1.6	No	OPIC - FMD: State Rapid River A3-25.
410	330 - Low-Density Trees	1.2	No	
411	310 - Herbaceous Openland	1.0	No	OPIC - FMD: Merit Energy State Coldsprings A2-30.
412	710 - Sand, Soil	1.8	No	OPIC - FMD: Merit Energy State Coldsprings 2-30.
413	310 - Herbaceous Openland	1.4	No	
414	310 - Herbaceous Openland	2.2	No	OPIC - FMD: Pipeline and powerline
415	310 - Herbaceous Openland	1.6	No	OPIC - FMD: Merit Energy State Coldsprings 3-30A.
416	310 - Herbaceous Openland	2.6	No	OPIC - FMD: State Coldsprings 1-30B. Schumde Oil.
417	310 - Herbaceous Openland	1.9	Yes	OPIC - FMD: Looks to be an old well site but nothing now.
418	310 - Herbaceous Openland	1.0	No	Looks like it was cleared for a well pad but doesn't look active. Used as a landing when stand 101 was cut.

# Report 8 - Nonforested Stands



Stand	Cover Type	Acres	Managed Site	General Comments:
419	330 - Low-Density Trees	0.9	No	OPIC - FMD: Some aspen coming in.
420	310 - Herbaceous Openland	11.1	No	Pipeline and road ROW
421	310 - Herbaceous Openland	2.0	No	Looks to be an old well site but nothing now.