

Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 61031 Entry Year 2023 Acreage: 3,100

County Benzie

Management Area: Manistee Plains

Revision Date: 2021-05-18
Stand Examiner: Craig Allen

Legal Description:

T25N-R13W; Sections 20, 21, 28, 29, 31, 32, 33. Colfax Township of Benzie County, Michigan

Identified Planning Goals:

Vegetation management in the Manistee Plains management area (MA) will provide forest products; maintain or enhance wildlife habitat; protect areas of unique character including the Betsie River (a designated natural river), Bear Creek and the Grass Lake Flooding State Wildlife Management Area; threatened, endangered and special concern species; and provide for forest-based recreational uses. The primary attributes and associated uses that influence and drive management in the Manistee Plains management area are wood fiber production, wildlife habitat for existing species and recreational uses. Management activities will emphasize the age, size and species distribution within cover types. Expected trends within this 10-year planning period are increased recreation pressure and continued management to balance cover type age-class distributions for timber and wildlife habitat.

Soil and topography:

Most of this compartment lies within a lake plain that is entirely level. Soils within this lake plain consist of deep mucks with some loamy sands intermixed. There is a high water table throughout a majority of the area. Low creek banks and seasonal flooding create wide variability in water levels. There is year-round drainage flows in some areas with wide sheet flow which create flooded timber conditions. The Little Betsie River also flows through two areas of the compartment as do several feeder creeks. Exception to the lake plain is found along the north edge of the compartment which is within an outwash plain with excessively drained deep sands.

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

This is a solid block of State ownership with no private in-holdings. There are a lot of private lands bordering the edges of the compartment. The village of Thompsonville lies very close, just to the southwest, and Nessen City is just outside the compartment to the southeast.

Unique Natural Features:

The Little Betsie River flows through the compartment and is a tributary of the Betsie River, which is a designated Michigan Natural River. Any proposed management treatments near this river system will follow the Natural River Plan.

Archeological, Historical, and Cultural Features:

There are a few known old homestead sites within or near the compartment. Any management activities will avoid disturbing these locations.

Special Management Designations or Considerations:

There is a "GEMs" DNR Wildlife management area within this compartment. Also, the Little Betsie River is managed as a Michigan Natural River due to it being a tributary to the Betsie River.

Watershed and Fisheries Considerations:

The Little Betsie River flows through Compartment 31. The Little Betsie River is a high-quality trout stream tributary to the Betsie River, and supports self-sustaining populations of brook trout, brown trout, steelhead, coho salmon, and Chinook salmon. Due to its cold, groundwater-fed nature, the Little Betsie River helps in maintaining the cold water thermal regime of the Betsie River. Beaver activity within the Little Betsie and its tributaries will negatively affect the trout populations they support by fragmenting habitat and degrading water quality (warmer water temperatures). Therefore, Fisheries Division recommends large enough vegetative buffers for any aspen clearcuts to discourage beaver activity along the Little Betsie River.

Wildlife Habitat Considerations:

State lands in this compartment fall mainly within a flat, very poorly drained lake plain landscape. Mucky soils predominate and harbor large areas of aspen, mixed lowland hardwoods, and lowland brush. This area has a history of aspen cutting, which should continue, resulting in a mosaic of cover types and age classes. Small, better-drained areas have pine

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plantations and some natural white pine. Wetter, or inundated areas, should be allowed to succeed to later successional stages, eventually including lowland conifers or upland white pine patches. Small patch cuts emulating natural blowdown pockets would be appropriate in these stands. Mature cover is most important in the riparian area along the Little Betsie River. Red-shouldered hawks are likely inhabitants of this area, and should be accommodated in timber harvest specifications if found. Other species using these habitats include deer, otter, blue racer, woodcock, ruffed grouse, barred owl, golden-winged warbler, and black bear.

Portions of this compartment also fall into flat outwash plain and sandy, flat lake plain. Pine plantations, shrubby openings, and aspen occupy these areas. The northern part of the compartment on outwash plain also has a history of aspen cutting toward increased age class diversity to benefit grouse, woodcock, golden-winged warbler, deer, and other species. Such early successional management should be continued in this area, incorporating snags, leave trees, brush piles, and downed logs to replicate a wildfire-altered forest. Future management of the several pine stands here should consider incorporating small (2-5 acre) islands that are left relatively un-thinned within mature stands to provide winter roosting cover for turkeys.

Opening maintenance will continue in the compartment to benefit openland species such as cedar waxwing, wild turkey, mourning dove, meadow vole, or red fox.

Much of compartment 31 is part of the Little Betsie River Grouse Enhanced Management System, or GEMS. GEMS are managed primarily for aspen, with a short rotation age. Selected two-track logging roads may be planted to herbaceous ground cover and maintained for wildlife foraging areas, as well as to provide easy hunting access for youth hunters, first time hunters and seniors. These trails will provide walking trails through well-managed grouse habitat without concern for passing vehicles. Gates and berms will be used to protect road seedings and provide walk-in access.

Mineral Resource and Development Concerns and/or Restrictions

The nearest active sand/gravel pit is approximately one mile south. There appears to be some sand potential in the compartment, but much of the compartment is covered by wetlands, which limits development potential. There has been some Antrim Shale gas and Guelph reef oil & gas production within the compartment, and all State-owned mineral rights in the compartment are currently leased and held by production. There may be potential for additional wells (both Guelph and Antrim) in the compartment. However, at current gas prices, additional Antrim development in this area is unlikely in the near future. There is no known metallic mineral potential in this part of the state. The state does not own all the mineral rights within the compartment. Because the mineral estate is the dominant estate, reasonable access to the surface must be provided to private owners if they choose to explore or develop their mineral rights. (comments from Peter Rose).

Vehicle Access:

There are several gravel seasonal county roads in and around the compartment offering good access to State lands. Lindy road is a paved road running through the south end of the area. There are also many state forest "2-track" roads in various areas of the compartment that are in mostly good condition and are used for public and DNR land management accessibility.

Survey Needs:

There are survey needs in section 31 along private land edges of stands 49 and 134.

Recreational Facilities and Opportunities:

The Betsie River snowmobile trail travels along the north edge of the compartment then south through the middle of the compartment on to Long road then west on Bentley, turning south on Thurman traveling down to the county line. Various types of dispersed forest recreation occur in the compartment. Examples include hunting, fishing, trapping, cross-country skiing, hiking, orv riding, mushroom/berry picking, biking, horseback riding, and dispersed camping.

Fire Protection:

Wildfire protection is accomplished through coordination of local fire departments along with DNR fire staff. The majority of this compartment and surrounding areas are forested in mesic hardwood deciduous types so the opportunity for large scale wildfires are minimal.

Additional Compartment Information:

The following reports from the Inventory are attached:

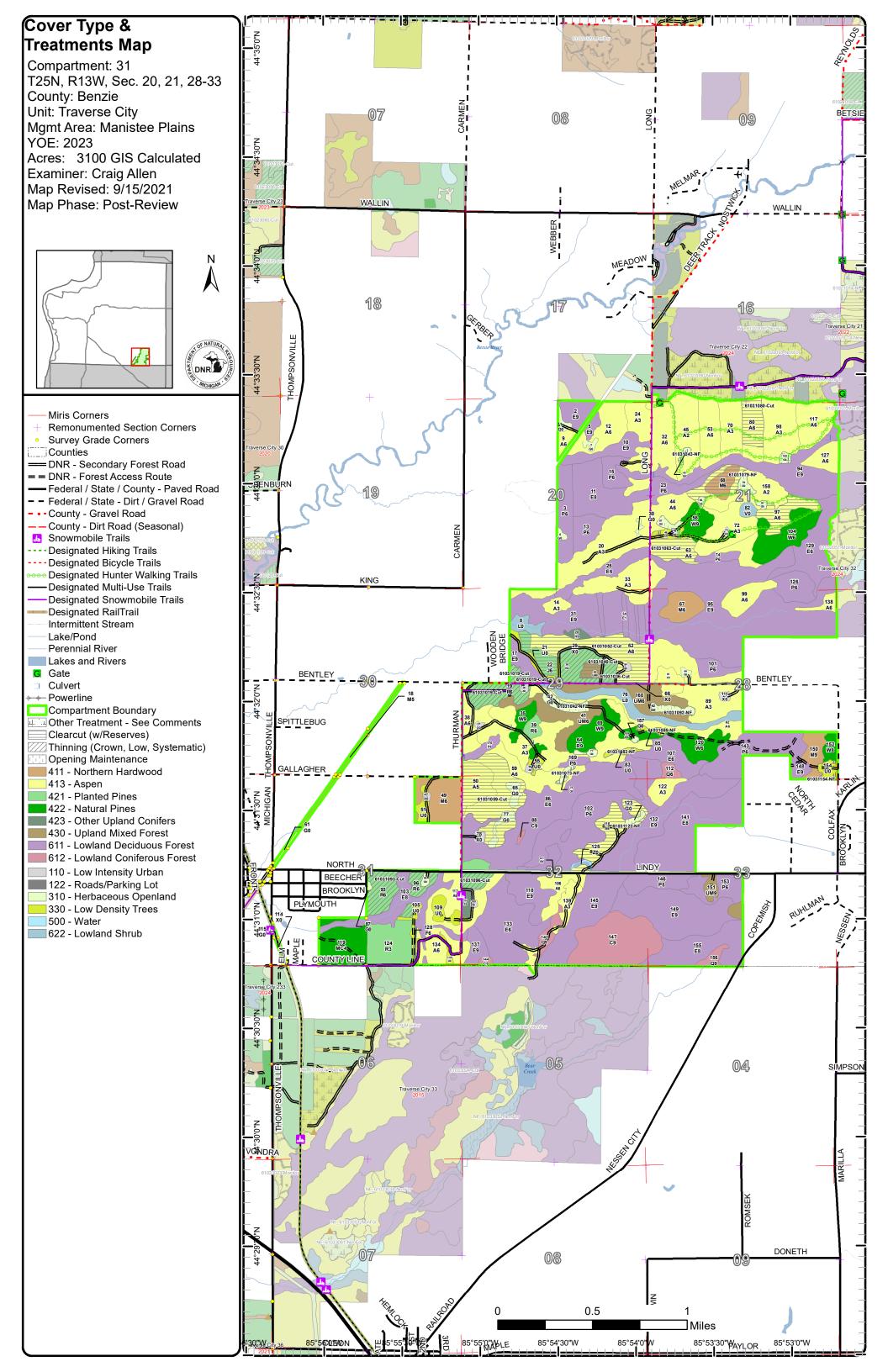
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

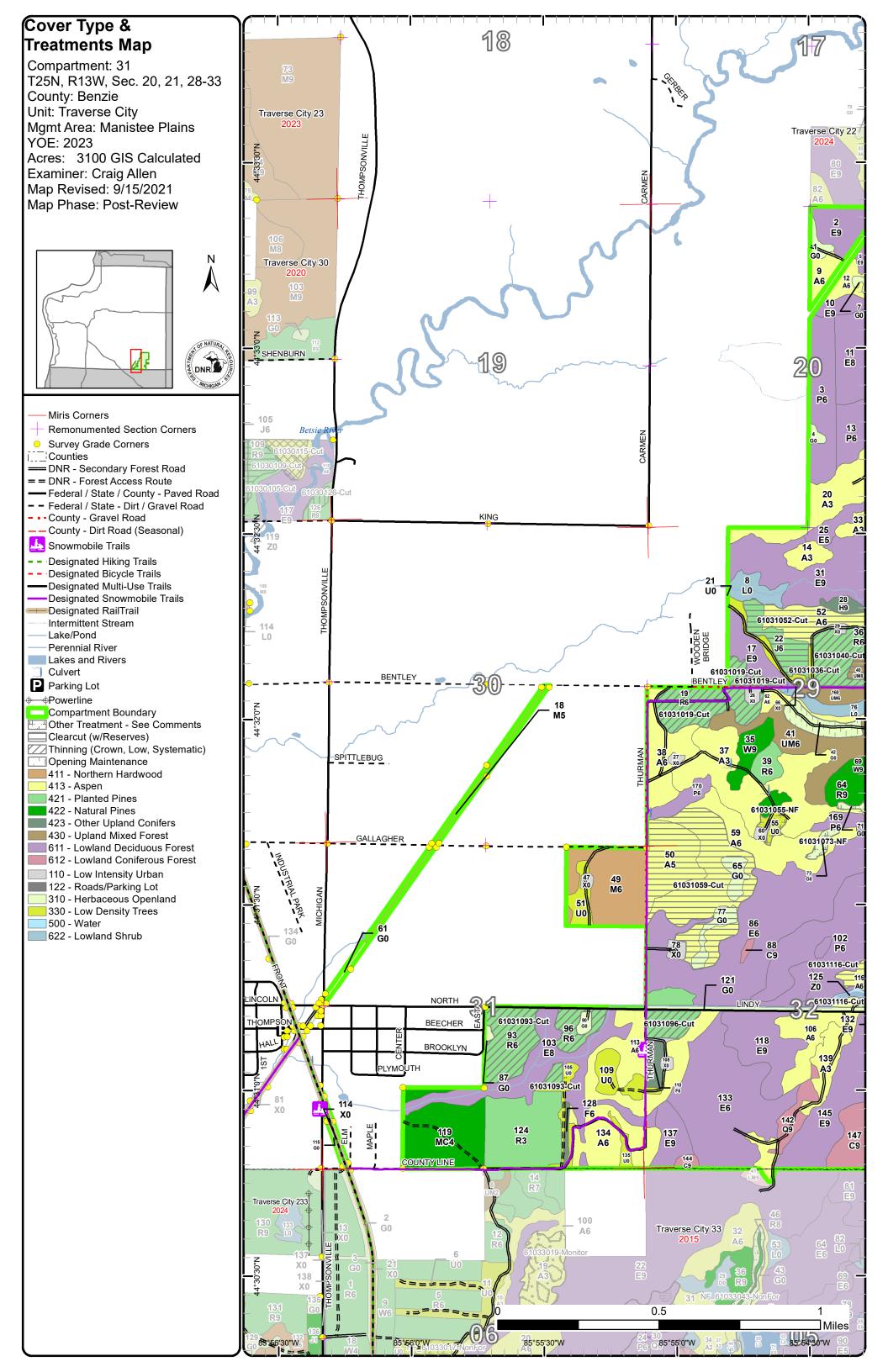
The following information is displayed, where pertinent, on the attached compartment maps:

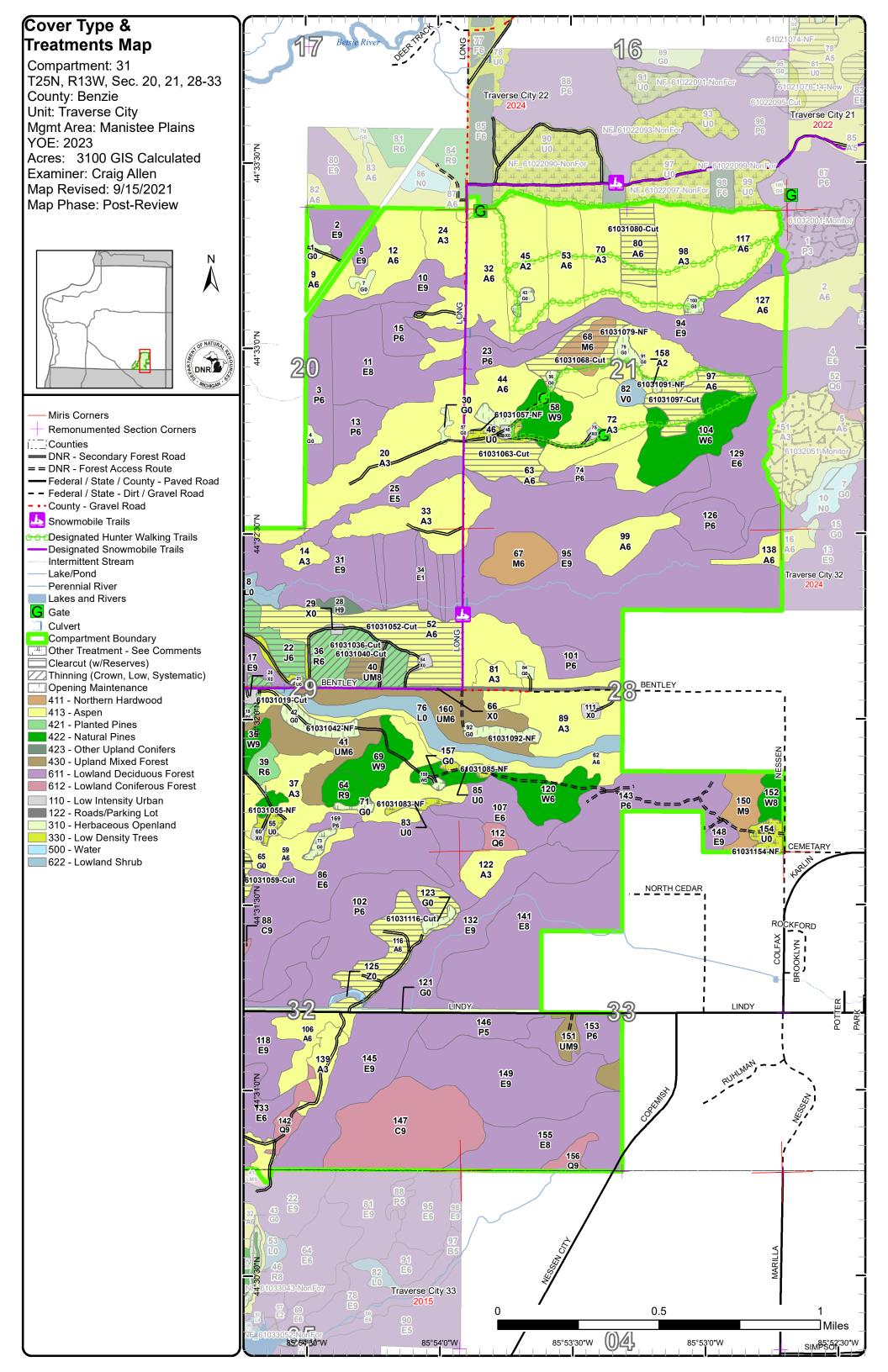
Base feature information, stand boundaries, cover types, and numbers

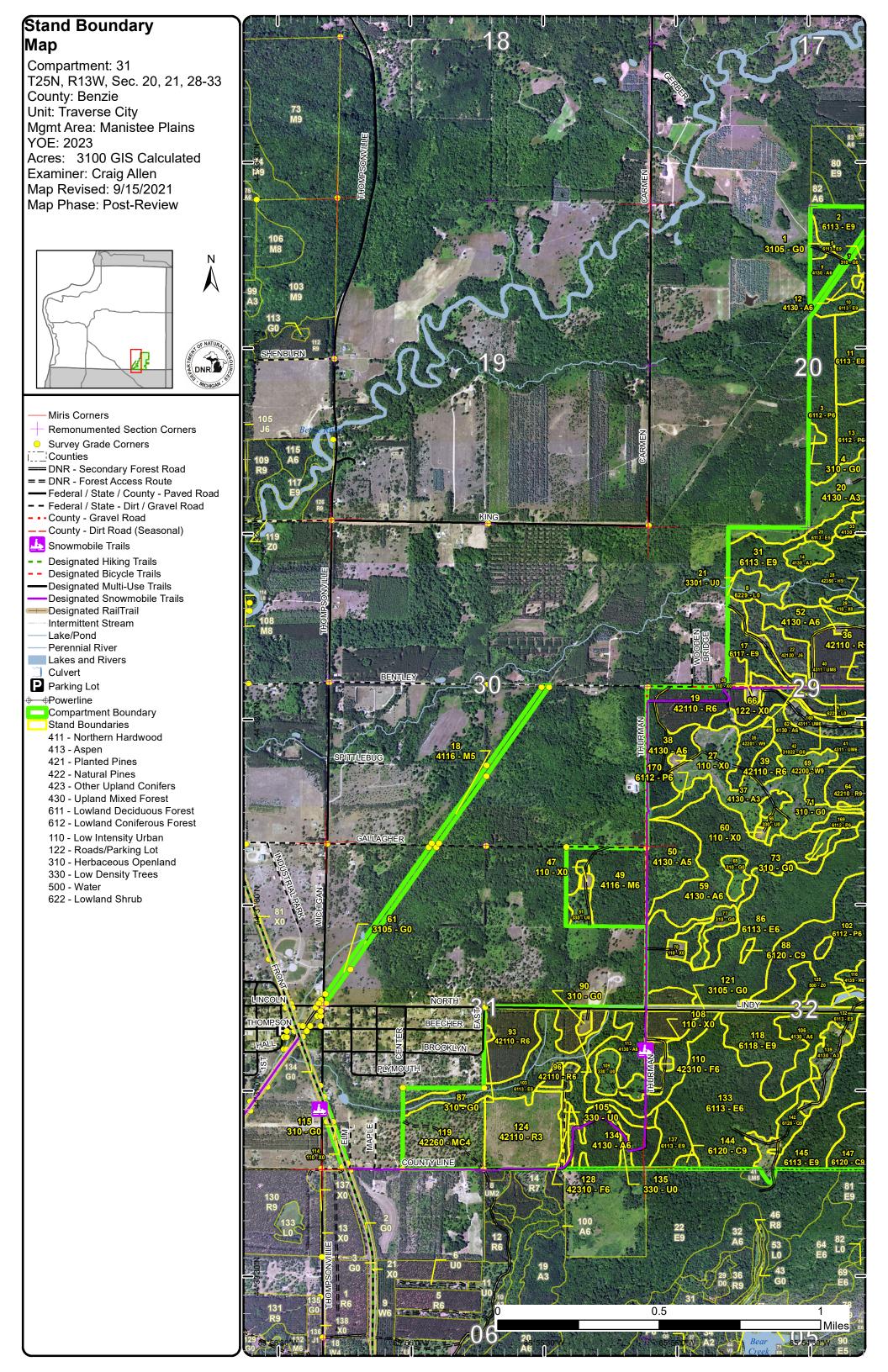
Proposed treatments
Site condition boundaries

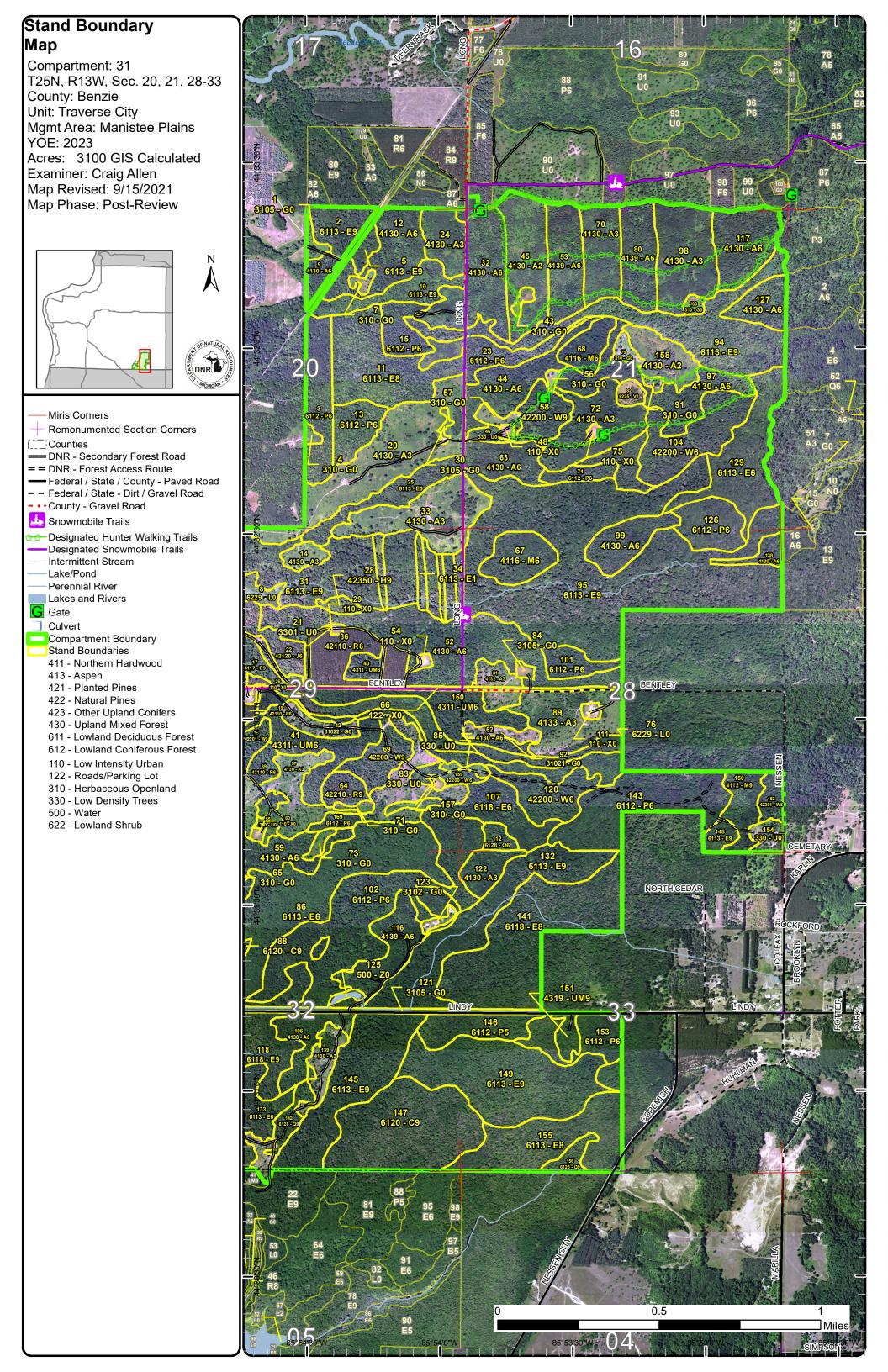
Details on the road access system

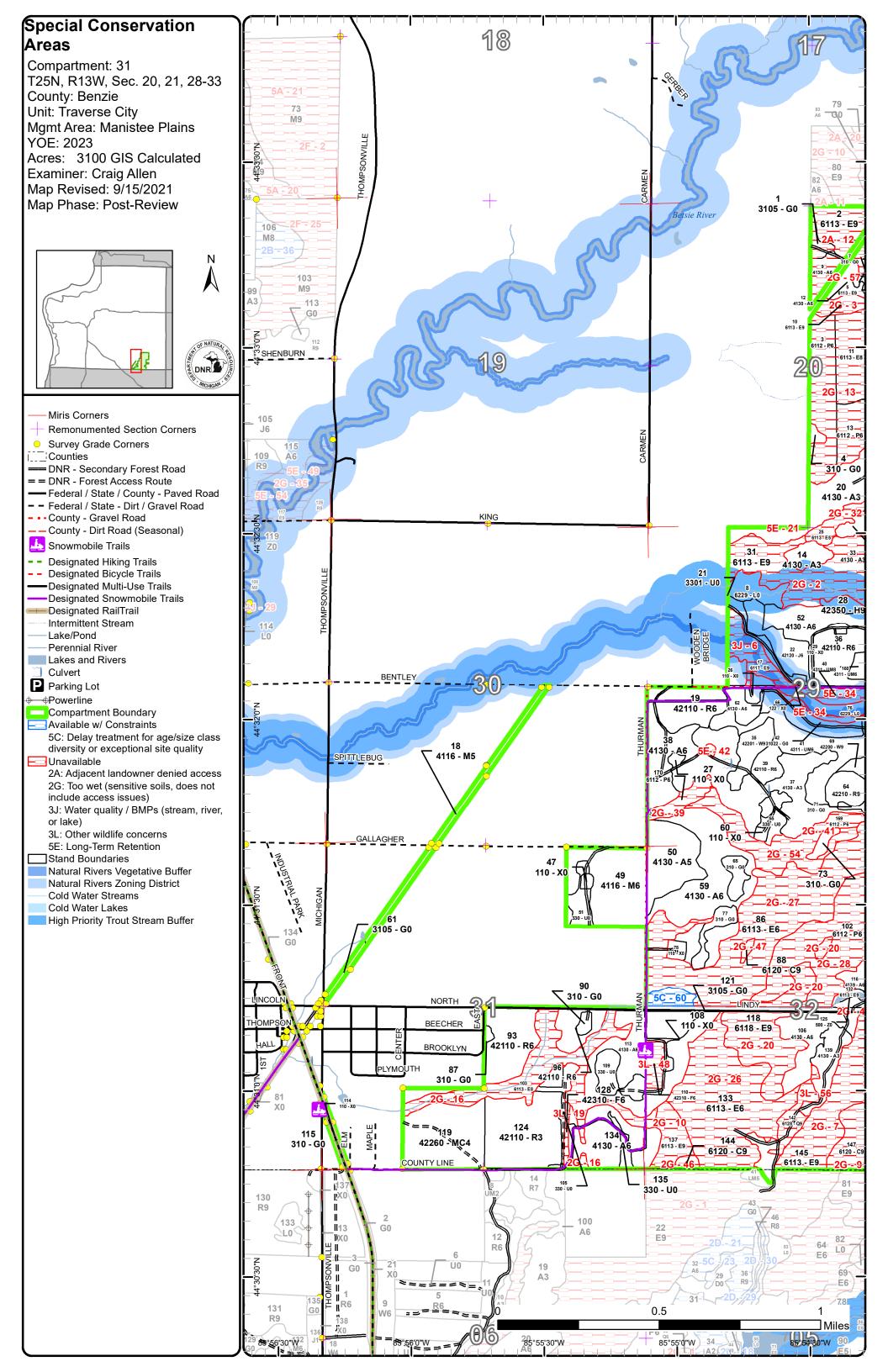


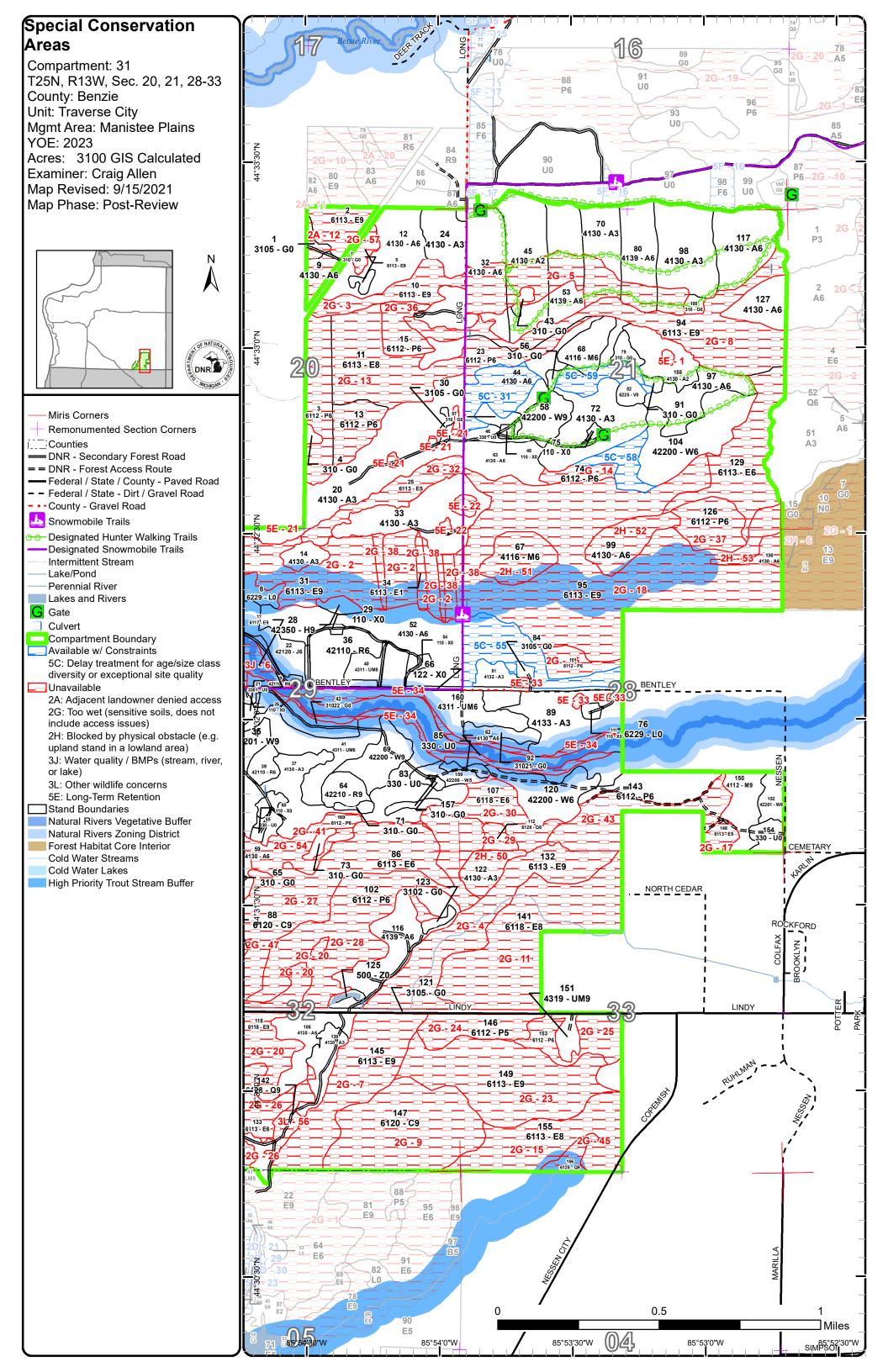












Compartment 31

Year of Entry 2023

Traverse City Mgt. Unit
Craig Allen: Examiner



Age Class

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Aspen	0	249	61	101	113	246	210	0	0	0	0	0	0	0	0	0	0	0	978
Bog	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4
Cedar	0	0	0	0	0	0	0	0	0	0	68	0	3	0	0	0	0	0	71
Hemlock	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
Herbaceous Openland	77	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	77
Jack Pine	0	0	0	0	0	0	0	12	0	0	0	0	0	0	0	0	0	0	12
Low-Density Trees	48	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
Lowland Aspen/Balsam Poplar	0	0	0	0	55	179	46	0	0	0	0	0	0	0	0	0	0	0	279
Lowland Conifers	0	0	0	0	0	0	0	5	0	0	14	0	0	0	0	0	0	0	18
Lowland Deciduous	0	0	0	0	32	236	0	0	0	0	333	466	33	0	0	0	0	0	1100
Lowland Shrub	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35
Natural Mixed Pines	0	0	0	35	0	0	0	0	0	0	0	0	0	0	0	0	0	0	34
Northern Hardwood	0	0	0	0	0	43	29	0	0	0	15	0	0	0	0	0	0	0	85
Red Pine	0	34	0	0	6	0	0	92	8	0	0	0	0	0	0	0	0	0	140
Upland Mixed Forest	0	0	0	0	28	0	30	0	0	6	9	0	0	0	0	0	0	0	73
Upland Spruce/Fir	0	0	0	0	0	0	0	7	0	0	0	0	0	0	0	0	0	0	6
Urban	23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	23
Water	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
White Pine	0	0	0	6	0	0	0	69	0	26	7	0	0	0	0	0	0	0	108
Total	189	283	61	142	234	704	315	185	8	32	449	466	36	0	0	0	0	0	3096



Report 2 – Treatment Summary

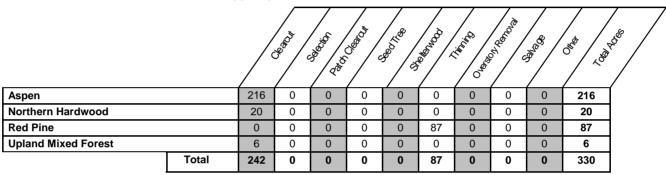
Traverse City Mgt. Unit Year of Entry: 2023

Acres of Harvest

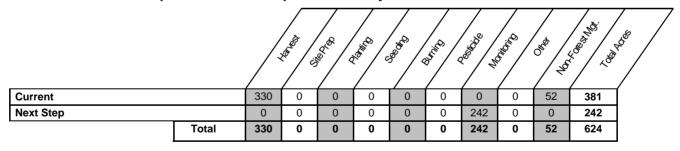
Compartment 31
Total Compartment Acres: 3,100

Commercial Harvest - 330 Harvests with Site Condition - 0 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



Report 3 -- Treatments

Compartment: 31 Year of Entry: 2023

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Treatment Name

Acres

Stand CoverType

Size Density Stand Age

BA Range **Treatment** Type

Treatment Method

Cover Type Objective

Age Structure Habitat Cut

Approved Treatments:

19 61031019-Cut 25.4 42110 - Planted Poletimber 171-Harvest Crown Thinning 4211 - Planted Even-Aged No Red Pine Red Pine Well 200

Prescription Thin stand by select marking individual trees to harvest approximately 1/3 of trees. Primarily focus on marking poor form, suppressed, defect trees then mark others allowing for approximately 1/3 of volume removal with even spacing throughout plantation as much as Specs:

possible. Use appropriate methods to protect Snowmobile Trail and its surface during project implementation.

Next Step

Treatments:

Acceptable Regen:

<u>Other</u>

Comment:

Site Condition

Proposed Start Date: 10/1 /2022

61031036-Cut 24.5 42110 - Planted Poletimber 65 171-Crown Thinning 4211 - Planted No Harvest Even-Aged Red Pine Well 200 Red Pine

Prescription Thin stand by select marking individual trees to harvest approximately 1/3 of trees. Primarily focus on marking poor form, suppressed, Specs: defect trees then mark others allowing for approximately 1/3 of volume removal with even spacing throughout plantation as much as possible

Next Step Treatments:

Acceptable Regen:

Use appropriate methods to protect Snowmobile Trail and its surface during project implementation. Other

Comment:

Site Condition

Proposed Start Date: 10/1 /2022

4133 - Aspen, 61031040-Cut 6.1 4311 - Pine, Aspen Sawtimber 80 1-50 Clearcut with Even-Aged Harvest No Mix Medium Retention Mixed Pine

Prescription Harvest all hardwood species to regenerate and expand aspen. Also select mark white pine to harvest to help open up stand for aspen regeneration as needed, remaining pine will stay for retention and diversity. Leave any oak that may be present. No additional retention due Specs:

to small size of stand.

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable aspen, maple, cherry, pine

Regen:

Other Use appropriate methods to protect Snowmobile Trail and its surface during project implementation.

Comment:

Site Condition

Report 3 -- Treatments

Compartment: 31 Year of Entry: 2023

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Treatment Stand Size Stand BA **Treatment** Treatment **Cover Type** Acres Age Habitat n Objective Age Method Structure Name CoverType Density Range Type Cut d

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42 61031042-NF 8.6 31022 - Warm Season Grass Nonstocked

Unspec

NonForestMgt Herbaceous/Crop /Grass Planting

3105 - Mixed Upland

Herbaceous

Specs:

Prescription Brush hog (or hand fell) around select leave trees and/or patches. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Fertilize plantings and protect with wire cages or tubex. Considering establishing herbaceous/forbs ground cover for wildlife food source.

Next Step

Treatments:

Acceptable

Comment:

Regen: Other

This opening is a traditional wildlife planting. Plant to annual rye for several years and then convert to a pasture mix (i.e. clover/alfalfa) if soil will support it. Periodic maintenance such as mowing, fertilization, reseeding, and/or removal of woody encroachment.

Site Condition

Proposed Start Date: 10/1 /2022

61031043-NF

1.9 310 - Herbaceous Nonstocked Openland

Unspec NonForestMgt Fruit Tree/Shrub ified

3204 - Mast Planting Producing Shrub No

Nο

Specs:

Prescription Brush hog (or hand fell) around select leave trees and/or patches. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Fertilize plantings and protect with wire cages or tubex. Considering establishing herbaceous/forbs ground cover for wildlife food source.

Next Step **Treatments:**

<u>Acceptable</u> Regen:

<u>Other</u>

Comment:

Site Condition

Proposed Start Date: 10/1 /2022

61031046-NF

4.4 330 - Low-Density Nonstocked Trees

Unspec NonForestMgt Fruit Tree/Shrub ified

Planting

3204 - Mast Producing Shrub No

Specs:

Prescription Brush hog (or hand fell) around select leave trees and/or patches . Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Fertilize plantings and protect with wire cages or tubex. Considering establishing herbaceous/forbs ground cover for wildlife food source.

Next Step

Treatments:

<u>Acceptable</u> Regen:

Other

Comment:

Site Condition

Report 3 -- Treatments

Compartment: 31 Year of Entry: 2023

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а **Treatment** Stand Size Stand BA **Treatment Treatment Cover Type** Acres Age Habitat n Method Objective Name CoverType Density Age Range Type Structure Cut d

52 61031052-Cut 58.9 4130 - Aspen

Monitoring, Natural Regen (Re-Inventory)

Poletimber Unspec Well ified

Harvest

Clearcut with Retention

413 - Aspen Even-Aged

Specs:

Harvest all hardwoods to expand and regenerate aspen. Retain any oak, if present. Harvest all jack pine but keep all other conifers species. Harvest area only west of long road. Retention via marking scattered large /unique maple, cherry as needed. Also, mark possible retention islands. Add drumming log spec for grouse and debris pile spec for small mammals.

Next Step Treatments:

Acceptable aspen, maple, cherry, white pine

Regen:

Other

Use appropriate methods to protect Snowmobile Trail and its surface during project implementation.

Comment:

Site Condition

Proposed Start Date: 10/1 /2022

61031055-NF 55

2.9 330 - Low-Density Nonstocked

Unspec NonForestMgt Fruit Tree/Shrub ified

Planting

3204 - Mast Producing Shrub Nο

Nο

Specs:

Prescription Brush hog (or hand fell) around select leave trees and/or patches. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Fertilize plantings and protect with wire cages or tubex. Considering establishing herbaceous/forbs ground cover for wildlife food source.

Next Step Treatments:

Acceptable

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2022

61031056-NF

1.2 310 - Herbaceous Nonstocked Openland

Unspec NonForestMgt Herbaceous/Crop 31021 - Cool /Grass Planting Season Grass ified

No

Specs:

Prescription Brush hog (or hand fell) around select leave trees and/or patches. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Protect with wire cages or tubex. Considering adding native herbaceous/forbs ground cover for wildlife food source.

Next Step **Treatments:**

Acceptable

Regen:

Other

This might be a good opening to try the RGS clover mix.

Comment:

FRD will need to use at least part of this stand for a timber landing.

Site Condition

Traverse	City	Mgt.	Unit
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Report 3 -- Treatments

Compartment: 31 Year of Entry: 2023

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а **Treatment** Stand Size Stand BA **Treatment** Treatment **Cover Type** Age Habitat n Method Objective Structure Name CoverType Density Age Range Type Cut d 57 61031057-NF 3.2 310 - Herbaceous Nonstocked Unspec NonForestMat Herbaceous/Crop 3105 - Mixed Openland /Grass Planting Upland ified Herbaceous Prescription Brush hog (or hand fell) around select leave trees and/or patches. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Fertilize plantings Specs: and protect with wire cages or tubex. Considering establishing herbaceous/forbs ground cover for wildlife food source. Next Step Treatments: Acceptable Regen: Other Comment: Site Condition Proposed Start Date: 10/1 /2022 61031059-Cut 73.2 4130 - Aspen Poletimber 41 Unspec Harvest Clearcut with 413 - Aspen Even-Aged No Well Retention ified Prescription Harvest all hardwood species for regeneration and expansion of aspen. Retain any conifers. Retain any oak, if present. Mark to retain any unique/ large maple or cherry as needed. Possibly have retention island around any lowland features as needed. Add drumming spec for Specs: grouse and add debris pile spec for small mammal use. Next Step Monitoring, Natural Regen (Re-Inventory) **Treatments:** Acceptable aspen, maple, cherry, any conifer species. Regen: Use appropriate methods to protect Snowmobile Trail and its surface during project implementation. **Other** Comment: Site Condition Proposed Start Date: 10/1 /2022 61031063-Cut 17.3 4130 - Aspen Poletimber Unspec Harvest Clearcut with No 56 413 - Aspen Even-Aged Well ified Retention Prescription Harvest all hardwoods to regenerate and expand aspen component. Leave all conifers. Possibly, mark a few retention islands as well as mark to leave any unique large red maple or cherry for retention as needed. Add drumming log spec, for grouse, and possible add spec for Specs: slash piles for small mammals. Landing would be in adjacent natural opening stand 46. Monitoring, Natural Regen (Re-Inventory) Next Step Treatments: Acceptable aspen, maple, cherry Regen: Use appropriate methods to protect Snowmobile Trail and its surface during project implementation. Other

Comment:

Site Condition

Report 3 -- Treatments

Compartment: 31 Year of Entry: 2023

Deciduous

а **Treatment** Stand Size Stand BA **Treatment Treatment Cover Type** Acres Age Habitat n Method Objective Structure Name CoverType Density Age Range Type Cut d 68 61031068-Cut 20.0 4116 - Mixed N. Poletimber 111-Harvest Clearcut with 4139 - Aspen, Even-Aged Nο Hardwood - Aspen Retention Mixed Well 140

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t

Prescription Harvest all hardwoods to regenerate and expand aspen component. Leave all conifers and any oak that may exist in stand. Mark a few retention islands as well as mark to leave any unique large red maple or cherry for retention. Add drumming log spec. for grouse, and possible add spec for slash piles for small mammals. Will need to have landing in adjacent opening stand 56.

Next Step

Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable Aspen, red maple, cherry,

Regen:

Specs:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2022

61031071-NF 1.9 310 - Herbaceous Nonstocked Unspec NonForestMgt Fruit Tree/Shrub 3204 - Mast No Openland Planting Producing Shrub ified

Specs:

Prescription Brush hog (or hand fell) around select leave trees and/or patches. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Fertilize plantings and protect with wire cages or tubex. Considering establishing herbaceous/forbs ground cover for wildlife food source.

Next Step **Treatments:**

<u>Acceptable</u>

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2022

61031073-NF 2.5 310 - Herbaceous Nonstocked Unspec NonForestMgt Fruit Tree/Shrub 3204 - Mast No Openland ified **Planting** Producing Shrub

Specs:

Prescription Brush hog (or hand fell) around select leave trees and/or patches . Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Fertilize plantings and protect with wire cages or tubex. Considering establishing herbaceous/forbs ground cover for wildlife food source.

Next Step Treatments:

<u>Acceptable</u>

Regen:

Other

Comment:

Site Condition

Report 3 -- Treatments

Compartment: 31 Year of Entry: 2023

Herbaceous

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Treatment Stand Size Stand BA **Treatment** Treatment **Cover Type** Acres Age Habitat n Method Objective Structure Name CoverType Density Age Range Type Cut d

79 61031079-NF 3.6 310 - Herbaceous Nonstocked Unspec NonForestMgt Herbaceous/Crop 3105 - Mixed No ified /Grass Planting Upland

Prescription Specs:

Brush hog (or hand fell) around select leave trees and/or patches. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Fertilize plantings and protect with wire cages or tubex. Considering establishing herbaceous/forbs ground cover for wildlife food source.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2022

80 61031080-Cut 17.7 4139 - Aspen, Poletimber 37 Unspec Harvest Clearcut with 413 - Aspen Even-Aged No Mixed Deciduous Well ified Retention

Prescription Specs: Harvest all hardwoods to regenerate and expand aspen component. Leave all conifers. Leave any oak if present. Mark to leave any unique large red maple or cherry for retention as needed. Most retention is within the stand portion that cannot be harvested due to lowland conditions to the south. Add drumming log spec. for grouse, and possible add spec for slash piles for small mammals.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable aspen, maple, cherry

Regen:

Other Use appropriate methods to protect Snowmobile Trail and its surface during project implementation.

Comment:

Site Condition

Proposed Start Date: 10/1 /2022

83 61031083-NF 3.0 330 - Low-Density Nonstocked Unspec NonForestMgt Fruit Tree/Shrub 3204 - Mast No
Trees ified Planting Producing Shrub

Prescription Brush hog (or hand fell) around select leave trees and/or patches. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Fertilize plantings and protect with wire cages or tubex. Considering establishing herbaceous/forbs ground cover for wildlife food source.

Next Step Treatments:

Acceptable

Regen:

Other Comment:

Site Condition

Report 3 -- Treatments

Compartment: 31 Year of Entry: 2023

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Treatment Stand Size Stand BA **Treatment Treatment Cover Type** Acres Age Habitat n CoverType Method Objective Structure Name Density Age Range Type Cut d

85 61031085-NF 2.3 330 - Low-Density Nonstocked Trees

Unspec NonForestMat ified

Fruit Tree/Shrub Planting

3204 - Mast Producing Shrub

Specs:

Prescription Brush hog (or hand fell) around select leave trees and/or patches. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Fertilize plantings and protect with wire cages or tubex. Considering establishing herbaceous/forbs ground cover for wildlife food source.

Next Step Treatments:

Acceptable

Regen:

Other Comment:

Site Condition

Proposed Start Date: 10/1 /2022

61031091-NF 91

1.4 310 - Herbaceous Nonstocked Openland

Unspec NonForestMgt Herbaceous/Crop ified

/Grass Planting

3105 - Mixed Upland Herbaceous

Nο

Nο

Specs:

Prescription Brush hog (or hand fell) around select leave trees and/or patches. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Fertilize plantings and protect with wire cages or tubex. Considering establishing herbaceous/forbs ground cover for wildlife food source.

Next Step **Treatments:**

<u>Acceptable</u>

Regen:

<u>Other</u>

Comment:

Site Condition

Proposed Start Date: 10/1 /2022

61031092-NF

5.6 31021 - Cool Season Grass Nonstocked

Unspec NonForestMgt Herbaceous/Crop ified /Grass Planting

3105 - Mixed Upland Herbaceous

No

Specs:

Prescription Brush hog (or hand fell) around select leave trees and/or patches. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Fertilize plantings and protect with wire cages or tubex. Considering establishing herbaceous/forbs ground cover for wildlife food source.

Next Step

Treatments:

Acceptable Regen:

Other Comment: This opening is a traditional wildlife planting. Plant to annual rye for several years and then convert to a pasture mix (i.e. clover/alfalfa) if soil will support it. Periodic maintenance such as mowing, fertilization, reseeding, and/or removal of woody encroachment.

The access road needs improvement.

Site Condition

s

S t									Year of Entr	y: 2023	DNR
a n Treatr d Nan		Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Habita Cut
93 610310	93-Cut	22.0	42110 - Planted Red Pine	Poletimbe Well	er 65	171- 200	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	No
Prescription Specs:								es. Primarily focus with even spacing			
Next Step Treatments:											
Acceptable Regen:											
Other Comment:											
Site Condition	<u>on</u>										
Proposed St	art Date:	10/1 /20)22								
96 610310)96-Cut	15.3	42110 - Planted Red Pine	Poletimbe Well	er 65	171- 200	Harvest	Crown Thinning	4211 - Planted Red Pine	Even-Aged	No
Prescription Specs:								es. Primarily focus with even spacing			
Next Step Treatments:											
Acceptable Regen:											
Other Comment:	Use app	ropriate	methods to protect	Snowmobil	e Trail a	and its su	rface during pro	pject implementation	١.		
Site Condition	n										
Proposed St		10/1 /20)22								
97 610310)97-Cut	18.7	4130 - Aspen	Poletimbe Well	er 57	Unspec ified	Harvest	Clearcut with Retention	413 - Aspen	Even-Aged	No
Prescription Specs:	any ced needed.	ar, if pres	sent. Possibly, mar imming log spec. fo	k a few rete	ention is	slands as	well as mark to	rhite pine but mark t leave any unique la biles for small mamr	arge red maple or	cherry for ret	ention as
Next Step Treatments:	Monitori	ng, Natu	ral Regen (Re-Inver	ntory)							
Acceptable Regen:	aspen, r	naple, ch	nerry, white pine								
Other Comment:											
Site Condition	<u>n</u>										
Proposed St	art Date:	10/1 /20)22								
100 61031	100-NF	2.1	310 - Herbaceous Openland	Nonstocke	ed	Unspec ified	NonForestMg	t Fruit Tree/Shrub Planting	3204 - Mast Producing Shrul	b	No
Prescription Specs:	wildlife f	ood and	cover. Could plant	site approp	riate na	ative shrul	bs and/or mast	ered mast producin producing trees for os ground cover for	wildlife food and	cover. Fertiliz	
Next Step Treatments:	·		Ü		Ū	Ū		·			
Acceptable Regen:											
Other Comment:											
0 0 1											

Proposed Start Date: 10/1 /2022

Site Condition

Report 3 -- Treatments

Compartment: 31

S Year of Entry: 2023 t а **Treatment** Stand Size Stand BA **Treatment Treatment Cover Type** Acres Age Habitat n Age Method Objective Name CoverType Density Range Type Structure Cut d 116 61031116-Cut 30.4 4139 - Aspen, Poletimber Unspec Harvest Clearcut with 413 - Aspen Even-Aged Nο Mixed Deciduous Well ified Retention Prescription Harvest all hardwood species. Leave any oak that may be present. Leave all conifer species. Mark for retention any large/unique hardwood Specs: as needed. Leave retention areas on south end around water features. Also may need retention islands in a few low spots if too wet for logging equipment. Add drumming spec for grouse. Next Step Monitoring, Natural Regen (Re-Inventory) Treatments: Acceptable aspen, maple, conifer species Regen: Other Comment: Site Condition Proposed Start Date: 10/1 /2022 Unspec NonForestMgt Herbaceous/Crop 3102 - Grass 3105 - Mixed 123 61031123-NF 2.1 Nonstocked Nο ified /Grass Planting Upland Herbaceous Prescription Brush hog (or hand fell) around select leave trees and/or patches. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Fertilize plantings Specs: and protect with wire cages or tubex. Considering establishing herbaceous/forbs ground cover for wildlife food source. Next Step **Treatments:** <u>Acceptable</u> Regen: This opening is a traditional wildlife planting. Plant to annual rye for several years and then convert to a pasture mix (i.e. clover/alfalfa) if soil **Other** will support it. Periodic maintenance such as mowing, fertilization, reseeding, and/or removal of woody encroachment. Comment: VERY SANDY SOIL. Site Condition Proposed Start Date: 10/1 /2022 61031154-NF 6.0 330 - Low-Density Nonstocked Unspec NonForestMqt Fruit Tree/Shrub 3204 - Mast No **Trees** ified **Planting** Producing Shrub Prescription Brush hog (or hand fell) around select leave trees and/or patches. Leave scattered mast producing trees and shrubs and/or conifers for Specs: and protect with wire cages or tubex. Considering establishing herbaceous/forbs ground cover for wildlife food source.

wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Fertilize plantings

Next Step **Treatments:**

Acceptable Regen:

Other Comment:

Site Condition

Traverse City Mgt. Unit Report 3 -- Treatments Compartment: 31 S Year of Entry: 2023 t а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age Habitat n Age Method Objective Structure Name Density Range CoverType Type Cut d 157 61031157-NF 1.0 310 - Herbaceous Nonstocked Unspec NonForestMgt Fruit Tree/Shrub 3204 - Mast No Planting Producing Shrub Openland ified Prescription Brush hog (or hand fell) around select leave trees and/or patches. Leave scattered mast producing trees and shrubs and/or conifers for wildlife food and cover. Could plant site appropriate native shrubs and/or mast producing trees for wildlife food and cover. Fertilize plantings Specs: and protect with wire cages or tubex. Considering establishing herbaceous/forbs ground cover for wildlife food source. Next Step Treatments: <u>Acceptable</u> Regen: Other Comment:

Total Treatment Acreage Proposed: 383.2

Proposed Start Date: 10/1 /2022

Site Condition

Compartment: 31

Traverse City Mgt. Unit

53%

Craig Allen: Examiner Year of Entry: 2023

Total	Acres	Acres Avail	Acres	D	omina	nt Sit	e Cond	dition	S		
Acres	Available	With Condition	Not Available		5C	2A	2G	2H	3J	3L	5E
944	745	69	131	Aspen	69	6	65	34		0	25
4	4	0	0	Bog							
70	0	0	70	Cedar			70				
3	3	0	0	Hemlock							
77	74	0	3	Herbaceous Openland		3	0				
12	12	0	0	Jack Pine							
48	48	0	0	Low-Density Trees							
279	18	0	261	Lowland Aspen/Balsam Poplar			261				
18	0	0	18	Lowland Conifers			10			8	
1100	5	0	1095	Lowland Deciduous		14	1,070		12		
35	35	0	0	Lowland Shrub							0
35	35	0	0	Natural Mixed Pines							
86	68	1	18	Northern Hardwood	1			18			
139	135	5	0	Red Pine	5						
73	61	0	12	Upland Mixed Forest							12
6	0	0	6	Upland Spruce/Fir						6	
23	23	0	0	Urban							0
2	2	0	0	Water							
108	108	0	0	White Pine							
3,064	1,375	74	1,615	Total Forested Acres	74	22	1,477	52	12	14	37

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 Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
5E: Long-Term Retention	1	Unspecified	Unspecified	Unspecified	Unspecified
		Dominant Site Condition Acres 5E: Long-Term Retention 1			

45%

2%

Traverse City Mgt. Unit

Craig Allen: Examiner Year of Entry: 2023

Compartment: 31

2	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	71	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments: Little Betsie River fl	lows thru					
3	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	18	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
4	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	57	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
5	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	46	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	12	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Little Betsie River fl	lows thru					
7	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	53	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Traverse City Mgt. Unit
Craig Allen: Examiner

Compartment: 31
Year of Entry: 2023

8	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	119	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
9	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	68	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
10	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	11	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
11	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	81	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
12	Unavailable	2A: Adjacent landowner denied access	23	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
13	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	88	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						

Traverse City Mgt. Unit

Compartment: 31 Year of Entry: 2023 Craig Allen: Examiner

14	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	6	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
15	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	47	Unspecified	Unspecified	Unspecified	Unspecified
C	comments:						
16	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	40	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
17	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	5	Unspecified	Unspecified	Unspecified	Unspecified
C	comments:						
18	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	202	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
19	Unavailable	3L: Other wildlife concerns	2	Unspecified	Unspecified	Unspecified	Unspecified
C	comments:						

Compartment: 31
Year of Entry: 2023

Traverse City Mgt. Unit

Craig Allen: Examiner

20	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	33	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
21	Unavailable	5E: Long-Term Retention	3	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
22	Unavailable	5E: Long-Term Retention	4	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
23	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	73	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
24	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	18	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
25	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	20	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						

Traverse City Mgt. Unit

Craig Allen: Examiner

Compartment: 31 Year of Entry: 2023

26	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	65	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
27	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	108	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
28	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	81	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
29	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	5	Unspecified	Unspecified	Unspecified	Unspecified
C	Comments:						
30	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	23	Unspecified	Unspecified	Unspecified	Unspecified
0	Comments:						

Traverse City Mgt. Unit

Craig Allen: Examiner

Compartment: 31 Year of Entry: 2023

31	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	19	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Delay harvest in or	der to stagger age classes of as	spen w	ith adjacent stands.			
32	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	19	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
33	Unavailable	5E: Long-Term Retention	2	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: these are two reter	ntion island that were left for sale	e #61-(096-13-01. which was harves	sted in Nov.2015		
34	Unavailable	5E: Long-Term Retention	27	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments:						
35	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	10	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
36	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	13	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						

Compartment: 31

Year of Entry: 2023 **Craig Allen: Examiner** Unspecified Unspecified Unspecified Unspecified 37 Unavailable 2G: Too wet (sensitive 19 soils, does not include access issues) Comments: Unspecified Unspecified Unspecified Unspecified 38 Unavailable 2G: Too wet (sensitive 13 soils, does not include access issues) Comments: Unspecified Unspecified Unspecified Unspecified 39 Unavailable 6 2G: Too wet (sensitive soils, does not include access issues) Comments: drainage area...usually has standing water and seasonal flow 5E: Long-Term Retention Unspecified Unspecified Unspecified 41 Unavailable 2G: Too wet (sensitive 4 soils, does not include access issues) Comments: 42 Unavailable 5E: Long-Term Retention Unspecified Unspecified Unspecified Unspecified 1 Comments: Unspecified Unspecified Unspecified Unspecified 43 Unavailable 2G: Too wet (sensitive 31 soils, does not include access issues) Comments:

Traverse City Mgt. Unit

Traverse City Mgt. Unit

Compartment: 31 Year of Entry: 2023 Craig Allen: Examiner

45	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	6	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
46	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	2	Unspecified	Unspecified	Unspecified	Unspecified
C	comments:						
47	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	1	Unspecified	Unspecified	Unspecified	Unspecified
C	comments:						
48	Unavailable	3L: Other wildlife concerns	5	Unspecified	Unspecified	Unspecified	Unspecified
_	omments: eave for wildlife th	ermal and hiding cover.					
50	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	11	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						
51	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	18	Unspecified	Unspecified	Unspecified	Unspecified
C	omments:						

Traverse City Mgt. Unit
Craig Allen: Examiner

Compartment: 31 Year of Entry: 2023

52	Unavailable	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	18	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
53	Unavailable	ble 2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)		Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
54	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	24	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
55	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	30	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
d	elay harvest of thi	s area in order to stagger age c	lasses c	of aspen with adjacent stand	ls. Stands to south were	harvested in 2015.	
56	Unavailable	3L: Other wildlife concerns	8	Unspecified	Unspecified	Unspecified	Unspecified
С	comments:						
57	Unavailable	2G: Too wet (sensitive soils, does not include access issues)	4	Unspecified	Unspecified	Unspecified	Unspecified
С	omments:						

Compartment: 31

Traverse City Mgt. Unit

Craig Allen: Examiner Year of Entry: 2023

58	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	11	Unspecified	Unspecified	Unspecified	Unspecified	
_	omments: arvest this area v	when adjacent stand 104 is harve	ested.					
59	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	11	Unspecified	Unspecified	Unspecified	Unspecified	
С	omments:							
60	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	5	Unspecified	Unspecified	Unspecified	Unspecified	
	Comments: This portion has less volume than other portions of this plantation at this time so this portion is not in need of thinning at this time.							

9/14/2021 3:19:08 PM - Page 11 of 11 BORUSZEWSKIA

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: 31
Year of Entry 2023



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	า Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area		
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen condi- stocked trout populations and those of other coldwater fish speci- 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.	es (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 d communities are ecologically and socially significant in their effect as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, iversity of plants and wildlife. Riparian cts on water quality and quantity, as well		
HCVA	Natural Rivers	ere are two Natural Rivers datasets which are derived from spatial buffers set from an established and roved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for st Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data er.			

Report 7 - Stands

Compartment: 31 Year of Entry: 2023



Stand	Level 4 C	over Type		Size Density	Acres	Stand Age	BA Range	Managed S	Site	General Comments
1	3105 - Mixed U	pland Herba	aceous	Nonstocked	2.9		Unspecified	No		
2	6113 - Lo	wland Maple	e	Sawtimber Wel	l 13.6	104	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Red Maple	100	Log/Pole	18 104	Re	ed Maple	Medium	Variable	Sapling	
3	6112 - Lo	wland Aspe	n	Poletimber Wel	l 25.9	37	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	
	Red Maple	20	Pole	6 37	Re	ed Maple	Medium	Variable	Sapling	
	Quaking Aspen	65	Pole	6 37	Bla	ck Cherry	Low	Variable	Sapling	
	Black Cherry	15	Pole	6 37	•					•
4	310 - Herbac	eous Openl	land	Nonstocked	1.6		Unspecified	No		
5		wland Maple	9	Sawtimber Wel	1	95	Unspecified	N/A		
	Canopy Species	% Cover		DBH Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	
	Red Maple	80	Log/Pole	14 95	Re	ed Maple	Low	Variable	Pole	
	Quaking Aspen	20	Log/Pole	11	Re	ed Maple	Medium	Variable	Sapling	
7	310 - Herbac	eous Openl	land	Nonstocked	2.0		Unspecified	No		
8	6229 - Mixed	d lowland sh	ırub	Nonstocked	7.7		Unspecified	No		flood plain of little betsie riverlots of clumps of alder and grasses.
9	4130	- Aspen		Poletimber Wel	l 6.0	37	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	
	Red Maple	20	Pole	4 37		ed Maple	Medium	Variable	Sapling	
	Quaking Aspen	65	Pole	4 37	Bla	ck Cherry	Low	Variable	Sapling	
	Black Cherry	15	Pole	4 37		·				
10	6113 - Lo	wland Maple	Э	Sawtimber Wel	l 18.4	95	51-80	N/A		
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	
	Red Maple	100	Log/Pole			erican Elm	Low	Variable	Sapling	
	·					ed Maple	Medium	Variable	Sapling	
11	6113 - Lo	wland Maple	e Sa	awtimber Mediu	m 46.6	95	Unspecified	N/A		standing water in most locations year round.
	Canopy Species	% Cover	Size Class	DBH Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	
	Red Maple	70	Log/Pole	14 95	Re	ed Maple	Medium	Variable	Pole	
	Quaking Aspen	30	Log/Pole	10	Re	ed Maple	High	Variable	Sapling	



Stand	d Level 4 Co	Level 4 Cover Type Size Density Acres Stand Age BA Range Managed Site	General Comments								
12	4130	- Aspen	1	Poletimb	er Well	27.7	37	Unspecified	N/A		Has some lowland spots.
	Canopy Species	% Cover	Size Class	DBF	l Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	
	Red Maple	20	Pole	8	37	Re	ed Maple	Medium	Variable	Sapling	
	Quaking Aspen	75	Pole	7	37	Qual	king Aspen	Low	Variable	Sapling	
	Black Cherry	5	Pole	8	37						
13	6112 - Lov	wland Aspe	n I	Poletimb	er Well	15.0	57	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBF	l Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	
	Red Maple	20	Pole/Log	9	60	Re	ed Maple	Medium	Variable	Sapling	
	Quaking Aspen	80	Pole/Log	9	57				•		
14	4130	- Aspen		Sapling	y Well	5.6	7	Immature	N/A		small island standwas cut in summer of 2014.
	Canopy Species	% Cover	Size Class	DBH	l Age						
	Bigtooth Aspen	100	Sapling	1	7						
15		wland Aspe	n l	Poletimb		12.6	37	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBF	l Age		nopy Specie	es Density	Avg. Height	Size	
	Red Maple	10	Pole	5	37	Bla	ck Cherry	Low	Variable	Sapling	
	Quaking Aspen	90	Pole	5	37						
17	6117 - Lowland Con	Deciduous, iferous	Mixed	Sawtimb	er Well	11.6	95	Unspecified	N/A		little betsie river flood plain
	Canopy Species	% Cover	Size Class	DBF	l Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	
	Red Maple	15	Log/Pole	11	95	Ame	erican Elm	Low	Variable	Sapling	
	Quaking Aspen	5	Log/Pole	12		Re	ed Maple	Low	Variable	Pole	
	White Pine	35	Log/Pole/XLo	og 15	95	Ta	ag Alder	Medium	Variable	Tall Shrub	
	Black Cherry	45	Log/Pole	11	95			-			
18	4116 - Mixed N.	Hardwood -	- Aspen Po	oletimbe	Mediun	n 10.5	40	51-80	N/A		portion of old railroad grade going from Bentley road towards Thompsonville road.
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	Thompsonvine road.
	Red Maple	60	Pole	8	40	Re	ed Maple	Low	Variable	Sapling	
	Quaking Aspen	40	Pole	8	40		Alder	Medium	Variable	Tall Shrub	
						Asp	oen (spp.)	Low	Variable	Sapling	
19	42110 - Pla	nted Red P	ine I	Poletimb	er Well	25.4	65	171-200	N/A		Thinned twice: 1993 3rd row, 2004 every 3rd tree.
	Canopy Species	% Cover	Size Class	DBF	l Age						
	Red Pine	100	Pole/Log	9	65						



Stand	d Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	ite	General Comments	MICHIGAN .
20		- Aspen		Sapling		64.3	7	Immature	N/A		Regen harvest done in July of 2014. Retention islands and trees within cut area.	ndividual
	Canopy Species	% Cover	Size Class	DBH	Age						tiees within cut area.	
	Red Maple	10	Sapling	1								
	Quaking Aspen	60	Sapling	1	7							
	Bigtooth Aspen	10	Sapling	1	7							
	Black Cherry	20	Sapling	1	7							
21	3301 - Low Densi	ity Deciduc	ous Trees	Nonsto	cked	6.4		Unspecified	No		slender travel area with two track	
22	42120 - Plar	nted Jack F	Pine I	Poletimb	er Well	11.9	65	51-80	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	anopy Speci	es Density	Avg. Height	Size		
	Jack Pine	100	Pole	7	65	Bla	ck Cherry	Low	Variable	Sapling		
23		wland Aspe		Poletimb		13.2	57	Unspecified	N/A		1	
	Canopy Species		Size Class		Age	Sub-Ca	anopy Speci		Avg. Height	Size		
	Red Maple	10	Log/Pole	10			ed Maple	Medium	Variable	Sapling		
	Quaking Aspen	65	Pole/Log	9	57	Bla	ck Cherry	Low	Variable	Sapling		
	Bigtooth Aspen	10	Pole/Log	9	57							
	White Pine	5	Log/XLog/Pol	e 15								
	Black Cherry	10	Log/Pole	10								
24	4130	- Aspen		Sapling	Well	29.2	18	Unspecified	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age							
	Red Maple	10	Sapling/Pole	3	18							
	Quaking Aspen	40	Sapling/Pole	3	18							
	Bigtooth Aspen	40	Sapling/Pole	3	18							
	Black Cherry	10	Sapling/Pole	3	18							
25	6113 - Lo	wland Map	le Po	oletimber	Mediun	n 19.1	37	Unspecified	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	anopy Speci	es Density	Avg. Height	Size		
	Red Maple	90	Pole/Sapling	5	37	Ame	erican Elm	Low	Variable	Sapling		
	Quaking Aspen	10	Pole/Sapling	5		Re	ed Maple	Medium	Variable	Sapling		
						T	ag Alder	Medium	Variable	Tall Shrub		
26	110 - Low Ir	ntensity Url	ban	Nonsto	cked	1.4		Unspecified			active oil/gas well site	
27	110 - Low Ir	ntensity Url	ban	Nonsto	cked	1.1		Unspecified				



Stand	d Level 4 C	over Type		Size Den	sity	Acres	Stand Age	BA Range	Managed S	ite	General Comments
28	42350 - Up	land Hemic	ock	Sawtimbe	r Well	3.3	96	51-80	N/A		
	Canopy Species	% Cover			Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Red Maple	30	Log/Pole	12		Re	d Maple	Low	Variable	Pole	
	Hemlock	70	Log/Pole	11	96	H	emlock	Low	Variable	Pole	
29	110 - Low I	ntensity Urb	oan	Nonstoo	ked	1.1		Unspecified			active oil/gas well site.
30	3105 - Mixed U	pland Herba	aceous	Nonstoc	ked	1.4		Unspecified	No		
31	6113 - Lo	wland Mapl	e	Sawtimbe	r Well	71.0	105	Unspecified	N/A		Little Betsie River flows thru
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Red Maple	100	Log/Pole	18	105	Ame	rican Elm	Low	Variable	Sapling	
						Re	d Maple	Low	Variable	Sapling	
						BI	ue Ash	Low	Variable	Sapling	
32	4130	- Aspen		Poletimbe	r Well	31.2	37	Unspecified	N/A		has some drainages
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Red Maple	5	Pole	7	37		ck Cherry	Medium	Variable	Sapling	
	Quaking Aspen	80	Pole	7	37				ı		
	Black Cherry	15	Pole	7	37						
33	4130	- Aspen		Sapling	Well	37.1	7	Immature	N/A		regen cut in summer of 2014. retention islands and individual trees left
	Canopy Species	% Cover	Size Class	DBH	Age						within
	Red Maple	10	Sapling	1							
	Quaking Aspen	44	Sapling	1	7						
	Bigtooth Aspen	43	Sapling	1	7						
	Black Cherry	3	Sapling	1							
34	6113 - Lo	wland Mapl	e	Sapling	Poor	12.6	32	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age						
	American Elm	20	Sapling	3							
	Red Maple	80	Sapling	3	32						
35	42201 - Natural Dec	White Pine iduous	, Mixed	Sawtimbe		11.6	85	51-80	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Quaking Aspen	30	Pole	7	41	Wh	nite Pine	Medium	Variable	Sapling	
	White Pine	70	Log/Pole	16	85	Blac	ck Cherry	Low	Variable	Sapling	



Stand	d Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	Site	General Comments
36	42110 - Pla	nted Red P	ine	Poletimb	er Well	24.5	65	171-200	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age						
	Red Pine	100	Log/Pole	11	65						
37	4130	- Aspen		Sapling	Well	68.3	6	Immature	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Speci	es Density	Avg. Height	Size	
	Red Maple	30	Sapling	1	6	Re	ed Maple	Medium	Variable	Sapling	
	Quaking Aspen	35	Sapling	1	6						
	Bigtooth Aspen	25	Sapling	1	6						
	Black Cherry	10	Sapling	1	6						
38	4130	- Aspen		Poletimb	er Well	19.3	41	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Speci	es Density	Avg. Height	Size	
	Red Maple	30	Pole	8	41	Re	ed Maple	Medium	Variable	Sapling	
	Quaking Aspen	35	Pole	8	41						-
	Bigtooth Aspen	25	Pole	8	41						
	Black Cherry	10	Pole	8	41						
39	42110 - Pla	nted Red P	ine	Poletimb	er Well	5.6	39	51-80	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Speci	es Density	Avg. Height	Size	
	Bigtooth Aspen	5	Pole	6		W	hite Pine	Low	< 5 feet	Sapling	
	Red Pine	90	Pole	6	39	Bla	ck Cherry	Low	< 5 feet	Sapling	
	Black Cherry	5	Pole	6		Bigto	ooth Aspen	Low	Variable	Sapling	
40	4311 - Pin	e, Aspen M	lix S	Sawtimber	Medium	n 6.1	80	1-50	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Speci	es Density	Avg. Height	Size	
	White Pine	50	Log/Pole	12	80	Bla	ck Cherry	Medium	< 5 feet	Sapling	
	Bigtooth Aspen	30	Pole	8				<u> </u>			
	Black Cherry	20	Log/Pole	12							
41	4311 - Pin	e, Aspen M	lix	Poletimb	er Well	27.5	39	51-80	N/A		Was underplanted with red pine in 1982, but some areas did not take we
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Speci	es Density	Avg. Height	Size	
	Quaking Aspen	30	Pole	7	41	W	hite Pine	Low	Variable	Sapling	
	Bigtooth Aspen	20	Pole	7	41	Bla	ck Cherry	Low	Variable	Sapling	
	White Pine	10	Pole	6	41	Bigto	ooth Aspen	Low	Variable	Sapling	
	Red Pine	40	Pole	6	39						
42	31022 - Warn	n Season G	Grass	Nonsto	cked	8.6		Unspecified	Managed Op	pening	
43	310 - Herbac	eous Open	land	Nonsto	cked	1.9		Unspecified	No		



Stan	nd Level 4 Cover Type	5	Size De	ensity	Acres	Stand Age	BA Range	Managed S	ite		General Comments	MICHI	
44	4130	- Aspen	Р	oletimb	er Well	24.9	57	Unspecified	N/A				
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size			
	Red Maple	10	Log/Pole	10		Re	d Maple	Medium	Variable	Sapling			
	Quaking Aspen	65	Pole/Log	9	57	Blac	ck Cherry	Low	Variable	Sapling			
	Bigtooth Aspen	10	Pole/Log	9	57								
	White Pine	5	Log/XLog/Pole	15									
	Black Cherry	10	Log/Pole	10									
45	4130	- Aspen	S	apling l	Medium	33.4	26	Unspecified	N/A				
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size			
	Quaking Aspen	65	Sapling/Pole	4	26	Blac	ck Cherry	Medium	< 5 feet	Sapling			
	Black Cherry	35	Sapling/Pole	4	26								
46	330 - Low-	Density Tre	ees	Nonst	ocked	4.4		Unspecified	No				
17	110 - Low I	ntensity Url	oan	Nonst	ocked	1.1		Unspecified	No		Active oil/gas well site.		
48	110 - Low I	ntensity Url	oan	Nonst	ocked	1.2		Unspecified			Active oil/gas well site.		
49	4116 - Mixed N.	Hardwood	- Aspen P	oletimb	er Well	32.0	43	81-110	N/A				
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size			
			Pole				d Maple	High	Variable				
	Red Maple	60	Pole	8	43	Re	iu iviapie	riigii	variable	Sapilitig			
	Quaking Aspen	15	Pole	8	43	Re	и марте	riigii	variable	Sapling			
	<u> </u>					Re	и марте	riigii	variable	Sapiling			
	Quaking Aspen	15	Pole	8	43	Re	и марте	r ligit	variable	Sapiling			
50	Quaking Aspen Bigtooth Aspen Black Cherry	15 10	Pole Pole Pole	8 8 8	43 43		·	Unspecified	N/A	Заршія			
50	Quaking Aspen Bigtooth Aspen Black Cherry	15 10 15 - Aspen % Cover	Pole Pole Pole Pole	8 8 8 etimbe	43 43 43	n 22.0	·	Unspecified s Density		Size			
50	Quaking Aspen Bigtooth Aspen Black Cherry 4130	15 10 15 - Aspen	Pole Pole Pole Pole	8 8 8 etimbe	43 43 43 r Medium	n 22.0 Sub-Ca	41	Unspecified	N/A				
50	Quaking Aspen Bigtooth Aspen Black Cherry 4130 Canopy Species	15 10 15 - Aspen % Cover	Pole Pole Pole Size Class	8 8 8 etimbe	43 43 43 r Medium	n 22.0 Sub-Ca	41 nopy Species	Unspecified s Density	N/A Avg. Height	Size			



Canopy Species Red Maple Quaking Aspen digtooth Aspen	- Aspen **Cover 15 65	Size Class Pole/Log		l Age	77.1 Sub-Car	55 nopy Specie	Unspecified Per Density	N/A Avg. Height		1
Red Maple Quaking Aspen Sigtooth Aspen	15	Pole/Log			Sub-Car	nopy Specie	es Density	Ava Height	٥.	1
Quaking Aspen sigtooth Aspen			9	- E				Avg. Height	Size	
ligtooth Aspen	65			55	Re	d Maple	Low	Variable	Sapling	
		Pole	7	55	Wh	ite Pine	Low	Variable	Sapling	
Dlack Charm	5	Pole/Log	8		Blac	k Cherry	Medium	Variable	Sapling	
Black Cherry	15	Pole/Log	9	55						
4139 - Aspen, M	Mixed Decid	suoub	Poletimb	er Well	24.5	37	Unspecified	N/A		
Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Specie	es Density	Avg. Height	Size	
Red Maple	30	Pole	7	37	Blac	k Cherry	Medium	< 5 feet	Sapling	
uaking Aspen	30	Pole	6	37						•
sigtooth Aspen	15	Pole	7	37						
Black Cherry	25	Pole	7	37						
110 - Low In	tensity Urb	an	Nonsto	ocked	1.3		Unspecified			active oil/gas well site.
330 - Low-Density Trees Nonstoo			ocked	2.9		Unspecified	No			
310 - Herbace	eous Openl	and	Nonsto	ocked	1.2		Unspecified	Managed Op	ening	
310 - Herbace	eous Openl	and	Nonsto	ocked	3.2		Unspecified	Managed Op	ening	
42200 - Natu	ral White F	 ine	Sawtimb	er Well	14.1	86	81-110	N/A		highly variable, lots of weevil damage. offers thermal coverage for
Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Specie	es Density	Avg. Height	Size	and aesthetic for highly used campsite.
									Sapling	
	5	Pole					Low	Variable		
White Pine		Log/Pole		86					1 0	
Black Cherry	10	Log/Pole								
4130 -	- Aspen		Poletimb	er Well	65.3	41	Unspecified	N/A		
Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Car	nopy Specie	es Density	Avg. Height	Size	
Red Maple	30	Pole/Log		41			Medium	Variable	Sapling	
uaking Aspen	35	Pole	8	41			1			1
		Dolo	8	41						
Sigtooth Aspen	25	Pole	0	41						
Si E	Red Maple ruaking Aspen igtooth Aspen Black Cherry 110 - Low In 330 - Low-D 310 - Herbace 310 - Herbace 42200 - Natu Canopy Species Red Maple ruaking Aspen White Pine Black Cherry 4130 - Canopy Species	Red Maple 30	Red Maple 30 Pole ruaking Aspen 30 Pole rigitooth Aspen 15 Pole Black Cherry 25 Pole 110 - Low Intensity Urban 330 - Low-Density Trees 340 - Herbaceous Openland 310 - Herbaceous Openland 42200 - Natural White Pine Canopy Species % Cover Size Class Red Maple 10 Log/Pole ruaking Aspen 5 Pole White Pine 75 Log/Pole Black Cherry 10 Log/Pole Black Cherry 10 Log/Pole 4130 - Aspen Canopy Species % Cover Size Class	Red Maple 30 Pole 7 Puaking Aspen 30 Pole 6 Igtooth Aspen 15 Pole 7 Black Cherry 25 Pole 7 110 - Low Intensity Urban Nonsto 330 - Low-Density Trees Nonsto 310 - Herbaceous Openland Nonsto 42200 - Natural White Pine Sawtimb Canopy Species % Cover Size Class DBH Puaking Aspen 5 Pole 8 White Pine 75 Log/Pole 16 Black Cherry 10 Log/Pole 12 4130 - Aspen Poletimb Canopy Species % Cover Size Class DBH	Red Maple 30 Pole 7 37 Puaking Aspen 30 Pole 6 37 Igtooth Aspen 15 Pole 7 37 Black Cherry 25 Pole 7 37 110 - Low Intensity Urban Nonstocked 330 - Low-Density Trees Nonstocked 310 - Herbaceous Openland Nonstocked 310 - Herbaceous Openland Nonstocked 42200 - Natural White Pine Sawtimber Well Canopy Species % Cover Size Class DBH Age Puaking Aspen 5 Pole 8 Pole 8 Pole Pole 12 Pole Pole Pole Pole Pole Pole Pole Pole	Red Maple 30	Red Maple	Red Maple	Red Maple 30 Pole 7 37 Black Cherry Medium < 5 feet susking Aspen 30 Pole 6 37 igtooth Aspen 15 Pole 7 37 Black Cherry 25 Pole 8 Black Cherry 26 Canopy Species % Cover Size Class DBH Age Black Cherry 10 Log/Pole 12 White Pine Cherry 10 Log/Pole 12 Black Cherry 10 Log/Pole 12 Sub-Canopy Species Density Avg. Height Canopy Species % Cover Size Class DBH Age Black Cherry 10 Log/Pole 12 Sub-Canopy Species Density Avg. Height Canopy Species % Cover Size Class DBH Age Sub-Canopy Species Density Avg. Height Canopy Species % Cover Size Class DBH Age Sub-Canopy Species Density Avg. Height Canopy Species % Cover Size Class DBH Age Sub-Canopy Species Density Avg. Height Canopy Species % Cover Size Class DBH Age Sub-Canopy Species Density Avg. Height Canopy Species % Cover Size Class DBH Age Sub-Canopy Species Density Avg. Height Canopy Specie	Red Maple 30 Pole 7 37 Black Cherry Medium < 5 feet Sapling waking Aspen 30 Pole 6 37 igtooth Aspen 15 Pole 7 37 Black Cherry 25 Pole 8 Black Cherry 25 Pole 8 Black Cherry 25 Pole 8 Black Cherry 26 Pole 8 Black Cherry 10 Log/Pole 12 White Pine 75 Log/Pole 16 86 Black Cherry 10 Log/Pole 12 Sub-Canopy Species White Pine 75 Log/Pole 12 Sub-Canopy Species Density Avg. Height Size Class White Pine 10 Log/Pole 12 Sub-Canopy Species Density Avg. Height Sapling White Pine 75 Log/Pole 12 Sub-Canopy Species Density Avg. Height Sapling White Pine 75 Log/Pole 12 Sub-Canopy Species Density Avg. Height Size Class DBH Age Sub-Canopy Species Density Avg. Height Size Class DBH Age Sub-Canopy Species Density Avg. Height Size Class DBH Age Sub-Canopy Species Density Avg. Height Size Class DBH Age Sub-Canopy Species Density Avg. Height Size



Stand				Size De	nsity	Acres	Stand Age	BA Range	Managed \$	Site	General Comments	MICHIGAN .
61	3105 - Mixed U	pland Herba	aceous	Nonsto	cked	2.4		Unspecified	No		old abandoned railroad grade leading into Thompsonville.	
62	4130	- Aspen		Poletimb	er Well	24.1	41	Unspecified	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Speci	es Density	Avg. Height	Size		
	Red Maple	30	Pole	8	41		d Maple	Mediun		Sapling		
	Quaking Aspen	35	Pole	8	41			'	'			
	Bigtooth Aspen	25	Pole	8	41							
	Black Cherry	10	Pole	8	41							
63	4130	- Aspen		Poletimb	er Well	27.9	56	Unspecified	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Speci	es Density	Avg. Height	Size		
	Red Maple	30	Pole/Log	9		Re	d Maple	Full	Variable	Sapling		
	Quaking Aspen	60	Pole/Log	9	56				-			
	Black Cherry	10	Log/Pole	11								
64	42210 - Nat	tural Red P	ine	Sawtimb	er Well	8.0	75	141-170	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Speci	es Density	Avg. Height	Size		
	White Pine	20	Log/Pole	13		Wh	nite Pine	Low	< 5 feet	Sapling		
	Red Pine	80	Log/Pole	13	75	Re	ed Pine	Mediun	n Variable	Sapling		
65	310 - Herbac	eous Open	land	Nonsto	cked	4.6		Unspecified	No			
66	122 - Road	d/Parking L	ot	Nonsto	cked	7.0		Unspecified	No		Bentley road	
67	4116 - Mixed N.	Hardwood	- Aspen	Poletimb	er Well	17.8	58	81-110	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Speci	es Density	Avg. Height	Size		
	Red Maple	40	Pole/Log	9	58	Re	d Maple	High	Variable	Sapling		
	Quaking Aspen	15	Pole/Log	9	58						-	
	Bigtooth Aspen	20	Pole/Log	9	58							
	Black Cherry	25	Log/Pole	10	58							
68	4116 - Mixed N.	Hardwood	- Aspen	Poletimb			57	111-140	N/A			
	Canopy Species	% Cover			Age		nopy Speci			Size		
	Red Maple	40	Log/Pole		57		d Maple	High	Variable	Sapling		
	Quaking Aspen	15	Pole/Log		57	Blac	ck Cherry	Low	Variable	Sapling		
	Bigtooth Aspen	15	Pole/Log		57							
	Black Cherry	30	Log/Pole	10	57							



Stand	Level 4 Co	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	ite	General Comments
69	42200 - Natu	ural White F	Pine	Sawtimbe		15.2	65	111-140	N/A		more open grown. Offering good cover for wildlife.
	Canopy Species	% Cover	Size Class	s DBH	Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	
	Bigtooth Aspen	10	Pole	7	41	WI	nite Pine	Medium	Variable	Sapling	
	White Pine	90	Log/Pole	12	65						
70	4130	- Aspen		Sapling	Well	21.9	26	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	s DBH	Age	Sub-Ca	nopy Specie	es Density	Avg. Height	Size	
	Red Maple	10	Sapling	4	26	Bla	ck Cherry	Low	< 5 feet	Sapling	
	Quaking Aspen	50	Sapling	4	26						
	Bigtooth Aspen	20	Sapling	4	26						
	Black Cherry	20	Sapling	4	26						
71	310 - Herbac	eous Open	land	Nonsto	cked	1.9		Unspecified	No		
72	4130	- Aspen		Sapling	Well	31.3	18	Unspecified	N/A		scattered mature leave trees of mainly white pine, and cherry.
	Canopy Species	% Cover	Size Class	s DBH	Age						
	Quaking Aspen	40	Sapling	3	18						
	Bigtooth Aspen	40	Sapling	3	18						
	Black Cherry	20	Sapling	3	18						
73	310 - Herbac	eous Open	land	Nonsto	cked	2.5		Unspecified	No		
74	6112 - Lov	wland Aspe	en	Poletimbe	er Well	6.4	37	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	s DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Red Maple	50	Pole	6	37	Re	ed Maple	Medium	Variable	Sapling	
	Quaking Aspen	50	Pole	6	37	В	lue Ash	Medium	Variable	Sapling	
75	110 - Low Ir	ntensity Urb	oan	Nonsto	cked	1.1		Unspecified			Active oil/gas well site
76	6229 - Mixed	d lowland sh	nrub	Nonsto	cked	27.3		Unspecified	No		flood plain/ Betsie River Bottom land. Vegetation mostly alder bushes and grasses.
77	310 - Herbac	eous Open	land	Nonsto	cked	5.1		Unspecified	No		
78	110 - Low Ir	ntensity Urb	oan	Nonsto	cked	2.1		Unspecified			active oil/gas well site.
79	310 - Herbac	eous Open	land	Nonsto	cked	3.6		Unspecified	Managed Op	pening	



Stan	nd Level 4 Cover Type			Size De	ensity	Acres	Stand Age	BA Range	Managed S	Site	General Comments	MICHIGAN .
80	4139 - Aspen,	Mixed Dec	iduous	Poletimb	er Well	23.1	37 l	Unspecified	N/A			
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size		
	Red Maple	30	Pole	7	37	Blac	ck Cherry	Low	Variable	Sapling		
	Quaking Aspen	30	Pole	6	37						-	
	Bigtooth Aspen	15	Pole	7	37							
	Black Cherry	25	Pole	7	37							
81	4132 - Asp	en, Jack P	ine	Saplino	g Well	10.0	6	Immature	N/A			
	Canopy Species	% Cover	Size Class	DBF	I Age							
	Red Maple	15	Sapling	1	6							
	Quaking Aspen	35	Sapling	1	6							
	Bigtooth Aspen	15	Sapling	1	6							
	White Pine	10	Log/Pole/XL	og 16								
	Jack Pine	25	Sapling	1	6							
82	6225	5 - Bog		Nonsto	ocked	3.8	ı	Unspecified	No			
83	330 - Low-I	Density Tre	ees	Nonsto	ocked	3.0	l	Unspecified	No			
84	3105 - Mixed Սլ	pland Herb	aceous	Nonsto	ocked	1.5	l	Unspecified	No		old abandoned oil/gas well site.	
85	330 - Low-I	Density Tre	ees	Nonsto	ocked	2.3	l	Unspecified	No			
86	6113 - Lo	wland Map	le	Poletimb	er Well	108.1	41 l	Unspecified	N/A			
	Canopy Species	% Cover	Size Class	s DBF	I Age	Sub-Car	nopy Species	s Density	Avg. Height	Size		
	American Elm	3	Pole	6	41		d Maple	Medium	Variable	Sapling		
	Red Maple	87	Pole	8	41			1110010111				
	Quaking Aspen	10	Pole	8	41							
87	310 - Herbac	eous Oper	nland	Nonsto	ocked	1.3	l	Unspecified	No			
88	6120 - Lo	wland Ceda	ar	Sawtimb	er Well	1.0	116	51-80	N/A			
	Canopy Species	% Cover	Size Class	DBF	I Age	Sub-Ca	nopy Species	s Density	Avg. Height	Size		
	Red Maple	5	Pole	8		Bla	ack Ash	Low	< 5 feet	Sapling		
	Quaking Aspen	15	Pole	7							1	
No	orthern White Cedar	80	Log/Pole	12	116							



Stand	d Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	ite	General Comments
89	4133 - Aspe			Sapling		32.1	6	Immature	N/A		Harvest in November of 2015 to regen and expand aspen.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Quaking Aspen	40	Sapling	1	6	Re	d Maple	Low	Variable	Sapling	
	Bigtooth Aspen	40	Sapling	1	6	Wh	nite Pine	Medium	Variable	Sapling	
	White Pine	20	Log/Pole	14		Blad	ck Cherry	Low	< 5 feet	Sapling	
90	310 - Herbac	eous Open	lland	Nonsto	cked	1.7		Unspecified	No		
91	310 - Herbac	eous Open	ıland	Nonsto	cked	1.4		Unspecified	No		
92	31021 - Cool	Season G	rass	Nonsto	cked	5.6		Unspecified	Managed Op	pening	wildlife division managed/cultivated opening.
93	42110 - Pla	nted Red P	rine	Poletimb	er Well	22.0	65	171-200	N/A		Thinned twice; 1994, 2004
	Canopy Species	% Cover	Size Class	DBH	Age						
	Red Pine	100	Log/Pole	10	65						
94	6113 - Lo	wland Mapl	e	Sawtimb	er Well	64.8	100	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Red Maple	100	Log/Pole	14	100	Ame	erican Elm	Low	Variable	Sapling	
						Ame	erican Elm	Low	Variable	Pole	
						Bl	lue Ash	Medium	>20 feet	Sapling	
95	6113 - Lo	wland Mapl	e	Sawtimb		202.3	105	Unspecified	N/A		Little Betsie River flows through stand. a lowland drainage areasheet flow water within year-round.
	Canopy Species	% Cover	Size Class		Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	now water within year-round.
	Red Maple	100	XLog/Log/Po	ole 18	105	Ame	erican Elm	Low	Variable	Sapling	
						Re	d Maple	Low	Variable	Sapling	
						Bla	ack Ash	Medium	Variable	Sapling	
96	42110 - Pla	nted Red P	ine	Poletimb	er Well	19.9	65	171-200	N/A		Was thinned once in 1995
	Canopy Species	% Cover	Size Class	DBH	Age						2nd thinning done by select mark approx.1/3 volume cut in fall of 2015.
	Red Pine	100	Log/Pole	11	65						
97		- Aspen		Poletimb		32.1		Unspecified	N/A		
	Canopy Species	% Cover			Age		nopy Specie		Avg. Height	Size	
	Red Maple	5	Pole	7	57		ed Maple	Low	Variable	Sapling	
	Quaking Aspen	75	Pole	7	57		ck Cherry	Low	Variable	Sapling	
	Bigtooth Aspen	10	Pole	7	57	Quak	king Aspen	Low	Variable	Sapling	
	Black Cherry	10	Log/Pole	11							



Stand	d Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	iite	General Comments	MICHIGAN
98	4130	- Aspen		Sapling	Well	35.9	26	Unspecified	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size		
	Red Maple	10	Pole/Sapling	5	26	Blad	ck Cherry	Medium	< 5 feet	Sapling		
	Quaking Aspen	40	Pole/Sapling	5	26							
	Bigtooth Aspen	25	Pole/Sapling	5	26							
	Black Cherry	25	Pole/Sapling	5	26							
99	4130	- Aspen	ı	Poletimb	er Well	17.7	58	Unspecified	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size		
	Red Maple	5	Pole	8	58	Re	d Maple	High	Variable	Sapling		
	Quaking Aspen	90	Pole	8	58							
	Black Cherry	5	Pole	8	58							
100	310 - Herbad	ceous Open	land	Nonsto	cked	2.1		Unspecified	No			
101	6112 - Lo	wland Aspe	n l	Poletimb	er Well	9.8	36	Unspecified	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size		
	Red Maple	10	Pole	8		Bla	ack Ash	Low	Variable	Sapling		
	Quaking Aspen	90	Pole	7	36	Та	ng Alder	Medium	< 5 feet	Tall Shrub		
102	6112 - Lo	wland Aspe	n I	Poletimb	er Well	81.1	41	Unspecified	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size		
	Red Maple	30	Pole	8	41	Re	d Maple	Medium	Variable	Sapling		
	Quaking Aspen	45	Pole	8	41							
	Bigtooth Aspen	15	Pole	8	41							
	Black Cherry	10	Pole	8	41							
103	6113 - Lo	wland Maple		awtimber		n 40.2	95	Unspecified	N/A		wet with creeks and drainages.	
	Canopy Species	% Cover	Size Class		Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size		
	Red Maple	60	Log/Pole	12	95		ack Ash	Medium	Variable	Sapling		
	Quaking Aspen	40	Pole/Log	9		Dogw	ood (spp.)	Medium	Variable	Tall Shrub		
						Wil	low spp.	Medium	Variable	Tall Shrub		
104	42200 - Nat	ural White F	Pine I	Poletimb	er Well	33.7	67	81-110	N/A			
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size		
	Quaking Aspen	20	Pole	8	57	Blad	ck Cherry	Low	< 5 feet	Sapling		
	White Pine	75	Log/Pole	11	67							
	Black Cherry	5	Pole	8								
105	330 - Low-	Density Tre	es	Nonsto	cked	6.0		Unspecified	No			



Stand	Level 4 C	over Type		Size De	nsity	Acres \$	Stand Age	BA Range	Managed \$	Site	General Comments
106	4130	- Aspen		Poletimb	er Well	16.0	41	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Can	opy Specie	s Density	Avg. Height	Size	
	Red Maple	30	Pole	7	41	Red	l Maple	Medium	Variable	Sapling	
	Bigtooth Aspen	70	Pole	7	41						
107	6118 - Lowland De	eciduous w	ith Cedar	Poletimb	er Well	22.8	41	1-50	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Can	opy Specie	s Density	Avg. Height	Size	
	Red Maple	10	Pole	8	41	Bals	sam Fir	Low	Variable	Sapling	
	Quaking Aspen	52	Pole	8	41	Blac	ck Ash	Medium	Variable	Sapling	
	Balsam Fir	15	Pole	8		Α	lder	Medium	Variable	Tall Shrub	
No	rthern White Cedar	20	Log/Pole	12							
	Tamarack	3	Pole/Log	9							
108	110 - Low Ir	ntensity Urb	pan	Nonsto	cked	1.9		Unspecified			Active oil/gas well site.
109	330 - Low-l	Density Tre	es	Nonsto	cked	9.0		Unspecified	No		
110	42310 - Pla	anted Sprud	ce	Poletimb	er Well	4.9	60	111-140	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age						
	White Spruce	100	Pole	7	60						
111	110 - Low Ir	ntensity Urb	oan	Nonsto	cked	1.8		Unspecified			Active oil/well site.
112	6128 - Lowland Dec	Coniferous, iduous	Mixed	Poletimb	er Well	4.5	65	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Can	opy Specie	s Density	Avg. Height	Size	
	Red Maple	10	Pole	6		Bals	sam Fir	Medium	Variable	Sapling	
	Quaking Aspen	20	Pole	6		Whit	te Pine	Medium	Variable	Sapling	
	Balsam Fir	10	Pole	6		А	lder	Low	< 5 feet	Tall Shrub	
No	rthern White Cedar	40	Pole	7	65			'		•	
	White Pine	20	Pole/Log	9	55						
113	4130	- Aspen		Poletimb		30.2	41	Unspecified	N/A		Also has a few scattered apple trees.
	Canopy Species		Size Class		Age		opy Specie		Avg. Height	Size	
	Red Maple	5	Pole	8	41		l Maple	Medium	Variable	Sapling	
	Quaking Aspen	85	Pole	8	41	Black	c Cherry	Medium	Variable	Sapling	
	Black Cherry	10	Pole	8	41						
114	110 - Low Ir	ntensity Urb	oan	Nonsto	cked	1.1		Unspecified			old abandoned railroad gradenow part of rails/ trails Betsie Valley Trail



tand	Level 4 Cover Type			Size Density		Acres	cres Stand Age BA Range		Managed S	Site	General Comments	
15	310 - Herbaceous Openland		Nonstocked		1.6	Unspecified				grassy vegetative sides of old abandoned railroad gradenow part of rails/ trails		
16	16 4139 - Aspen, Mi		duous F	Poletimber We		30.4	54 l	Jnspecified	N/A		also contains some scattered white pine, fir, cedar	
C	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Cai	nopy Species	Density	Avg. Height	Size	mostly upland but some lowland mixed in.	
	Red Maple	40	Pole	8	54	Re	d Maple	Medium	Variable	Sapling		
В	igtooth Aspen	57	Pole/Log	9	54			,			•	
-	Black Cherry	3	Pole	8								
17	4130	- Aspen	F	Poletimb	er Well	26.4	46 l	Jnspecified	N/A		Some scattered bur oak in NE corner of stand of various age class.	
C	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size		
	Red Maple	3	Pole	8		Blac	k Cherry	Medium	Variable	Sapling		
Q	uaking Aspen	72	Pole	8	46	Quak	ing Aspen	Medium	Variable	Sapling		
E	Black Cherry	25	Pole	8								
18	6118 - Lowland D	eciduous w	ith Cedar S	Sawtimb	er Well	32.9	116 l	Jnspecified	N/A			
C	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Species	Density	Avg. Height	Size		
	Red Maple	50	Log/Pole	13	116	Ame	rican Elm	Low	Variable	Sapling		
Q	uaking Aspen	10	Pole	8		Bla	ack Ash	Low	Variable	Sapling		
North	nern White Cedar	40	Log/Pole	11	116							
19	42260 - Natural Pi	ne, Mixed D	Deciduous F	Poletimb	er Pooi	34.5	25	Immature	N/A		Also contains scattered old apple trees and ground juniper.	
C	Canopy Species	% Cover	Size Class	DBH	Age		nopy Species	Density	Avg. Height	Size		
	Red Pine	35	Sapling/Pole	4	25		ed Pine	Medium	Variable	Sapling		
	Jack Pine	20	Sapling/Pole				ck Pine	Medium	Variable	Sapling		
	Black Cherry	35	Pole	8		Blac	k Cherry	Medium	Variable	Sapling		
	White Pine	10	Sapling/Pole	3		Wh	ite Pine	Low	Variable	Sapling		
20	42200 - Natu	ural White F	Pine F	Poletimb	er Well	20.7	65	111-140	N/A		nice quality natural pine. Some larger DBH's mixed in as well.	
C	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Cai	nopy Species	Density	Avg. Height	Size		
	Red Maple	5	Pole/Log	9		Re	d Maple	Low	Variable	Sapling		
	White Pine	95	Log/Pole	10	65	Wh	ite Pine	Medium	Variable	Sapling		
21	3105 - Mixed U	pland Herba	aceous	Nonsto	cked	15.8	l	Jnspecified			cleared power line area along north edge of Lindey road. small drainage creek also running through the stand.	



Stand	Level 4 C	over Type		Size De	ensity	Acres St	and Age I	BA Range	Managed S	ite	General Comments
122	4130	- Aspen		Sapling	g Well	10.6	24 l	Jnspecified	N/A		mostly upland, but some wet areas
	Canopy Species	% Cover	Size Class	DBH	H Age	Sub-Canop	y Species	Density	Avg. Height	Size	
	Bigtooth Aspen	75	Sapling/Pole		24	Balsar	m Fir	Low	< 5 feet	Sapling	
	Balsam Fir	5	Sapling/Pole	e 4		White	Pine	Low	< 5 feet	Sapling	
	White Pine	5	Log/Pole	12							
	Paper Birch	5	Sapling/Pole								
	Red Maple	10	Sapling/Pole	e 4							
123	3102	- Grass		Nonst	ocked	2.1	ι	Jnspecified	Managed Op	ening	cultivated opening by wildlife Div.
124	42110 - Pla	nted Red P	ine	Sapling	g Well	33.6	9	Immature	N/A		This was a mature red pine stand that was clearcut (red pine project) and
	Canopy Species	% Cover Size Clas		DBH	H Age	Sub-Canop	y Species	Density	Avg. Height	Size	trenched and replanted to red pine.
	Black Cherry	7	Sapling	1	9	Red F	Pine	High	< 5 feet	Sapling	
	Red Pine	90	Sapling	1	9						
	Jack Pine	3	Sapling	1	9						
125	500	- Water		Nonst	ocked	1.6	ι	Jnspecified	No		small pond with drainage creek coming in one end and flowing out other.
126	6112 - Lov	wland Aspe	en	Poletimb	oer Well	18.6	46 l	Jnspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	H Age	Sub-Canop	y Species	Density	Avg. Height	Size	
	Red Maple	15	Pole	8	46	Red M	1aple	High	Variable	Sapling	
	Quaking Aspen	85	Pole	8	46						
127	4130	- Aspen		Poletimber Well		13.5	44 l	Jnspecified	N/A		sparse stocking
	Canopy Species	% Cover	Size Class	DBH	H Age	Sub-Canop	y Species	Density	Avg. Height	Size	Treat when stand in adjacent compartment 32 is treated. (all the same stand). Majority is in comp 32
	Quaking Aspen	97	Pole	7	44	Black C	Cherry	Low	< 5 feet	Sapling	, , , , , , , , , , , , , , , , , , , ,
	Black Cherry	3	Pole	7	44	Quaking	Aspen	Low	Variable	Sapling	
128	42310 - Pla	anted Spru	ce	Poletimb	er Well	1.6	60	51-80	N/A		
	Canopy Species	% Cover	Size Class	DBH	H Age						
	White Spruce	100	Pole	8	60						
129	6113 - Lo	wland Mapl	е	Poletimb	er Well	40.7	46 l	Jnspecified	N/A		Standing water and sheet flow drainage throughout the year.
	Canopy Species	% Cover	Size Class	DBH	H Age	Sub-Canop	y Species	Density	Avg. Height	Size	
	Red Maple	80	Pole	8	46	America	an Elm	Low	Variable	Sapling	
		0.0	_					N.A. 11	\ / I - I -	0 !:	
	Quaking Aspen	20	Pole	8	46	Red M	laple	Medium	Variable	Sapling	



Stand	Level 4 Co	over Type		Size De	ensity	Acres	Stand Age	BA Range	Managed S	ite	General Comments
132	6113 - Lov	wland Mapl	e S	Sawtimb	er Well	56.5	102	Unspecified	N/A		many blowdowns. lots of woody debris. standing water most of the year.
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Red Maple	100	XLog/Log/Pole	e 18	102	Re	ed Maple	Medium	Variable	Sapling	
						Re	ed Maple	Medium	Variable	Pole	
						BI	ack Ash	Low	Variable	Sapling	
133	6113 - Lov	wland Mapl	e P	oletimb	er Well	64.6	41	Unspecified	N/A		also contains some scattered cedar
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Red Maple	80	Pole/Log	9	41	Ame	erican Elm	Low	Variable	Sapling	
	Quaking Aspen	20	Pole	8	41	Re	ed Maple	High	Variable	Sapling	
						ВІ	ack Ash	Low	Variable	Sapling	
134		- Aspen		oletimb	er Well	23.0	41	Unspecified	N/A		mostly upland but a few drainages.
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	American Elm	3	Pole	7		Re	ed Maple	Medium	Variable	Sapling	
	Red Maple	25	Pole/Log	8	41	BI	ack Ash	Low	Variable	Sapling	
	Quaking Aspen	37	Pole	7	41						
	Bigtooth Aspen	25	Pole	7	41						
	Black Cherry	10	Pole	7							
135	330 - Low-I	Density Tre	es	Nonst	ocked	2.6		Unspecified	No		
137	6113 - Lo	wland Mapl	e S	Sawtimb	er Well	10.5	96	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Red Maple	100	XLog/Log/Pole	e 18	96	Re	ed Maple	Low	Variable	Sapling	
						BI	ack Ash	Low	Variable	Sapling	
138		- Aspen	F	oletimb	er Well	5.8	46	Unspecified	N/A		a small upland ridge surrounded by lowland maple
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Red Maple	10	Pole	7	46	Re	ed Maple	Low	Variable	Sapling	
	Quaking Aspen	90	Pole	7	46	ВІ	ack Ash	Low	Variable	Sapling	
139	4130	- Aspen		Sapling		15.7	6	Immature	N/A		_
	Canopy Species	% Cover	Size Class	DBH	I Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Red Maple	35	Sapling	1	6	W	hite Pine	Medium	< 5 feet	Sapling	
			Sapling								」



Stand	d Level 4 C	over Type		Size De	nsity	Acres	Stand Age	BA Range	Managed S	ite	General Comments
141	6118 - Lowland D	eciduous wi	ith Cedar Sa	wtimber	Medium	81.4	92	1-50	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	American Elm	10	Pole	8		Ame	rican Elm	Low	Variable	Sapling	
	Red Maple	45	Log/Pole	11	92	Re	d Maple	Medium	Variable	Sapling	
	Quaking Aspen	15	Pole	8		Re	d Maple	Medium	Variable	Pole	
	Balsam Fir	5	Pole	9		Northern	White Cedar	r Low	Variable	Pole	
No	orthern White Cedar	25	Log/Pole	12	92	Bla	ack Ash	Medium	Variable	Sapling	
142	6128 - Lowland Dec	Coniferous,	Mixed S	awtimb	er Well	7.9	90	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Red Maple	10	Pole	8		Re	d Maple	Low	Variable	Pole	
	Bigtooth Aspen	10	Pole	8		H	emlock	Medium	Variable	Pole	
	White Pine	30	Log/Pole	18	90						
	Hemlock	50	Log/Pole	12	90						
143	6112 - Lo	wland Aspe	n P	oletimb		49.0	41	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie		Avg. Height	Size	
	Red Maple	55	Pole/Log	8	41		d Maple	High	Variable	Sapling	
	Quaking Aspen	25	Pole	8	41	Wh	nite Pine	Low	< 5 feet	Sapling	
	Bigtooth Aspen	20	Pole/Log	8	41						
144	6120 - Lo	wland Ceda	ır S	awtimb	er Well	1.8	110	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Red Maple	10	Log/Pole	14		Bla	ack Ash	Low	Variable	Sapling	
No	orthern White Cedar	90	Log/Pole	13	110						-
145	6113 - Lo	wland Maple	e S	awtimb		52.5	102	Unspecified	N/A		lots of woody debris. quite a few blowdowns, standing water most of year.
	Canopy Species		Size Class		Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	year.
	Red Maple	100	XLog/Log/Pole	18	102		d Maple	Medium	Variable	Sapling	
							d Maple	Medium	Variable	Pole	
							ack Ash	Low	Variable	Sapling	
						Та	ng Alder	Medium	< 5 feet	Tall Shrub	
146	6112 - Lo	wland Aspe	n Pol		Medium	18.0	55	Unspecified	N/A		Recent Ash die-off causing lots of blow-downs and woody debris and crown gap openings.
	Canopy Species		Size Class		Age		nopy Specie		Avg. Height	Size	Gram gap oponings.
	Red Maple	45	Pole	8	55		d Maple	Medium	Variable	Sapling	
	Quaking Aspen	40	Pole	7	55	Bla	ack Ash	High	Variable	Sapling	
No	orthern White Cedar	15	Pole	8							



Stand Level 4 Cover Type Size De				ensity	Acres Stand Age	BA Range	Managed S	ite	General Comments		
147	6120 - Lov	wland Ceda	ar Sa	awtimb	er Well	67.5 92	51-80	N/A			
	Canopy Species	% Cover	Size Class		l Age	Sub-Canopy Specie	s Density	Avg. Height	Size		
	Red Maple	40	Log/Pole	13	92	Red Maple	Medium	Variable	Sapling		
No	orthern White Cedar	60	Log/Pole	13	92	Black Ash	Medium	Variable	Sapling		
148	6113 - Lov	wland Map	le Sa	awtimb	er Well	5.1 100	111-140	N/A			
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Canopy Specie	s Density	Avg. Height	Size		
	Red Maple	60	Log/Pole	12	100	Red Maple	Medium	Variable	Sapling		
	Hemlock	30	Log/Pole	11	100	Red Maple	Medium	Variable	Pole		
	Red Oak	5	Log	16		Hemlock	Medium	Variable	Pole		
	White Pine	5	XLog/Log	22			·				
149	6113 - Lov	wland Map	le Sa	awtimb	er Well	73.1 96	Unspecified	N/A		mostly lowland, but a few small upland ridges.	
	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Canopy Specie	s Density	Avg. Height	Size		
	Red Maple	100	Log/Pole/XLog	17	96	Red Maple	Medium	Variable	Sapling		
						Red Maple	Medium	Variable	Pole		
						Black Ash	Medium	Variable	Sapling		
150	4112 - Maple, Beec	n, Cherry A	Association Sa	awtimb	er Well	14.5 90	81-110	N/A		also contains some beech, ash, paper birch.	
150	Canopy Species		Association Sa Size Class		er Well I Age	14.5 90 Sub-Canopy Specie		N/A Avg. Height	Size	also contains some beech, ash, paper birch.	
150									Size Sapling	also contains some beech, ash, paper birch.	
150	Canopy Species	% Cover	Size Class	DBH	l Age	Sub-Canopy Specie	s Density	Avg. Height		also contains some beech, ash, paper birch.	
150	Canopy Species Sugar Maple	% Cover 35	Size Class Log/Pole	DB H	Age 90	Sub-Canopy Specie Sugar Maple	s Density	Avg. Height Variable	Sapling	also contains some beech, ash, paper birch.	
150	Canopy Species Sugar Maple Red Maple	% Cover 35 52	Size Class Log/Pole Log/Pole	12 14	Age 90	Sub-Canopy Specie Sugar Maple Sugar Maple Red Maple	Low	Avg. Height Variable Variable	Sapling Pole	also contains some beech, ash, paper birch.	
150	Canopy Species Sugar Maple Red Maple Red Oak	% Cover 35 52 10	Size Class Log/Pole Log/Pole Log/Pole	12 14 14	Age 90	Sub-Canopy Specie Sugar Maple Sugar Maple	S Density Low Low Low	Avg. Height Variable Variable Variable	Sapling Pole Sapling	also contains some beech, ash, paper birch.	
150	Canopy Species Sugar Maple Red Maple Red Oak	% Cover 35 52 10	Size Class Log/Pole Log/Pole Log/Pole	12 14 14	Age 90	Sub-Canopy Specie Sugar Maple Sugar Maple Red Maple Red Maple	Low Low Low Medium	Avg. Height Variable Variable Variable Variable	Sapling Pole Sapling Pole	also contains some beech, ash, paper birch.	
150	Canopy Species Sugar Maple Red Maple Red Oak	% Cover 35 52 10 3	Size Class Log/Pole Log/Pole Log/Pole Log/Pole	12 14 14 10	Age 90	Sub-Canopy Specie Sugar Maple Sugar Maple Red Maple Red Maple Hemlock	Low Low Low Medium Low	Avg. Height Variable Variable Variable Variable Variable >20 feet	Sapling Pole Sapling Pole Pole	also contains some beech, ash, paper birch.	
	Canopy Species Sugar Maple Red Maple Red Oak Black Cherry	% Cover 35 52 10 3 3	Size Class Log/Pole Log/Pole Log/Pole Log/Pole	12 14 14 10	90 90 90	Sub-Canopy Specie Sugar Maple Sugar Maple Red Maple Red Maple Hemlock Ironwood	Low Low Low Medium Low Medium 51-80	Avg. Height Variable Variable Variable Variable Variable >20 feet 5 - 10 feet	Sapling Pole Sapling Pole Pole	also contains some beech, ash, paper birch.	
	Canopy Species Sugar Maple Red Maple Red Oak Black Cherry 4319 - Mixed	% Cover 35 52 10 3 3	Size Class Log/Pole Log/Pole Log/Pole Log/Pole Log/Pole	12 14 14 10	90 90 90 eer Well	Sub-Canopy Specie Sugar Maple Sugar Maple Red Maple Red Maple Hemlock Ironwood	Low Low Low Medium Low Medium 51-80	Avg. Height Variable Variable Variable Variable Variable 5-10 feet N/A	Sapling Pole Sapling Pole Pole Sapling	also contains some beech, ash, paper birch.	
	Canopy Species Sugar Maple Red Maple Red Oak Black Cherry 4319 - Mixed Canopy Species	% Cover 35 52 10 3 3 Upland Fo % Cover	Size Class Log/Pole Log/Pole Log/Pole Log/Pole Size Class	DBH 12 14 14 10 awtimb	90 90 90 eer Well	Sub-Canopy Specie Sugar Maple Sugar Maple Red Maple Red Maple Hemlock Ironwood 9.2 94 Sub-Canopy Specie	Low Low Low Medium Low Medium 51-80 Low Density	Avg. Height Variable Variable Variable Variable >20 feet 5 - 10 feet N/A Avg. Height	Sapling Pole Sapling Pole Pole Sapling	also contains some beech, ash, paper birch.	
	Canopy Species Sugar Maple Red Maple Red Oak Black Cherry 4319 - Mixed Canopy Species Red Maple	% Cover 35 10 3 3 Upland Fo % Cover 55	Size Class Log/Pole Log/Pole Log/Pole Log/Pole Size Class Log/Pole	DBH 12 14 10 awtimb DBH 12 12	90 90 90 eer Well	Sub-Canopy Specie Sugar Maple Sugar Maple Red Maple Red Maple Hemlock Ironwood 9.2 94 Sub-Canopy Specie Red Maple	Low Low Low Medium Low Medium 51-80 Density Low Medium Medium	Avg. Height Variable Variable Variable Variable >20 feet 5 - 10 feet N/A Avg. Height Variable	Sapling Pole Sapling Pole Pole Sapling Sapling	also contains some beech, ash, paper birch.	
	Canopy Species Sugar Maple Red Maple Red Oak Black Cherry 4319 - Mixed Canopy Species Red Maple Bigtooth Aspen	% Cover 35 10 3 3 Upland Fo % Cover 55 3	Size Class Log/Pole Log/Pole Log/Pole Log/Pole Size Class Log/Pole Log/Pole	DBH 12 14 10 awtimb DBH 12 12	90 90 90 eer Well	Sub-Canopy Specie Sugar Maple Sugar Maple Red Maple Red Maple Hemlock Ironwood 9.2 94 Sub-Canopy Specie Red Maple Red Maple	Low Low Low Medium Low Medium 51-80 Density Low Medium Medium	Avg. Height Variable Variable Variable Variable >20 feet 5 - 10 feet N/A Avg. Height Variable Variable	Sapling Pole Sapling Pole Pole Sapling Sapling Size Sapling Pole	also contains some beech, ash, paper birch.	
	Canopy Species Sugar Maple Red Maple Red Oak Black Cherry 4319 - Mixed Canopy Species Red Maple Bigtooth Aspen White Pine Hemlock 42201 - Natural N	% Cover 35 10 3 3 Upland Fo 55 3 7 35	Size Class Log/Pole Log/Pole Log/Pole Log/Pole Size Class Log/Pole Log/Pole XLog/Pole Log/Pole	DBH 12 14 14 10 2 2 3 3 4 4 10 10 12 12 18 12	90 90 90 90 Per Well 4 Age 94	Sub-Canopy Specie Sugar Maple Sugar Maple Red Maple Red Maple Hemlock Ironwood 9.2 94 Sub-Canopy Specie Red Maple Red Maple Northern White Cedar	Low Low Low Medium Low Medium 51-80 Density Low Medium Low Medium	Avg. Height Variable Variable Variable Variable >20 feet 5 - 10 feet N/A Avg. Height Variable Variable Variable Variable Variable	Sapling Pole Sapling Pole Pole Sapling Size Sapling Pole Pole	also contains some beech, ash, paper birch.	
151	Canopy Species Sugar Maple Red Maple Red Oak Black Cherry 4319 - Mixed Canopy Species Red Maple Bigtooth Aspen White Pine Hemlock 42201 - Natural N	% Cover 35 52 10 3	Size Class Log/Pole Log/Pole Log/Pole Log/Pole Size Class Log/Pole Log/Pole XLog/Pole Log/Pole	DBH 12 14 14 10 awtimb DBH 12 18 12 18 12	90 90 90 90 90 90 90 94 94	Sub-Canopy Specie Sugar Maple Sugar Maple Red Maple Red Maple Hemlock Ironwood 9.2 94 Sub-Canopy Specie Red Maple Red Maple Northern White Cedar	Low Low Low Medium Low Medium 51-80 Density Low Medium 1-50	Avg. Height Variable Variable Variable Variable >20 feet 5 - 10 feet N/A Avg. Height Variable Variable Variable Variable Variable Variable	Sapling Pole Sapling Pole Pole Sapling Size Sapling Pole Pole	also contains some beech, ash, paper birch.	
151	Canopy Species Sugar Maple Red Maple Red Oak Black Cherry 4319 - Mixed Canopy Species Red Maple Bigtooth Aspen White Pine Hemlock 42201 - Natural V	% Cover 35 52 10 3	Size Class Log/Pole Log/Pole Log/Pole Log/Pole Size Class Log/Pole Log/Pole Log/Pole Log/Pole XLog/Log/Pole Log/Pole Size Class Size Class Size Class Log/Pole Size Class Log/Pole Size Class Size Class Log/Pole Size Class Log/Pole Size Class Size Class Log/Pole Size Class Size Class Log/Pole Size Class Size Clas	DBH 12 14 14 10 awtimb DBH 12 18 12 18 12	er Well 1 Age 90 90 90 90 90 91 94 94	Sub-Canopy Specie Sugar Maple Sugar Maple Red Maple Red Maple Hemlock Ironwood 9.2 94 Sub-Canopy Specie Red Maple Red Maple Red Maple Northern White Cedar Hemlock 1 6.9 90	Low Low Low Medium Low Medium 51-80 Density Low Medium 1-50	Avg. Height Variable Variable Variable Variable >20 feet 5 - 10 feet N/A Avg. Height Variable Variable Variable Variable Variable Variable Variable Variable	Sapling Pole Sapling Pole Pole Sapling Size Sapling Pole Pole Pole	also contains some beech, ash, paper birch.	
151	Canopy Species Sugar Maple Red Maple Red Oak Black Cherry 4319 - Mixed Canopy Species Red Maple Bigtooth Aspen White Pine Hemlock 42201 - Natural \ Deci	% Cover 35 10 3 3 3 3 3 3 3 3 3	Size Class Log/Pole Log/Pole Log/Pole Log/Pole Size Class Log/Pole Log/Pole Log/Pole XLog/Log/Pole Log/Pole Size Class Size Class Size Class Size Class Size Class Size Class	DBH 12 14 14 10 DBH 12 18 12 Ntimber	er Well 1 Age 90 90 90 90 90 91 94 94	Sub-Canopy Specie Sugar Maple Sugar Maple Red Maple Red Maple Hemlock Ironwood 9.2 94 Sub-Canopy Specie Red Maple Red Maple Red Maple Red Maple Red Maple Red Maple Sub-Canopy Specie Red Maple Red Maple Sub-Canopy Specie Northern White Cedar	Low Low Low Medium Low Medium 51-80 S Density Low Medium 1-50 Density	Avg. Height Variable Variable Variable Variable >20 feet 5 - 10 feet N/A Avg. Height Variable Variable Variable Variable Variable Variable Avg. Height Avg. Height	Sapling Pole Sapling Pole Pole Sapling Size Sapling Pole Pole Pole Sapling	also contains some beech, ash, paper birch.	



Stand	Level 4 C	Cover Type		Size Density		Acres	Stand Age	BA Range	Managed S	ite	General Comments
153	6112 - Lov	wland Aspe	n	Poletimb	er Well	19.5	44	Unspecified	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Red Maple	19	Pole	6	44	Re	ed Maple	Low	Variable	Sapling	
	Paper Birch	3	Pole	6	44	BI	ack Ash	High	Variable	Sapling	
(Quaking Aspen	75	Pole	6	44						
	Hemlock	3	Log/Pole	12							
154	330 - Low-l	Density Tree	es	Nonsto	cked	6.0		Unspecified	No		
155	6113 - Lo	wland Maple	e S	awtimber	Medium	46.9	96	51-80	N/A		Swampy/lowlands area around the headwaters of Dutchman creek.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Red Maple	70	Log/Pole	15	96	Yel	llow Birch	Low	Variable	Sapling	
	Yellow Birch	5	Log/Pole	10		Northern	n White Ceda	r Low	Variable	Pole	
(Quaking Aspen	5	Pole	8		Н	lemlock	Low	Variable	Pole	
	Hemlock	20	Log/Pole	12	96	ВІ	ack Ash	High	Variable	Sapling	
156	6128 - Lowland Dec	Coniferous, iduous	Mixed	Sawtimb	er Well	5.7	96	51-80	N/A		headwaters of dutchman/bearcreek.
	Canopy Species	% Cover	Size Class	DBH	Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size	
	Red Maple	20	Log/Pole	13	96	Re	ed Maple	Low	Variable	Sapling	
Nor	thern White Cedar	35	Pole/Log	9	96	ВІ	ack Ash	Low	Variable	Sapling	
	Hemlock	45	Log/Pole	13	96						•
157	310 - Herbac	eous Openl	land	Nonsto	cked	1.0		Unspecified			
158	4130	- Aspen		Sapling N	Medium	16.4	7	Immature	N/A		final harvest/regen cut was made in summer of 2014. This unit cut during period of heavy rains.
	Canopy Species	% Cover	Size Class	DBH	Age						during period of fleavy fairs.
(Quaking Aspen	70	Sapling	1	7						
I	Bigtooth Aspen	15	Sapling	1	7						
	Red Maple	5	Sapling	1							
	White Pine	10	Pole/Log	8							
159	42200 - Natu	ural White F	Pine P	oletimbei	Medium	6.0	21	1-50	N/A		
	Canopy Species	% Cover	Size Class	DBH	Age						
	White Pine	100	Pole/Sapling	g 6	21						

Traverse City Mgt. Unit

Report 7 - Stands



Stand	Level 4 C	over Type	S	ize De	ensity	Acres	Stand Age	BA Range	Managed S	Site	General Comments	Міснів
160	4311 - Pin	e, Aspen M	lix Po	oletimb	er Well	30.4	53	81-110	N/A			
C	anopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size		
Qı	uaking Aspen	25	Pole	8	53	Re	ed Maple	Low	Variable	Sapling		
Bi	gtooth Aspen	25	Pole/Log	9	53	W	hite Pine	Medium	Variable	Sapling		
1	White Pine	50	Log/Pole/XLog	15	53	Bla	ck Cherry	Low	< 5 feet	Sapling		
169	6112 - Lov	wland Aspe	n Po	oletimb	er Well	4.0	41	51-80	N/A			
C	anopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	nopy Specie	s Density	Avg. Height	Size		
	Red Maple	30	Pole	8	41	Re	ed Maple	Medium	Variable	Sapling		
Qı	uaking Aspen	35	Pole	8	41			•				
Bi	gtooth Aspen	25	Pole	8	41							
Е	Black Cherry	10	Pole	8	41							
170	6112 - Lov	wland Aspe	n Po	oletimb	er Well	6.3	41	Unspecified	N/A			
С	anopy Species	% Cover	Size Class	DBH	l Age	Sub-Ca	Sub-Canopy Species		Avg. Height	Size		
	Red Maple	30	Pole	8	41	Re	ed Maple	Medium	Variable	Sapling		
Qı	uaking Aspen	35	Pole	8	41							
Bi	gtooth Aspen	25	Pole	8	41							
В	Black Cherry	10	Pole	8	41							