

Compartment Review Presentation

Traverse City Forest Management Unit

Compartment 61172
Entry Year 2020
Acreage: 1,868
County Kalkaska

Management Area: Williamsburg Moraine

Revision Date: 2018-04-16

Stand Examiner: Steve Crigier

Legal Description:

T28N R7W Sections 19, 20, 21, 22, and 23

Identified Planning Goals:

Vegetation management in the Williamsburg Moraine management area will provide various forest products; maintain or enhance wildlife habitat; protect areas of unique character and threatened, endangered and special concern species; and provide for forest-based recreational uses. Timber management objectives for this management area for this 10-year planning period include improving the age-class structure of aspen, regenerating oak and the continuation of management through selection or restarting harvests of red pine and upland hardwood communities. Wildlife habitat management objectives include increasing the structural complexity of upland hardwood communities for forest interior species; perpetuating early-successional communities for young-forest-dependent species, hunting and other wildlife-related recreation opportunities; maintaining soft and hard mast sources including oak; and preserving the biodiversity value of the Skegemog high conservation value area. Expected trends within this 10-year planning period are: increased recreational pressure, especially on established trails; increased oil and gas development; introduced pests and diseases, especially beech bark disease and emerald ash borer; an increased need to regenerate oak and red pine; and the decreased dominance of pure oak types to mixed oak/pine types.

Soil and topography:

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

There are multiple private inholdings in and around Sections 22 and 23.

Unique Natural Features:

Osprey have been know to have nests within the compartment.

Archeological, Historical, and Cultural Features:

A number of old homesteads can be found within the compartment.

Special Management Designations or Considerations:

Rapid River is listed as a High Priority Trout Stream.

Watershed and Fisheries Considerations:

The Rapid River flows through the compartment.

Wildlife Habitat Considerations:

Most of compartment 172 contains excessively drained sandy soils with scattered ice-block depressions. This compartment is within the Williamsburg Moraines Management Area (MA) of the Regional State Forest Management Plan. Featured wildlife species and their habitat niches for this MA include Marten, woodcock, beaver, bear, black-throated blue warbler, eastern massasauga rattlesnake, mallard, pileated woodpecker, turkey, deer, wood thrush, and wood duck. Much of this area supports second growth northern hardwoods, along with some scattered aspen cuts. The Rapid River flows through this compartment with over 1.8 miles of stream frontage, creating a valuable riparian corridor through an otherwise dry landscape. Cedar is the dominant cover type along the river and provides valuable winter habitat for many species of wildlife.

Ice block depressions tend to collect or funnel cold air, which can restrict plant growth, and therefore most of these cold air "sinks" support open or semi-open communities. Some of these depressions may contain poorly drained organic soils. Selective cutting of woody encroachment, pruning of remnant orchard trees, grass planting, and a prescribed burn have been proposed for opening management projects.

In hardwoods care should be taken to maintain age and tree species diversity within the northern hardwood stands, and over this landscape. Hardwood treatments should retain a component of mature mast producing trees and protect/create snags, den, cavity, and downed trees. Forest interior species utilize large tracts of hardwoods with relatively few and/or small canopy gaps. When treating such tracts care should be taken in designing the treatment to prevent fragmentation and too much access by edge predators to the forest interior.

Future management of the several pine plantations 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. Deciduous species should be encouraged within conifer plantations for diversity.

Mineral Resource and Development Concerns and/or Restrictions

A sand/gravel pit is located less than one mile to the southwest, and there is good potential for sand & gravel within the compartment. The compartment is located between the current extents of the Niagaran reef play (to the southeast) and the Antrim Shale gas play (to the northwest). There has not been any production to date within the compartment, but there have been a number of dry well tests, mostly Niagaran. There are a number of active leases within the compartment. There are active gas storage fields a couple of miles to the southeast. There may be potential for additional gas storage within the Niagaran in this area. The Niagaran reefs have also been tested for CO2 sequestration. There is no known metallic mineral potential in this part of the state.

Vehicle Access:

There is good access throughout the compartment.

Survey Needs:

If there is no private survey work that has been done on parcels in sections 22 & 23 a survey request will need to be submitted.

Recreational Facilities and Opportunities:

Leetsville a designated 50" ORV Trail occurs in section 23. Dispersed hunting and trapping in the compartment due to the proximity of private land, and rapid river.

Fire Protection:

The DNR Kalkaska Field Office would provide initial fire response with support from the Kalkaska Fire Department. The mainly hardwood cover types do not pose a significant risk for fire.

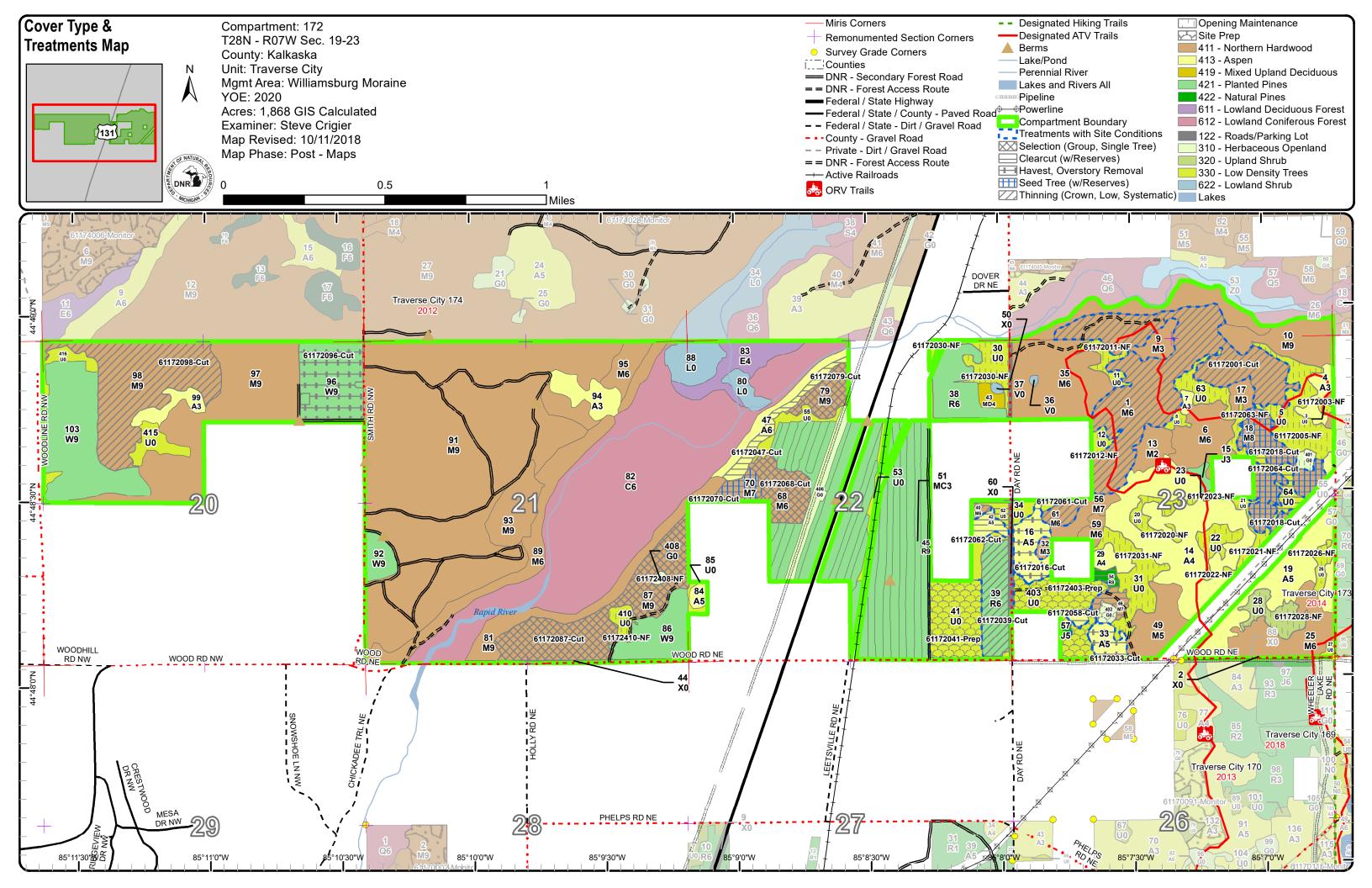
Additional Compartment Information:

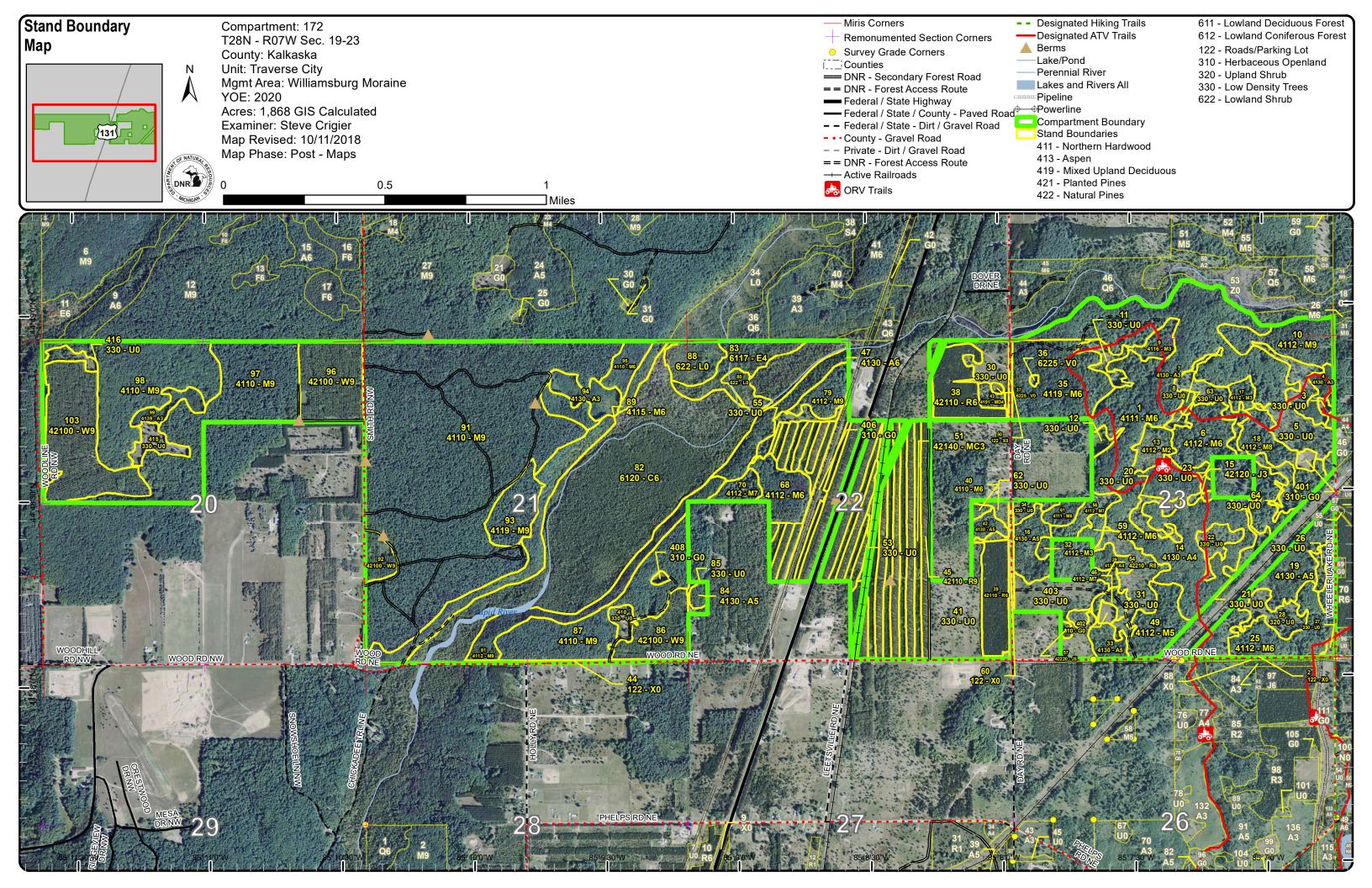
The following reports from the Inventory are attached:

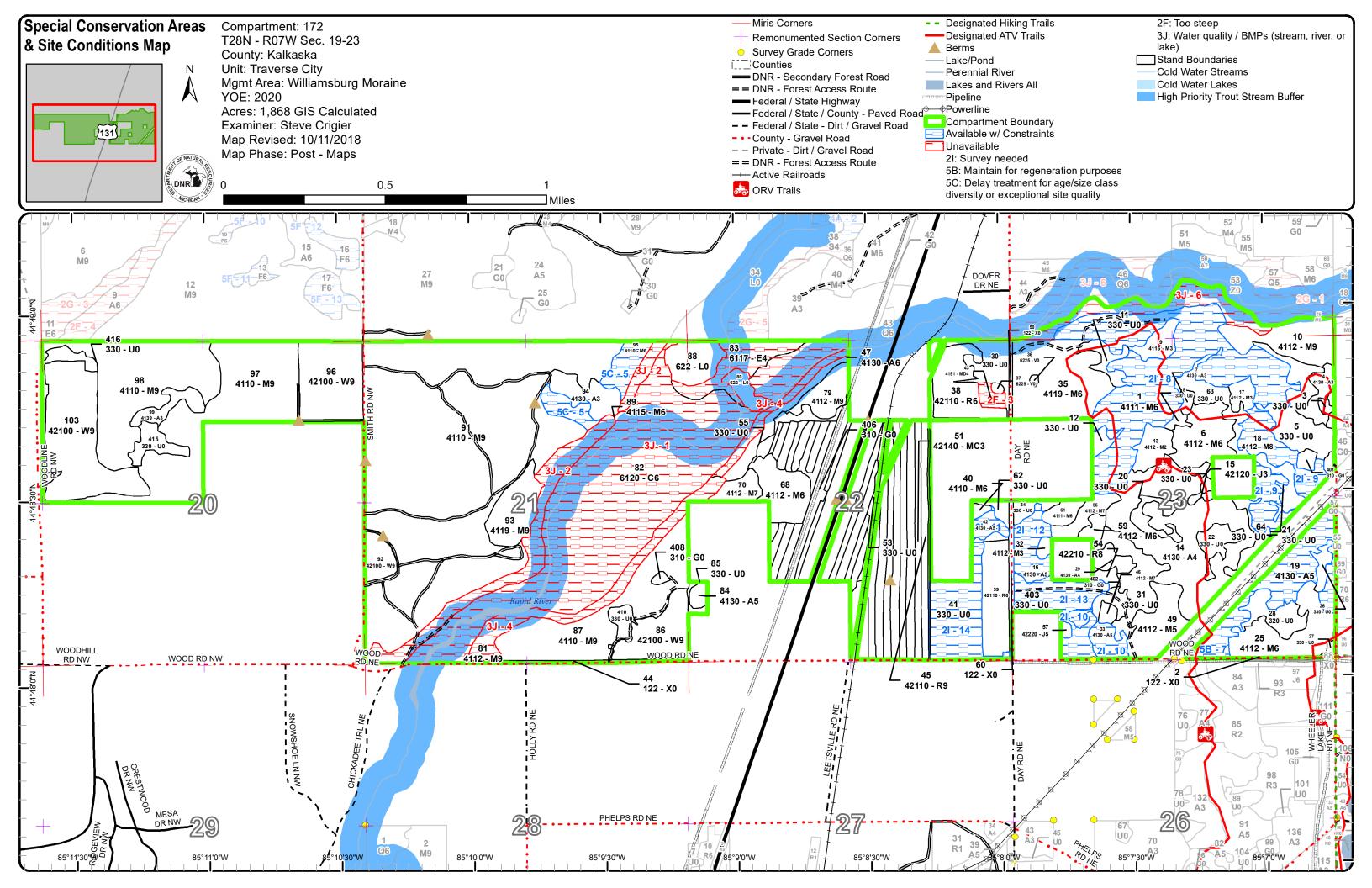
Total Acres by Cover Type and Age Class
Cover Type by Harvest Method
Proposed Treatments – No Limiting Factors
Proposed Treatments – With Limiting Factors
Stand Details (Forested and Nonforested)
Dedicated and Proposed Special Conservation Areas
Site Condition Details

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

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







Traverse City Mgt. Unit
Steve Crigier: Examiner



Age Class

	₽o.	KO S	2 / 2		\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	8 / \$) 		\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\		\$ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	70,700	SZ / SZ	\$ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	\$ K	ON AND AND AND AND AND AND AND AND AND AN	Ox July	Service / O
Aspen	0	0	11	16	70	15	52	13	0	0	0	0	0	0	0	0	0	0	176
Bog	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Cedar	0	0	0	0	0	0	0	0	0	0	0	0	0	203	0	0	0	0	203
Herbaceous Openland	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16
Jack Pine	0	0	0	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Low-Density Trees	192	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	192
Lowland Deciduous	0	0	0	0	0	0	0	0	0	17	0	0	0	0	0	0	0	0	17
Lowland Shrub	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Mixed Upland Deciduous	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3
Northern Hardwood	0	0	2	18	0	0	0	0	50	415	0	0	0	0	0	0	0	428	913
Planted Mixed Pines	0	0	0	63	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63
Red Pine	0	0	0	0	39	0	0	90	2	0	0	0	0	0	0	0	0	0	131
Upland Shrub	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Urban	12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12
White Pine	0	0	0	0	0	0	0	110	0	0	0	0	0	0	0	0	0	0	110
Total	250	0	13	99	113	15	52	213	52	432	0	0	0	203	0	0	0	428	1868



Report 2 - Treatment Summary

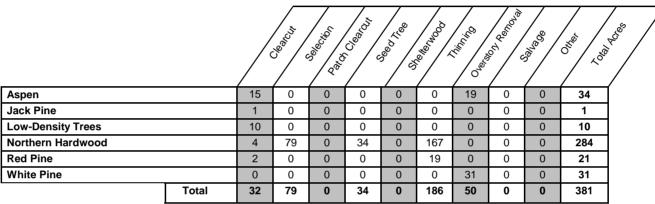
Traverse City Mgt. Unit Year of Entry: 2020

Acres of Harvest

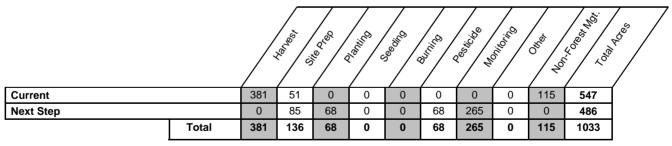
Compartment 172
Total Compartment Acres: 1,868

Commercial Harvest - 225 Harvests with Site Condition - 157 Next Step Harvest - 0 Habitat Cut - 0

Cover Type by Harvest Method



Proposed and Next Step Treatments by Method



a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
1	61172001-Cut	98.7	4111 - S.Maple, Hard Mast Association	Poletimber Well	81	111- 140	Harvest	Crown Thinning	411 - Northern Hardwood	Uneven- Aged	Approved Proposal
			014 0 1141	_							

Habitat Cut: No Site Condition: Survey Needed

Prescription Thin stand down to a BA of about 80 sqft/ac. Use general hardwood marking practices. Identify a few areas (~1 acre in size) to do a mini Specs: clearcut/regen gap. Remove most of the Beech as BBD is present and spec out the aspen and ironwood.

Next Step Treatments:

S

Acceptable Regen:

Other there are some areas of lower stocking, also some areas of younger pole/sapling timber.

Comment:

Proposed Start Date: 10/1 /2019

61172003-NF 1.1 330 - Low-Density Nonstocked Unspec NonForestMgt **Brush Cutting** 3205 - Mixed Approved Upland Shrub Proposal Trees ified

Habitat Cut: No Site Condition:

Specs:

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. 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.

Work with FRD to find opportunities to expand these U stands into adjacent forested stands where stocking is low, or unmerchantable woody species could be thinned or removed. The expansion of these U types should be designed to improve efficiency of opening management. May need to control bracken fern due to lack of natural disturbances. Mechanically treat bracken to reduce its extent, plant to annual rye for several years and then convert to an appropriate native mix if soils will allow. Periodic maintenance such as mowing, fertilization, reseeding, burning, and/or removal of woody encroachment.

Next Step Treatments:

Acceptable

Regen: Other

Comment:

Proposed Start Date: 10/1 /2019

61172005-NF 21.6 330 - Low-Density Nonstocked Unspec NonForestMgt **Brush Cutting** 3205 - Mixed Approved Trees ified **Upland Shrub** Proposal

Habitat Cut: No Site Condition:

Specs:

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. 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.

Work with FRD to find opportunities to expand these U stands into adjacent forested stands where stocking is low, or unmerchantable woody species could be thinned or removed. The expansion of these U types should be designed to improve efficiency of opening management. May need to control bracken fern due to lack of natural disturbances. Mechanically treat bracken to reduce its extent, plant to annual rye for several years and then convert to an appropriate native mix if soils will allow. Periodic maintenance such as mowing, fertilization, reseeding, burning, and/or removal of woody encroachment.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Compartment: 172 Year of Entry: 2020 **Cover Type** Age Approva

Structure

8 61172008-NF

Treatment

Name

1.6 330 - Low-Density Nonstocked Trees

Size

Density

Stand

Age

BA

Range

Stand

CoverType

Site Condition:

Unspec NonForestMgt **Brush Cutting** ified

3205 - Mixed Upland Shrub

Objective

Treatment

Method

Approved Proposal

Status

Habitat Cut: No **Site Condition:**

Acres

Specs:

s

t а

n

d

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. 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.

Treatment

Type

Work with FRD to find opportunities to expand these U stands into adjacent forested stands where stocking is low, or unmerchantable woody species could be thinned or removed. The expansion of these U types should be designed to improve efficiency of opening management. May need to control bracken fern due to lack of natural disturbances. Mechanically treat bracken to reduce its extent, plant to annual rye for several years and then convert to an appropriate native mix if soils will allow. Periodic maintenance such as mowing, fertilization, reseeding, burning, and/or removal of woody encroachment.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/1 /2019

61172011-NF 5.7 330 - Low-Density 3205 - Mixed Nonstocked Unspec NonForestMgt **Brush Cutting** Approved Trees ified Upland Shrub Proposal

Habitat Cut: No

Specs:

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. 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.

Work with FRD to find opportunities to expand these U stands into adjacent forested stands where stocking is low, or unmerchantable woody species could be thinned or removed. The expansion of these U types should be designed to improve efficiency of opening management. May need to control bracken fern due to lack of natural disturbances. Mechanically treat bracken to reduce its extent, plant to annual rye for several years and then convert to an appropriate native mix if soils will allow. Periodic maintenance such as mowing, fertilization, reseeding, burning, and/or removal of woody encroachment.

Next Step

Treatments:

Acceptable Regen:

Other

Comment:

10/1 /2019 Proposed Start Date:

12 61172012-NF 2.8 330 - Low-Density Nonstocked Unspec NonForestMgt **Brush Cutting** 3205 - Mixed Approved **Trees** ified **Upland Shrub** Proposal

Habitat Cut: No Site Condition:

Specs:

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. 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.

Work with FRD to find opportunities to expand these U stands into adjacent forested stands where stocking is low, or unmerchantable woody species could be thinned or removed. The expansion of these U types should be designed to improve efficiency of opening management. May need to control bracken fern due to lack of natural disturbances. Mechanically treat bracken to reduce its extent, plant to annual rye for several years and then convert to an appropriate native mix if soils will allow. Periodic maintenance such as mowing, fertilization, reseeding, burning, and/or removal of woody encroachment.

Next Step Treatments:

<u>Acceptable</u> Regen:

Other Comment

Proposed Start Date:

10/1 /2019



Compartment: 172

Year of Entry: 2020

S

a n d	Treatment Name	Acres	Stand CoverType		and ge F	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
16	61172016-Cut	12.5	4130 - Aspen	Poletimber 6 Medium	62	1-50	Harvest	Overstory Removal	411 - Northern Hardwood	Even-Aged	Approved Proposal

Habitat Cut: No Site Condition: Survey Needed

Prescription Overstory removal. Leave some scattered sugar maple as a seed source and protect the advanced regeneration. MO of Hwds. Bark slip spec Specs:

for the saplings. Line out solid pockets of M3.

Next Step **Treatments:**

Acceptable aspen, red maple, sugar maple, cherry.

Regen:

Other Need corners put in.

Comment:

Proposed Start Date: 10/1 /2019

411 - Northern 18 61172018-Cut 27.9 4112 - Maple. Sawtimber 81 51-80 Harvest Seed Tree Even-Aged Approved Beech, Cherry Medium Hardwood Proposal

Association

Habitat Cut: No Site Condition: Survey Needed

Prescription Seed tree by mark to leave some of the large poor quality sugar maple as a seed source. 2" cutting spec. Try to encourage scarification with

Specs: the cutting specs.

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable maple, cherry, basswood, aspen.

Regen:

Comment:

Maple are large/open grown and of medium to poor quality. Stocking is variable There is a fair amount of aspen in this stand, some in clones, Other

some a scattered individual trees. Stand appears to be two-aged. Lots of ironwood, some is merchantable but a lot in the 3-4" range.

Looks like we might need the surveyors to put in some corners around the private property.

Proposed Start Date: 10/1 /2019

61172020-NF 6.0 330 - Low-Density Nonstocked Unspec NonForestMgt **Brush Cutting** 3205 - Mixed Approved **Trees** ified **Upland Shrub** Proposal

Site Condition: **Habitat Cut: No**

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. 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 Specs: plantings and protect with wire cages or tubex.

Work with FRD to find opportunities to expand these U stands into adjacent forested stands where stocking is low, or unmerchantable woody species could be thinned or removed. The expansion of these U types should be designed to improve efficiency of opening management. May need to control bracken fern due to lack of natural disturbances. Mechanically treat bracken to reduce its extent, plant to annual rye for several years and then convert to an appropriate native mix if soils will allow. Periodic maintenance such as mowing, fertilization, reseeding,

burning, and/or removal of woody encroachment.

Next Step Treatments:

<u>Acceptable</u>

Regen:

Other Comment:

Compartment: 172

Year of Entry: 2020

s t а n

Treatment Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age Approva Range Method Objective Status Name CoverType Density Age Type Structure d 5.2 330 - Low-Density 3205 - Mixed 21 61172021-NF Nonstocked Unspec NonForestMgt **Brush Cutting** Approved Upland Shrub Trees ified Proposal

Habitat Cut: No Site Condition:

Specs:

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. 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.

Work with FRD to find opportunities to expand these U stands into adjacent forested stands where stocking is low, or unmerchantable woody species could be thinned or removed. The expansion of these U types should be designed to improve efficiency of opening management. May need to control bracken fern due to lack of natural disturbances. Mechanically treat bracken to reduce its extent, plant to annual rye for several years and then convert to an appropriate native mix if soils will allow. Periodic maintenance such as mowing, fertilization, reseeding, burning, and/or removal of woody encroachment.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/1 /2019

61172022-NF 3205 - Mixed 6.7 330 - Low-Density Nonstocked Unspec NonForestMgt **Brush Cutting** Approved Trees ified Upland Shrub Proposal

Habitat Cut: No Site Condition:

Specs:

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. 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.

Work with FRD to find opportunities to expand these U stands into adjacent forested stands where stocking is low, or unmerchantable woody species could be thinned or removed. The expansion of these U types should be designed to improve efficiency of opening management. May need to control bracken fern due to lack of natural disturbances. Mechanically treat bracken to reduce its extent, plant to annual rye for several years and then convert to an appropriate native mix if soils will allow. Periodic maintenance such as mowing, fertilization, reseeding, burning, and/or removal of woody encroachment.

Next Step

Treatments:

Acceptable

Regen:

Other Comment:

10/1 /2019 Proposed Start Date:

61172023-NF 1.3 330 - Low-Density Nonstocked Unspec NonForestMgt **Brush Cutting** 3205 - Mixed Approved **Trees** ified **Upland Shrub** Proposal

Habitat Cut: No Site Condition:

Specs:

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. 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.

Work with FRD to find opportunities to expand these U stands into adjacent forested stands where stocking is low, or unmerchantable woody species could be thinned or removed. The expansion of these U types should be designed to improve efficiency of opening management. May need to control bracken fern due to lack of natural disturbances. Mechanically treat bracken to reduce its extent, plant to annual rye for several years and then convert to an appropriate native mix if soils will allow. Periodic maintenance such as mowing, fertilization, reseeding, burning, and/or removal of woody encroachment.

Next Step Treatments:

<u>Acceptable</u> Regen:

Other

Comment

Year of Entry: 2020

Compartment: 172

a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
26	61172026-NF	3.4	330 - Low-Density Trees	Nonstocked	d	Unspec ified	NonForestMgt	Brush Cutting	3205 - Mixed Upland Shrub		Approved Proposal

Habitat Cut: No Site Condition:

Specs:

S

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. 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.

Work with FRD to find opportunities to expand these U stands into adjacent forested stands where stocking is low, or unmerchantable woody species could be thinned or removed. The expansion of these U types should be designed to improve efficiency of opening management. May need to control bracken fern due to lack of natural disturbances. Mechanically treat bracken to reduce its extent, plant to annual rye for several years and then convert to an appropriate native mix if soils will allow. Periodic maintenance such as mowing, fertilization, reseeding, burning, and/or removal of woody encroachment.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/1 /2019

61172028-NF 9.9 320 - Upland Shrub Nonstocked 3205 - Mixed Unspec NonForestMgt **Brush Cutting** Approved ified Upland Shrub Proposal

Habitat Cut: No Site Condition:

Specs:

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. 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.

Work with FRD to find opportunities to expand these U stands into adjacent forested stands where stocking is low, or unmerchantable woody species could be thinned or removed. The expansion of these U types should be designed to improve efficiency of opening management. May need to control bracken fern due to lack of natural disturbances. Mechanically treat bracken to reduce its extent, plant to annual rye for several years and then convert to an appropriate native mix if soils will allow. Periodic maintenance such as mowing, fertilization, reseeding, burning, and/or removal of woody encroachment.

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

10/1 /2019 Proposed Start Date:

61172030-NF 14.1 330 - Low-Density Nonstocked Unspec NonForestMgt **Brush Cutting** 3205 - Mixed Approved **Trees** ified **Upland Shrub** Proposal

Habitat Cut: No Site Condition:

Specs:

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. 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.

Work with FRD to find opportunities to expand these U stands into adjacent forested stands where stocking is low, or unmerchantable woody species could be thinned or removed. The expansion of these U types should be designed to improve efficiency of opening management. May need to control bracken fern due to lack of natural disturbances. Mechanically treat bracken to reduce its extent, plant to annual rye for several years and then convert to an appropriate native mix if soils will allow. Periodic maintenance such as mowing, fertilization, reseeding, burning, and/or removal of woody encroachment.

Next Step **Treatments:**

<u>Acceptable</u> Regen:

Other Comment:

Traverse City Mgt. Unit Report 3 -- Treatments Compartment: 172 Year of Entry: 2020 **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age **Approval** Density Method Objective Range Structure Status Name CoverType Age Type 61172031-NF 17.1 330 - Low-Density 3205 - Mixed Nonstocked Unspec NonForestMgt **Brush Cutting** Approved

ified

Habitat Cut: No Site Condition:

Trees

Specs:

s

t а

n

d

31

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. 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.

Upland Shrub

Hardwood

Proposal

Work with FRD to find opportunities to expand these U stands into adjacent forested stands where stocking is low, or unmerchantable woody species could be thinned or removed. The expansion of these U types should be designed to improve efficiency of opening management. May need to control bracken fern due to lack of natural disturbances. Mechanically treat bracken to reduce its extent, plant to annual rye for several years and then convert to an appropriate native mix if soils will allow. Periodic maintenance such as mowing, fertilization, reseeding, burning, and/or removal of woody encroachment.

Next Step Treatments:

Acceptable Regen:

Other Comment:

Proposed Start Date: 10/1 /2019

61172033-Cut 6.7 Poletimber 411 - Northern 4130 - Aspen 42 51-80 Harvest Overstory Even-Aged Approved Medium Removal Hardwood Proposal

Habitat Cut: No Site Condition: Survey Needed

Prescription overstory removal. Protect the maple regen and mark some sugar maple to leave for a seed source. Bark slip restriction for the maple

saplings?? Specs:

Next Step Treatments:

<u>Acceptable</u>

Regen:

Other Comment:

Proposed Start Date: 10/1 /2019

61172039-Cut 18.8 42110 - Planted Poletimber 32 171-Harvest Systematic 4211 - Planted Even-Aged Approved Thinning Red Pine Well 200 Red Pine Proposal

Habitat Cut: No Site Condition:

Prescription 3rd row thin the stand.

Specs:

Next Step Treatments:

<u>Acceptable</u>

Regen: Other

Mostly 3 stick trees, some 4 sticks. About 40% live crown on the trees. Some porcupine damage. Nice straight rows with good spacing. BAs

Comment: (180, 190, 190).

Proposed Start Date: 10/1 /2019

61172040-Cut 1.3 4110 - Sugar Maple Poletimber 72 81-110 Harvest Crown Thinning 411 - Northern Uneven-Approved

Association Well

Habitat Cut: No Site Condition:

Prescription Thin stand down to 80sqft/ac. Specs:

Next Step Treatments:

Acceptable Regen:

Other

Comment

Proposed Start Date: 10/1 /2019 Proposal

Aged

Proposal

Compartment: 172

Year of Entry: 2020

Red Pine

s t а

Treatment Acres Stand Size Stand BA **Treatment Treatment Cover Type** Approval Age n Method Objective Status Name CoverType Density Age Range Type Structure d 61172041-25.2 330 - Low-Density 4211 - Planted 41 Nonstocked Unspec SitePrep Roller Chopping Even-Aged Approved

Prep Trees **Habitat Cut: No** Site Condition: Survey Needed

Prescription Might have to have some of the larger trees cut down first then roller chop, trench and plant red pine.

Specs:

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

ified

Treatments:

Acceptable red pine

Regen:

Other Comment:

Proposed Start Date: 10/1 /2019

42 61172042-Cut 4 4 4130 - Aspen Poletimber 1-50 4211 - Planted 42 Harvest Clearcut Even-Aged Approved Medium Red Pine Proposal

Habitat Cut: No Site Condition: Survey Needed

Prescription clearcut, chop, trench and plant to red pine.

Specs:

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

Treatments: Pesticide, Aerial

Acceptable red pine

Regen:

Other not sure if corners are in.

Comment

Proposed Start Date: 10/1 /2019

61172046-Cut 79 4211 - Planted 4.1 4112 - Maple, Sawtimber 1-50 Harvest Clearcut Even-Aged Approved Beech, Cherry Poor Red Pine Proposal

Association

Habitat Cut: No Site Condition:

Prescription Clearcut, chop, trench and plant red pine.

Specs:

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

Treatments: Pesticide, Aerial

Acceptable red pine

Regen:

Other Comment:

10/1 /2019 **Proposed Start Date:**

47 61172047-Cut 8.7 4130 - Aspen Poletimber 81-110 Harvest Clearcut with 4134 - Aspen, Even-Aged Approved Well Retention Spruce/Fir Proposal

Habitat Cut: No Site Condition:

Prescription Clearcut what is feasible on top of the bluff and make sure bmps are applied so there is no threat of erosion into the Rapid river. Leave small fir Specs:

and retentions in gulches/drainages and on the slope to the west.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

aspen, cherry, fir, white pine. <u>Acceptable</u>

Regen:

Other Nice clones of bigtooth in the south end turning to poor quality aspen in the north.

Comment

Medium

Red Pine

Report 3 -- Treatments

DNR DNR MCHIGAN

Proposal

Compartment: 172

Red Pine

s Year of Entry: 2020 t а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age Approval n Method Objective Status Name CoverType Density Age Range Type Structure d 61172054-Cut 42210 - Natural 4211 - Planted 54 2.3 Sawtimber 72 51-80 Harvest Clearcut Even-Aged Approved

Habitat Cut: No Site Condition:

Prescription clearcut, chop, trench and plant red pine.

Specs:

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

Treatments: Pesticide, Aerial

Acceptable red pine

Regen:
Other
Comment:

Proposed Start Date: 10/1 /2019

57 61172057-Cut 1.0 42220 - Natural Poletimber 35 1-50 Harvest Clearcut 4211 - Planted Even-Aged Approved Jack Pine Medium Proposal

Habitat Cut: No Site Condition:

Prescription clearcut, chop, trench and plant to red pine.

Specs:

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

Treatments: Artificial Regen(3yr)

Acceptable red pine

Regen:

Other Comment:

Proposed Start Date: 10/1 /2019

33 61172058-Cut 1.8 4130 - Aspen Poletimber 42 51-80 Harvest Clearcut 4211 - Planted Even-Aged Approved Medium Proposal

Habitat Cut: No Site Condition: Survey Needed

Prescription Clearcut, chop, trench and plant to red pine.

Specs:

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

Treatments: Pesticide, Aerial

Acceptable red pine

Regen:

Other Comment:

Proposed Start Date: 10/1 /2019

61172061-Cut 4.7 4111 - S.Maple. Poletimber 81 111-Harvest Crown Thinning 411 - Northern Even-Aged Approved Hard Mast Well 140 Hardwood Proposal

Association

Habitat Cut: No Site Condition: BMPs

Prescription 1st thinning on this stand. Take BA down to 70-80sqft/ac.

Specs:

Next Step

Treatments:

<u>Acceptable</u>

Regen:

Other Comment:



Compartment: 172

Year of Entry: 2020

s t а

Treatment Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age Approval n Method Objective Structure Status Name CoverType Density Age Range Type d 3.7 330 - Low-Density 4211 - Planted 62 61172062-Cut Nonstocked Unspec Harvest Clearcut Even-Aged Approved Red Pine Proposal Trees ified

Site Condition: Habitat Cut: No

Prescription Clearcut, chop, trench and plant to red pine.

Specs:

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

Treatments: Pesticide, Aerial

Acceptable red pine

Regen: Other Comment:

Proposed Start Date: 10/1 /2019

61172063-NF 10.9 330 - Low-Density Nonstocked Unspec NonForestMat **Brush Cutting** 3205 - Mixed Approved **Upland Shrub** Trees ified Proposal

Habitat Cut: No Site Condition:

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

Work with FRD to find opportunities to expand these U stands into adjacent forested stands where stocking is low, or unmerchantable woody species could be thinned or removed. The expansion of these U types should be designed to improve efficiency of opening management. May need to control bracken fern due to lack of natural disturbances. Mechanically treat bracken to reduce its extent, plant to annual rye for several years and then convert to an appropriate native mix if soils will allow. Periodic maintenance such as mowing, fertilization, reseeding, burning, and/or removal of woody encroachment.

Next Step

Treatments:

<u>Acceptable</u>

Regen:

Other Comment:

10/1 /2019 **Proposed Start Date:**

6.3 330 - Low-Density Nonstocked Unspec 310 -61172064-Cut Harvest Clearcut Approved Trees ified Herbaceous Proposal Openland

Habitat Cut: No Site Condition:

Prescription clearcut the scattered timber out of the opening along with stand 18.

Specs:

Monitoring, Natural Regen (Re-Inventory) Next Step

Treatments:

Acceptable grass

Regen:

Other Please leave scattered mature cherry for mast production. -4/17/18

Comment:

S t a Compartment: 172 Year of Entry: 2020

DNR DICHIGAN
Approval

a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
68	61172068-Cut	16.5	4112 - Maple, Beech, Cherry Association	Poletimber Well	83	111- 140	Harvest	Single Tree Selection	411 - Northern Hardwood	Uneven- Aged	Approved Proposal

Habitat Cut: No Site Condition:

Prescription Thin stand down to about 80sqft/ac. Create a few regen gaps every 2 or 3 acres.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable maple, cherry, basswood, aspen.

Regen:

Other Not sure if corners are in.

Comment:

Proposed Start Date: 10/1 /2019

70 61172070-Cut 6.4 4112 - Maple, Sawtimber 83 1-50 Harvest Seed Tree 411 - Northern Even-Aged Approved Beech, Cherry Poor Hardwood Proposal

Association

Habitat Cut: No Site Condition:

Prescription Mark some scattered maple for seed and harvest the rest to restart the stand.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable maple, basswood, cherry, aspen.

Regen:

Other Semi-open area with clumps of witch hazel and large open grown maple. Some cherry filling in the canopy gaps

Comment:

Proposed Start Date: 10/1 /2019

61172079-Cut 10.7 4112 - Maple, 81 111-Single Tree 411 - Northern Sawtimber Harvest Even-Aged Approved Beech, Cherry Well 140 Selection Hardwood Proposal

Association

Habitat Cut: No Site Condition:

Prescription Thin stand down to 80sqft/ac. Create a regen gap every couple of acres.

Specs:

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable maple, cherry, birch, basswood.

Regen:

Other

Comment:

Proposed Start Date: 10/1 /2019

87 61172087-Cut 51.9 4110 - Sugar Maple Sawtimber 81 81-110 Harvest Single Tree 411 - Northern Uneven- Approved Selection Hardwood Aged Proposal

Habitat Cut: No Site Condition:

Prescription 2nd thinning of the stand. Take BA down to around 80 and create a good sized regen gap every 2 or 3 acres. Run red line at the top of the

Specs: bluff.

Next Step Monitoring, Natural Regen (Re-Inventory)

Treatments:

Acceptable maple, cherry, basswood, birch

Regen:

Other Stand was thinned in 2004 (TS# 61-001-03-1). Overall decent quality hardwoods on some rolling terrain that gets a bit steep in the north end of

Comment: the stand. A good amount of cherry regeneration in the understory. BAs (100, 140, 110, 100, 100, 110)

a n d	Treatment Name	Acres	Stand CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Age Structure	Approval Status
96	61172096-Cut	30.7	42100 - Planted White Pine	Sawtimber Well	61	111- 140	Harvest	Overstory Removal	411 - Northern Hardwood	Even-Aged	Approved Proposal

Habitat Cut: No Site Condition:

Prescription Remove the white pine overstory and protect the advanced maple regen as best we can. Leave retention as scattered pine or as an area Specs:

(around the homestead site).

Next Step Treatments:

S

Acceptable Regen:

An old homestead foundation is located along the roadway and should not be disturbed. Other

Comment:

Proposed Start Date: 10/1 /2019

98 61172098-Cut 62.2 4110 - Sugar Maple Sawtimber 111-Harvest Crown Thinning 411 - Northern Even-Aged Approved

Association Well 140 Hardwood Proposal

Habitat Cut: No Site Condition:

Prescription Thin stand down to 80sqft/ac. Create some regen gaps every couple of acres. Access is off Smith Rd.

Specs:

Next Step Treatments:

Acceptable Regen:

No records of this stand being thinned before. Mediocre quality hardwoods. Some scattered aspen, also pockets of wind throw along the west Other Comment:

side of the stand. BAs (100, 110, 140, 160, 120).

Proposed Start Date: 10/1 /2019

401 61172401-NF 2.1 310 - Herbaceous Nonstocked Unspec NonForestMgt **Brush Cutting** 3205 - Mixed Approved Openland Proposal ified Upland Shrub

Habitat Cut: No Site Condition:

Prescription Selectively fell woody encroachment to maintain upland brush/grassland community. 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 Specs: plantings and protect with wire cages or tubex.

Work with FRD to find opportunities to expand these U stands into adjacent forested stands where stocking is low, or unmerchantable woody species could be thinned or removed. The expansion of these U types should be designed to improve efficiency of opening management. May need to control bracken fern due to lack of natural disturbances. Mechanically treat bracken to reduce its extent, plant to annual rye for several years and then convert to an appropriate native mix if soils will allow. Periodic maintenance such as mowing, fertilization, reseeding,

burning, and/or removal of woody encroachment.

Next Step Treatments:

<u>Acceptable</u>

Regen:

Other 1 4 1 Comment:

10/1 /2019 **Proposed Start Date:**

2.0 310 - Herbaceous Nonstocked 402 61172402-Unspec SitePrep Roller Chopping 4211 - Planted Even-Aged Approved Openland ified Red Pine Proposal Prep

Habitat Cut: No Site Condition:

Prescription site prep, trench and plant red pine.

Specs:

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

Treatments:

Acceptable red pine

Regen:

Other Comment:

Traverse City Mgt. Unit

Report 3 -- Treatments

Compartment: 172 Year of Entry: 2020

Red Pine

DNR DNR

Proposal

а **Treatment** Acres Stand Size Stand BA **Treatment Treatment Cover Type** Age Approval n Method Structure Name Objective **Status** d CoverType Density Age Range Type 61172403-23.6 330 - Low-Density 4211 - Planted 403 Nonstocked Unspec SitePrep Roller Chopping Even-Aged Approved

Habitat Cut: No Site Condition: Survey Needed

Trees

<u>Prescription</u> Remove as much wood encroagement as possible either with a timber sale or roller chopping. Then trench and plant red pine. <u>Specs:</u>

s

t

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

ified

Treatments:

Acceptable red pine

Prep

Regen: Other

Need to get surveyors out to put corners on the private property.

Comment:

Proposed Start Date: 10/1 /2019

408 61172408-NF 1.0 310 - Herbaceous Nonstocked Unspec NonForestMgt Herbaceous/Crop 3105 - Mixed Approved ified /Grass Planting Upland Proposal Herbaceous

Habitat Cut: No Site Condition:

<u>Prescription</u> May want/need to plant herbaceous species for wildlife forage needs. Consider an appropriate native species, but don't rule out pasture mix (i.e. <u>Specs:</u> alfalfa/clover). Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment.

Next Step
Treatments:

Acceptable

Regen:

<u>Other</u>

Comment:

Proposed Start Date: 10/1 /2019

410 61172410-NF 4.1 330 - Low-Density Nonstocked Unspec NonForestMgt Herbaceous/Crop 3105 - Mixed Approved ified /Grass Planting Upland Proposal Herbaceous

Habitat Cut: No Site Condition:

<u>Prescription</u> May want/need to plant herbaceous species for wildlife forage needs. Consider an appropriate native species, but don't rule out pasture mix (i.e. Specs: alfalfa/clover). Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment.

Next Step

Treatments:

Acceptable

Regen:

Other

Comment:

Proposed Start Date: 10/1 /2019

Total Treatment Acreage Proposed:

546.7

Traverse City Mgt. Unit

Steve Crigier : Examiner

Compartment: 172
Year of Entry: 2020

Availa	ability for	Managemer	nt						
Total	Acres	Acres Avail	Acres		Domina	nt Site	e Con	dition	s
Acres	Available	With Condition	Not Available		21	5B	5C	2F	3J
177	109	59	8	Aspen	25	34			8
1	1	0	0	Bog					
203	0	0	203	Cedar					203
16	16	0	0	Herbaceous Openland					
3	3	0	0	Jack Pine					
192	141	52	0	Low-Density Trees	52				
17	0	0	17	Lowland Deciduous					17
18	18	0	0	Lowland Shrub					0
3	0	0	3	Mixed Upland Deciduous				3	
912	674	142	96	Northern Hardwood	127		16		96
63	63	0	0	Planted Mixed Pines					
131	131	0	0	Red Pine					
10	10	0	0	Upland Shrub					
12	12	0	0	Urban					
110	110	0	0	White Pine					
1,868	1,288	253	327	Total Forested Acres	204	34	16	3	324
	69%	14%	18%	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 ond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
1	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	219	2H: Blocked by physical obstacle (e.g. upland stand in a lowland area)	Unspecified	Unspecified	Unspecified
Co	omments:						
2	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	36	Unspecified	Unspecified	Unspecified	Unspecified
Co	omments:						

Report 4 – Site Conditions

Traverse City Mgt. Unit
Steve Crigier: Examiner

3	Unavailable	2F: Too steep	3	3J: Water quality / BMPs (stream, river, or lake)	Unspecified	Unspecified	Unspecified
	Comments:						
4	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	33	2F: Too steep	Unspecified	Unspecified	Unspecified
	Comments:						
5	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	16	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
6	Unavailable	3J: Water quality / BMPs (stream, river, or lake)	21	2F: Too steep	Unspecified	Unspecified	Unspecified
	Comments:						
7	Available	5B: Maintain for regeneration purposes	34	Unspecified	Unspecified	Unspecified	Unspecified
	Comments:						
8	Available	2I: Survey needed	99	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Coded at Pre-Revie	ew. Nate					
9	Available	2I: Survey needed	28	Unspecified	Unspecified	Unspecified	Unspecified
	Comments: Coded at Pre-Revie	ew. Nate					

Report 4 – Site Conditions

Compartment: 172

Traverse City Mgt. Unit

Steve Crigier : Examiner Year of Entry: 2020

10	Available	2I: Survey needed	8	Unspecified	Unspecified	Unspecified	Unspecified
	omments: oded at Pre-Review	w. Nate					
11	Available	2I: Survey needed	4	Unspecified	Unspecified	Unspecified	Unspecified
	omments: oded at Pre-Reviev	w. Nate					
12	Available	2I: Survey needed	13	Unspecified	Unspecified	Unspecified	Unspecified
	omments: oded at Pre-Reviev	w. Nate					
Co		w. Nate 2l: Survey needed	24	Unspecified	Unspecified	Unspecified	Unspecified
13 C c	oded at Pre-Reviev	2l: Survey needed	24	Unspecified	Unspecified	Unspecified	Unspecified

10/11/2018 11:25:07 AM - Page 3 of 3 POLEYN

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: 172





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.

Conservati Area	on Type	Description	ERA = Ecological Reference Area HCVA = High Conservation Value Area SCA = Special Conservation Area
SCA	Cold Water Lake	A coldwater lake has temperature and dissolved oxygen condition stocked trout populations and those of other coldwater fish speci conditions for coldwater fishes may occur in Michigan lakes if the groundwater inflows, or are located in colder (northern) areas of Director's action and designated as trout resources by Fisheries	es to persist from year to year. Suitable ey are relatively deep, have substantial the state. Such lakes are established by
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen cond 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 communities are ecologically and socially significant in their effective as aesthetics, habitat, bank stability, timber production, and their	e unique conditions adjacent to lakes, liversity of plants and wildlife. Riparian cts on water quality and quantity, as well

S t	Traverse Cit	y Mgt. Unit		Report 7	- Forested	Stands Compartment: 172 Year of Entry: 2020
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4111 - S.Maple, Hard Mast Association	Poletimber Well	119.5	81	111-140	Medium quality timber on rolling terrain. Some pockets of young pole timber. BBD is present in the stand. BAs 130, 110, 110, 140, 80, 140, 110.
4	4130 - Aspen	Sapling Well	7.7	28	Immature	Well stocked. The bigtooth clones are almost pole sized. Trees are 30-40' tall. Moare quaking at the north end of the stand.
6	4112 - Maple, Beech, Cherry Association	Poletimber Well	19.4	81	51-80	Medium/poor quality hardwoods that was thinned in 2014 (Hidden Hardwoods 61-064-10-01). Lots of ironwood in the understory. Stocking is patchy. Sugar maple regen along the edges of the UO types. Patches of younger red maple pole timber.
7	4130 - Aspen	Sapling Well	1.6	28	Immature	Trees are 30-40' tall, starting to convert to pole sized trees. Quite a few crooked stems.
9	4116 - Mixed N. Hardwood - Aspen	Sapling Well	6.3	28	Immature	Well stocked. Some of the aspen is 30-40' tall. A good mix of hardwood species.
10	4112 - Maple, Beech, Cherry Association	Sawtimber Well	22.2	81	81-110	Good quality hardwoods, unfortunately it has suffered some heavy wind damage. Stand was thinned in 2014 Hidden hardwoods 61-064-10-01. Lots of ironwood filling in the understory: (. Small M3 pocket down in the bowl.
13	4112 - Maple, Beech, Cherry Association	Sapling Medium	8.0	26	Immature	Trees are about 20' tall. Stocking is patchy. There is a good amount of maple along the edges of the stand. 5000 hybrid aspen were planted in June of 1992 in an attempt to convert the stand from hardwood. Planting survival was low. There is some Hard Maple and Cherry 10-20 feet tall. Heavy raspberry in many areas. Several aspen appear to have insect or disease problem since bulges are occurring in the main stem and stems are breaking at that point on the stem. (Rouston)
14	4130 - Aspen	Poletimber Poor	65.3	32	1-50	Aspen is maybe 3 sticks tall and is already declining. Understory is thick with maple!! A4 over M3.
15	42120 - Planted Jack Pine	Sapling Well	2.1	26	Immature	10/1998 Machine planted in May 1992 12x6. In October 1993 one or two acorns were hand planted next to each Jack Pine seedling. Acorns planted 2"-3" deep. (Rouston)
16	4130 - Aspen	Poletimber Medium	12.5	62	1-50	Poor quality quaking aspen, a few clones of bigtooth. Understory is a nice mix of hardwoods.
17	4112 - Maple, Beech, Cherry Association	Sapling Well	4.1	25	1-50	Stand is highly variable. Mostly scattered large maple trees that have seeded in a thick understory of maple and cherry. Lots of size/age classes.
18	4112 - Maple, Beech, Cherry Association	Sawtimber Medium	27.9	81	51-80	Maple are large/open grown and of medium to poor quality. Stocking is variable There is a fair amount of aspen in this stand, some in clones, some a scattered individual trees. Stand appears to be two-aged. Lots of ironwood, some is merchantable but a lot in the 3-4" range. BAs 90, 100, 130, 60

S t	Traverse City	/ Mgt. Unit		Report 7	Forested	Stands Compartment: 172 Year of Entry: 2020
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
19	4130 - Aspen	Poletimber Medium	33.7	50	1-50	Poor quality aspen with lots of sugar maple in the understory! Maybe 5-10 cords/acre of aspen. There are a few areas where there is no overstory that are M3 pockets.
25	4112 - Maple, Beech, Cherry Association	Poletimber Well	23.6	79	81-110	Medium quality hardwoods. Stocking is variable with some M3 pockets and clones of aspen. BAs 80, 120, 90, 100, 80.
29	4130 - Aspen	Poletimber Poor	4.8	32	1-50	Declining aspen that is nursing along nice maple regen. aspen is 2-3 sticks tall.
32	4112 - Maple, Beech, Cherry Association	Sapling Well	1.7	18	Immature	Nice quality maple that is about 20' tall. Some scattered pole size aspen. age is not on the aspen but MIFI makes me put an age on the aspen.
33	4130 - Aspen	Poletimber Medium	8.4	42	51-80	Medium-poor quality aspen over advanced maple regen.
35	4119 - Mixed Northern Hardwoods	Poletimber Well	41.8	81	81-110	Stand is on some rolling terrain that is steep in some areas. Medium quality timber, stocking is pretty variable. BAs (80, 150, 130, 80, 150). There is a decent amount of sugar maple regen, mostly in the northern 1/2 of the stand. Leetsville ORV trail runs though the stand. Stand was thinned in 2002 TS# 066-00-1
38	42110 - Planted Red Pine	Poletimber Well	20.3	32	141-170	Red Pine planted in 1989 3-0 stock. Trees are 2-3 stick tall, good density and they are putting on 12-18" of height/yr. Stand is on some rolling terrain.
39	42110 - Planted Red Pine	Poletimber Well	18.8	32	171-200	Mostly 3 stick trees, some 4 sticks. About 40% live crown on the trees. Some porcupine damage. Nice straight rows with good spacing. BAs (180, 190, 190).
40	4110 - Sugar Maple Association	Poletimber Well	1.3	72	81-110	Nice quality pole stand.
42	4130 - Aspen	Poletimber Medium	4.4	42	1-50	Poor Quality aspen, some of which is falling over. Hardwoods filling in the understory.
43	4191 - Mixed Upland Deciduous with Conifer	Poletimber Poor	3.1	30	1-50	Opening that is filling in. Lots of size/age classes. On a pretty steep slope.
45	42110 - Planted Red Pine	Sawtimber Well	89.7	67	111-140	Stand has been thinned 3 times, (1990, 2003 and 2013). Nice looking plantation. Trees on the west side of 131 are 6-7 sticks tall and has a bit more hardwood in the understory. The trees on the west side are 5-6 sticks tall and has a pretty clean understory.
46	4112 - Maple, Beech, Cherry Association	Sawtimber Poor	4.1	79	1-50	Large open grown maple.
47	4130 - Aspen	Poletimber Well	17.6	58	81-110	Steep slope down to the river. Sometimes lots of aspen, sometimes lots of red maple. Nice quality Bigtooth at the south end that turns to lower quality Quaking at the north.

S	Traverse City	/ Mgt. Unit		Report 7	– Forested	Stands Compartment: 172 Year of Entry: 2020
t a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
49	4112 - Maple, Beech, Cherry Association	Poletimber Medium	17.6	79	51-80	Stand is a mix of young pole timber and scattered large limby trees. Pretty poor quality and has a thick ironwood understory.
51	42140 - Planted Mixed Pine	Sapling Well	63.1	27	51-80	J3-R3 at this time. Part of the stand is getting close to the pole size trees. (BA 80, 70, 60, 30). The strips east of 131 seems to have more of a jack pine component and small diameters while the strips west of 131 is more red pine and diameters around 5-6". Jack pine is natural regeneration. Planted in 1994 with 3-0 Red Pine stock from Needlefast Nursery, Scottville on May 16, 1994. 48,000 trees/60 acres. Lots of natural Jack Pine reproduction especially along East edges of North/South strips. Some hardwood patches coming in too.
54	42210 - Natural Red Pine	Sawtimber Medium	2.3	72	51-80	
56	4112 - Maple, Beech, Cherry Association	Sawtimber Poor	7.3	81	1-50	Stand is scattered large maple trees with pockets of aspen over sugar maple regen (M3).
57	42220 - Natural Jack Pine	Poletimber Medium	1.0	35	1-50	Scrubby jack pine that is filling in the opening.
59	4112 - Maple, Beech, Cherry Association	Poletimber Well	3.3	71	51-80	Stand has some good quality sugar maple stems, just a bit on the small side. Some pockets of aspen.
61	4111 - S.Maple, Hard Mast Association	Poletimber Well	4.7	81	111-140	Medium quality timber on rolling terrain. Some pockets of young pole timber. BBD is present in the stand. BAs 130, 110, 110, 140, 80, 140, 110. Same stand as '1' just separated by the private property.
68	4112 - Maple, Beech, Cherry Association	Poletimber Well	16.5	83	111-140	Nice quality pole timber, stand was thinned in 2004. BAs (110, 140, 140). Some cherry regen showing up in the understory. Unfortunately some ironwood as well.
70	4112 - Maple, Beech, Cherry Association	Sawtimber Poor	6.4	83	1-50	Semi-open area with clumps of witch hazel and large open grown maple. Soom cherry filling in the canopy gaps.
79	4112 - Maple, Beech, Cherry Association	Sawtimber Well	10.7	81	111-140	Decent quality hardwoods thinned in 2004. Some small pockets of windthrow. Pockets of cherry in the understory. BAs (90,

4112 - Maple, Beech,

Cherry Association

6120 - Lowland Cedar

81

82

Sawtimber

Well

Poletimber

Well

24.1

202.6

83

128

111-140

141-170

110, 130).

Nice quality hardwoods on a bluff over the Rapid River. Some

scattered hemlock. Steep slopes make this stand valuable as a filtration strip alongside the Rapid River corridor.

Deeryard with Rapid River flowing through the stand. Stand

has abrupt bluffs on both sides of it. Lots of seep and a tributary creek on the east side of stand. Some areas have more of a spruce and fir component. Nice Cedar Logs in areas.

s t	Traverse City	y Mgt. Unit		Report 7	Forested	Stands Compartment: 172 Year of Entry: 2020
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
83	6117 - Lowland Deciduous, Mixed Coniferous	Poletimber Poor	16.9	81	1-50	4/17/2008 A beaver flooding took place in 3 parts of this stand between January of 1988 & the inventory taken in 1998. Looking at the photos it looked flooded in 1998 but now does not have any floodings. The 1998 inventory alludes to a change but must have never entered the stand. Will keep this as one stand, an E-type, but has 3 old beaver floodings now dry. (Grieve) 10/1998 Former stand 27 during 1990 YOE records. This stand needs closer examination. Data from old records is suspect. This area is very wet in some places and the stand serves as a buffer to the Rapid River corridor. (Rouston)
84	4130 - Aspen	Poletimber Medium	2.5	45	51-80	Patchy stocking of aspen with white pine and balsam fir filling in the understory. Scotch pine on the edges of the stand. Aspen is about 5 sticks tall, Maybe 25-30 cords on this piece.
86	42100 - Planted White Pine	Sawtimber Well	20.0	60	111-140	Stand was planted in spring of 1960 with 2-0 & 3-0 stock. Stand has been row thinned 2 times once in 2003 and then again in 2012. Overstory has some individual and small pocket mortality, and is overall of poor form. The understory is filling in with a mix of pine and hardwoods.
87	4110 - Sugar Maple Association	Sawtimber Well	51.9	81	81-110	Stand was thinned in 2004 (TS# 61-001-03-1). Overall decent quality hardwoods on some rolling terrain that gets a bit steep in the north end of the stand. A good amount of cherry regeneration in the understory. BAs (100, 140, 110, 100, 100, 110)
89	4115 - Y.Birch, Hemlock NH	Poletimber Well	36.1	81	111-140	This corridor consists of a steep forested slope with a South/SouthEast aspect. There is a balsam fir sapling understory. It is an important buffer to the Rapid River bottomlands which are directly adjacent. Slope is about 45-50 feet from the top to the bottom and the stand is approximately three chains wide. The timber on this site is somewhat smaller in diameter than that in the similar stand adjacent (std 61) and to the southwest. Any erosion in this buffer zone would threaten the river area with sediments. A road that is at the bottom of the ridge in this stand should be closed and rehabilitated.
91	4110 - Sugar Maple Association	Sawtimber Well	285.2	81	81-110	Stand was thinned and sale was complete in the summer of 2013. Decent quality hardwoods. Scattered individual tree mortality. Lots of ironwood in the understory. BAs (110, 80, 70, 90, 90, 80, 80, 80).
92	42100 - Planted White Pine	Sawtimber Well	7.8	61	111-140	Stand was planted in spring 1960 with 3-0 stock. One quarter of the stand was replanted in 1966 with 3-0 stock. Rows are planted North/South. Evidence of weevil damage is still apparent. Stand was thinned in 2003 (TS# 026-00-1) and then again in 2012 (Homestead white Pine). The old aerial photos show that this spot was once an orchard. Stand has a lot of sugar maple established in the understory.
93	4119 - Mixed Northern Hardwoods	Sawtimber Well	17.3	81	81-110	Stand thinned in 2004 (TS# 61-001-03-1). There is some individual tree mortality, but overall good quality hardwoods. Heavy ironwood understory. BAs (100, 80, 100, 110).
94	4130 - Aspen	Sapling Well	11.1	13	Immature	Stand was cut in 2005 (TS# 61-002-03-1) Stand is in a bit of a valley. Aspen is about 20' tall. Good stem density. More of a hardwood component along the edges of the stand.

S t	Traverse City	/ Mgt. Unit		Report 7	Forested	Stands Compartment: 172 Year of Entry: 2020
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
95	4110 - Sugar Maple Association	Poletimber Well	15.6	81	111-140	Stand is nice quality hardwoods and has not been thinned before. The terrain is a bit hilly but looks operable.
96	42100 - Planted White Pine	Sawtimber Well	31.6	61	111-140	White pine planted in spring of 1960 (2-0 & 3-0 stock). Some replanting in 1963 and 1966 (3-0 stock). Stand was 3rd row thinned in 2002-2003 (TS# 026-00-1) and then again in 2012. An old homestead foundation is located along the roadway and should not be disturbed. A few Red Pine mixed in. Evidence of weevil damage in the past. Understory has a good mix of species and quite a bit of sugar maple. Overstory is a lot of multi-topped white pine 5-6 sticks tall.
97	4110 - Sugar Maple Association	Sawtimber Well	73.6	81	81-110	Stand was initially thinned in 1992-1993 (TS# 17-91-1) and then again in 2012 (hornbeam Hardwoods' 61-052-12-01). Nice quality maple in the overstory, some scattered large hemlock trees. 6-7 stick hardwood trees with 2-3 logs in them. Very heavy ironwood in the understory. BAs (80, 90, 90, 80)
98	4110 - Sugar Maple Association	Sawtimber Well	62.2	81	111-140	No records of this stand being thinned before. Mediocre quality hardwoods. Some scattered aspen, also pockets of wind throw along the west side of the stand. BAs (100, 110, 140, 160, 120).
99	4139 - Aspen, Mixed Deciduous	Sapling Well	7.1	26	Immature	Stand was clearcut in 1991, TS# 34-90-1. (Rouston) Aspen is almost pole size. Well stocked stand, more of a hardwood component on along the edges of the stand.

60

50.3

111-140

Stand was first row thinned in 2003 TS#026-00-01 and thinned

again in 2012 'Homestead White pine. Understory is filling in with white pine, sugar maple and beech. Not great quality in the white pine, most of it is 5-6 sticks. Some individual dieback and small pocket mortality.

42100 - Planted White

Pine

103

Sawtimber

Well



Stand	Cover Type	Acres	Managed Site	General Comments:
2	122 - Road/Parking Lot	1.3	No	
3	330 - Low-Density Trees	1.1	No	
5	330 - Low-Density Trees	21.6	Yes	Upland area w/scattered black cherry trees on rolling terrain. Hard Maple saplings are invading the edges of the opening and they are coming in under the crowns of the cherry. Lots of bracken fern appears to occupy the site but it is hard to tell due to the snowcover.
8	330 - Low-Density Trees	1.6	No	
11	330 - Low-Density Trees	5.7	No	
12	330 - Low-Density Trees	2.8	No	
20	330 - Low-Density Trees	6.0	No	
21	330 - Low-Density Trees	5.2	No	
22	330 - Low-Density Trees	6.7	No	
23	330 - Low-Density Trees	1.3	No	
26	330 - Low-Density Trees	3.4	No	Upland area w/scattered black cherry trees. Hard Maple saplings are invading the edges of the opening and they are coming in under the crowns of the cherry. Lots of bracken fern appears to occupy the site.
27	330 - Low-Density Trees	1.0	No	
28	320 - Upland Shrub	9.9	No	Typical U stand for this county except there is more open grass area included. Cherry and Hard Maple poles are scattered and a fair amount of bracken fern is found here. (Rouston)
30	330 - Low-Density Trees	14.1	No	Old homestead. Heavy snowmobile use. Old concrete foundation is on this site.
31	330 - Low-Density Trees	17.1	Yes	
34	330 - Low-Density Trees	3.6	No	



Stand	Cover Type	Acres	Managed Site	General Comments:
36	6225 - Bog	0.5	No	10/98 Vernal Pond. Pothole at the bottom of steep slopes - typically holds water into early summer - dry this year. Mostly marsh grasses with some leatherleaf. Must protect from sedimentation by using a filtration zone around the perimeter of the stand when thinning is done in hardwood stand that surrounds this vernal pond. (Rouston)
37	6225 - Bog	0.7	No	
41	330 - Low-Density Trees	28.2	No	Opening seeding in with white pine and cherry. There is a quite a bit of pole size trees but I don't think there is enough for a timber sale.
				OPIC - FMD: 12/17/2008 From compartment review; plant to red pine leaving 1/3 of total area open.
44	122 - Road/Parking Lot	4.5	No	
50	122 - Road/Parking Lot	1.7	No	
53	330 - Low-Density Trees	3.6	No	
55	330 - Low-Density Trees	5.0	No	OPIC - FMD: 3/12/2008 Still the same. (Grieve) 10/98 Grass opening filling in around the edges with Q. Aspen. Steep slope on NW side down to conifer/hardwood mix. Plenty of witch hazel. Some Black Cherry and Hard Maple scattered. Could cut aspen now or in 10 years along the NW edge and over the bank. (Rouston)
60	122 - Road/Parking Lot	4.2	No	
62	330 - Low-Density Trees	3.7	No	Opening seeding in with white pine and cherry. There is a quite a bit of pole size trees but I don't think there is enough for a timber sale.
				OPIC - FMD: 12/17/2008 From compartment review; plant to red pine leaving 1/3 of total area open.
63	330 - Low-Density Trees	10.9	Yes	Upland area w/scattered black cherry trees. Hard Maple saplings are invading the edges of the opening and they are coming in under the crowns of the cherry. Lots of bracken fern appears to occupy the site but it is hard to tell due to the snowcover. (Rouston)
64	330 - Low-Density Trees	6.3	Yes	Upland area w/scattered black cherry trees. Hard Maple saplings are invading the edges of the opening and they are coming in under the crowns of the cherry. Lots of bracken fern appears to occupy the site but it is hard to tell due to the snowcover.
80	622 - Lowland Shrub	5.5	No	A beaver flooding took place in stand between January of 1988 & the inventory taken in 1998. Looking at the photos it looked flooded in 1998.
85	330 - Low-Density Trees	1.3	No	OPIC - FMD: 4/31/2008 This land should be sold along with stand 84. (Grieve)



Stand	Cover Type	Acres	Managed Site	General Comments:
88	622 - Lowland Shrub	13.0	No	A beaver flooding took place between January of 1988 & the inventory taken in 1998. Looking at the photos it looked flooded in 1998.
401	310 - Herbaceous Openland	2.1	No	Some knapweed, to much snow to see how much. Former well drilling site that is now restored to a grassy opening.
402	310 - Herbaceous Openland	2.0	Yes	Abandon well site, to much snow to see ground cover.
403	330 - Low-Density Trees	23.6	Yes	Opening with scattered Black Cherry and a few wolfy Hard Maple sawlog size trees.
406	310 - Herbaceous Openland	10.9	No	Pipeline ROW
408	310 - Herbaceous Openland	1.0	No	OPIC - FMD: 3/12/2008 Old well site, very bad subsidence on three sides, check with wildlife for treatment. (Grieve) 10/98 Old well-site, now grassy opening. Good site for Wildlife planting if desired. (Rouston)
410	330 - Low-Density Trees	4.1	Yes	Hilly, some scattered maple & cherry. Staghorn sumac on top of hill. Check when snow is off for ORV problems. (Grieve) 10/1998 Grass opening with some cherry mostly at the North end. Rolling topography with some trash in the form of a couple old car bodies. Sign of an old fire - plow furrows at the North end. (Rouston)
415	330 - Low-Density Trees	7.0	Yes	OPIC - FMD: 2008 Fill in gaps in planting with seedlings. (Wildlife) 3/17/2008 Red pine has been planted on the edge of this stand in the SE corner next to the hardwoods. Looks like about 8 years ago. (Grieve) 10/98 Grass opening with scattered cherry poles. Maintain as natural opening. Edges are clean yet (no invasions). (Rouston)
416	330 - Low-Density Trees	7.4	No	OPIC - FMD: 3/17/2008 This was a gas well pad which was cleared but never drilled in the NE part of this stand. The rest is just edge that keeps filling in.