

# **Compartment Review Presentation**

Traverse City Forest Management Unit Compartment 26 Entry Year 2016 Acreage: 1,882 County Benzie Management Area: Benzie Outwash

#### Revision Date: 02/21/2014

Stand Examiner: Craig Allen

## Legal Description:

T25N- R14W; sections 4, 9, 16

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

This compartment is a part of the Benzie Outwash Management Area. The management plan for this area involves many aspects. Vegetation management in the Benzie Outwash management area (MA) will provide forest products; maintain or enhance wildlife habitat; protect areas of unique character, including the Betsie River which is a designated natural river; and threatened, endangered and special concern species and provide for forest-based recreational uses and Native American non-commercial uses of forest products. Timber management for the next 10 years includes improving the age-class distribution of aspen and red pine. Northern hardwoods management includes continued selective or regeneration harvesting of northern hardwoods to achieve an uneven age-class structure or improve timber quality. Wildlife management objectives include increasing the structural complexity of northern hardwood communities for interior forest species and perpetuating early-successional communities for species adapted to young forests. Expected trends in this 10-year planning period are increased recreational pressure on recreational trails and introduced insect and disease concerns, especially emerald ash borer and beech bark disease.

## Soil and topography:

The topography is mostly level except for a deep ravine containing Dair creek and part of its headwaters. The upland areas consist of the well drained Kalkaska- Rubicon soil association. Lowland areas of wet and semi- wet flats are made up of permeable Roscommon- Augres- Croswell soils.

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

This compartment is part of a large block of State land, which includes some scattered private ownerships. The areas lying to the west, south and east of this compartment are also mostly State owned. The area to the north is mostly private, and parceled into various ownerships mostly used for vacation and recreation.

"Homestead Orchards" and "Homestead Orchards 1" are two old platted subdivisions located in the southwest corner of section 4. These are 2 of 11 subdivisions in this area that were established between 1919 and 1927. Since that time most of the parcels became State property through tax reversion. There are only two small undeveloped parcels that remain in private ownership in section 4 (see map). Most of the platted roads (except some on sections lines) in these 11 subs were never installed.

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

Dair Creek is located in section 16. This is a designated trout stream and "Natural River" as it is a tributary to the Betsie River.

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

There are known concerns within the compartment. All proposed management activities have taken these concerns into consideration.

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

See attached proposed treatments.

#### Watershed and Fisheries Considerations:

Dair Creek flows through Compartment 26. Dair Creek is a significant tributary of the Betsie River. Dair Creek is a Designated Trout Stream, with naturally reproducing populations of brook trout, brown trout, and rainbow trout (steelhead). Dair Creek is critical in that it produces a large percentage of the wild steelhead parr from the Betsie River watershed. Therefore, Dair Creek should receive the utmost protection. (Fish Div., Tonello)

## Wildlife Habitat Considerations:

Compartment 26 is located on Newaygo Outwash Plain. The land type association is characterized by a broad, flat outwash plain, with few lakes and wetlands (LTA 5111). Topography is flat, with localized kettle lakes or wetlands.

Presettlement vegetation varied, but was mostly dominated by upland conifers. Large areas of wildfire were noted by GLO surveys. Windthrows were common, but not large in size. Present vegetation of LTA 5111 is mostly hardwoods and conifer woodlands.

The priority wildlife species within this compartment are white-tailed deer, ruffed grouse, and woodcock. The abundance of public land within this compartment provides many hunting and viewing opportunities for many wildlife species. There is a probable red-shouldered hawk nest within this compartment. Another hawk nest was noted during inventory, likely a broad-winged hawk. The Michigan Natural Feature Inventory has a record of eastern box turtle and wood turtle occupying the Betsie River watershead. Dair Creek is part of this watershed. Northern goshawk activity was noted in a compartment nearby by MNFI. (Wildlife Div., Traverse City F.O.).

#### **Mineral Resource and Development Concerns and/or Restrictions**

Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 600 and 800 feet. Beneath the glacial drift is the Devonian Ellsworth Shale. The Ellsworth is used for cement products. A gravel pit is located three miles to the southeast, but there may be some potential. This area is located northwest of the current Antrim Shale gas play and the Antrim appears to have potential. Some of the Compartment is leased and the rest is nominated for oil and gas leasing.

#### **Vehicle Access:**

South Pioneer road (677) is a paved county road that borders the entire east side of this compartment. There are several seasonal county roads within this area offering good and easy access to State lands. There are also many forest "2-track" roads in various areas of the compartment that are in good condition and are used for public and DNR land management accessibility.

#### **Survey Needs:**

There are no known survey needs in this compartment at this time.

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

The Platte River State Snowmobile Trail runs along the south edge of the compartment on Landis road (seasonal county road) and along the north edge of section 9 then south toward the Weldon Township cemetery and continuing east across pioneer road. The Betsie Vally Rail Trail (open to snowmobiles in the winter, and non-motorized recreation trail use during non-winter seasons) travels diagonally through this compartment. Appropriate trail protection specifications should be used along all designated snowmobile trails. The Betsie Valley Rail Trail is an improved rail grade that warrants retention consideration to address aesthetic concerns. Hunting, trapping, mushroom hunting and dispersed camping are also popular recreational activities throughout the compartment. (T.M.N. 4/14/14)

#### **Fire Protection:**

This area has wildfire protection by Traverse City DNR and local volunteer Fire Departments.

#### **Additional Compartment Information:**

Any of the private lands within this compartment should be considered for purchase if they become available. Purchase of these lands would further help to block in State ownership of land within this compartment, thereby making land management easier with better access and allowing more contiguous land area for Public enjoyment and use.

#### The following reports from the Inventory are attached:

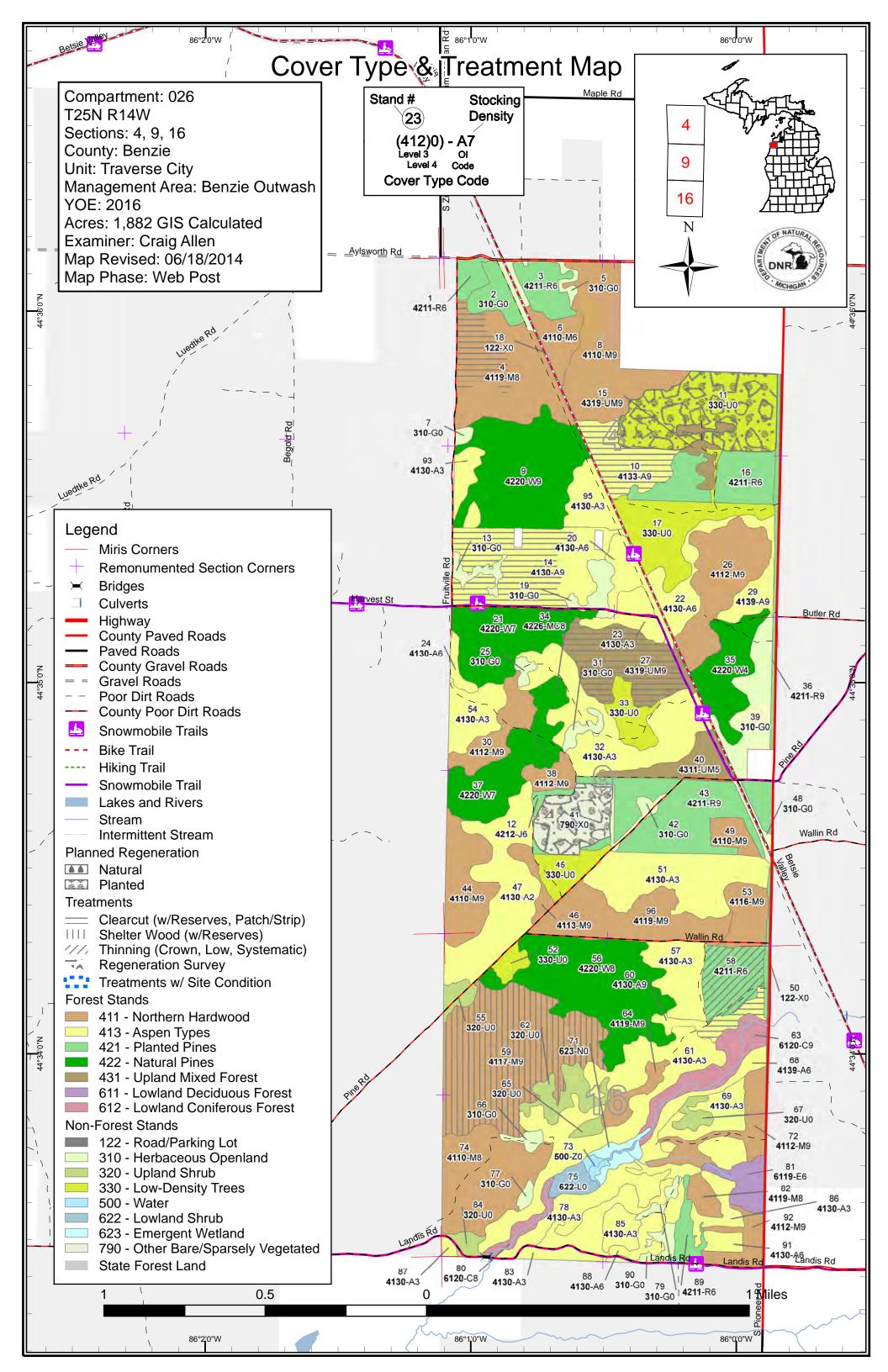
Total Acres by Cover Type and Age Class Cover Type by Harvest Method Proposed Treatments – No Limiting Factors Proposed Treatments – With Limiting Factors Stand Details (Forested and Nonforested) Dedicated and Proposed Special Conservation Areas Site Condition Details

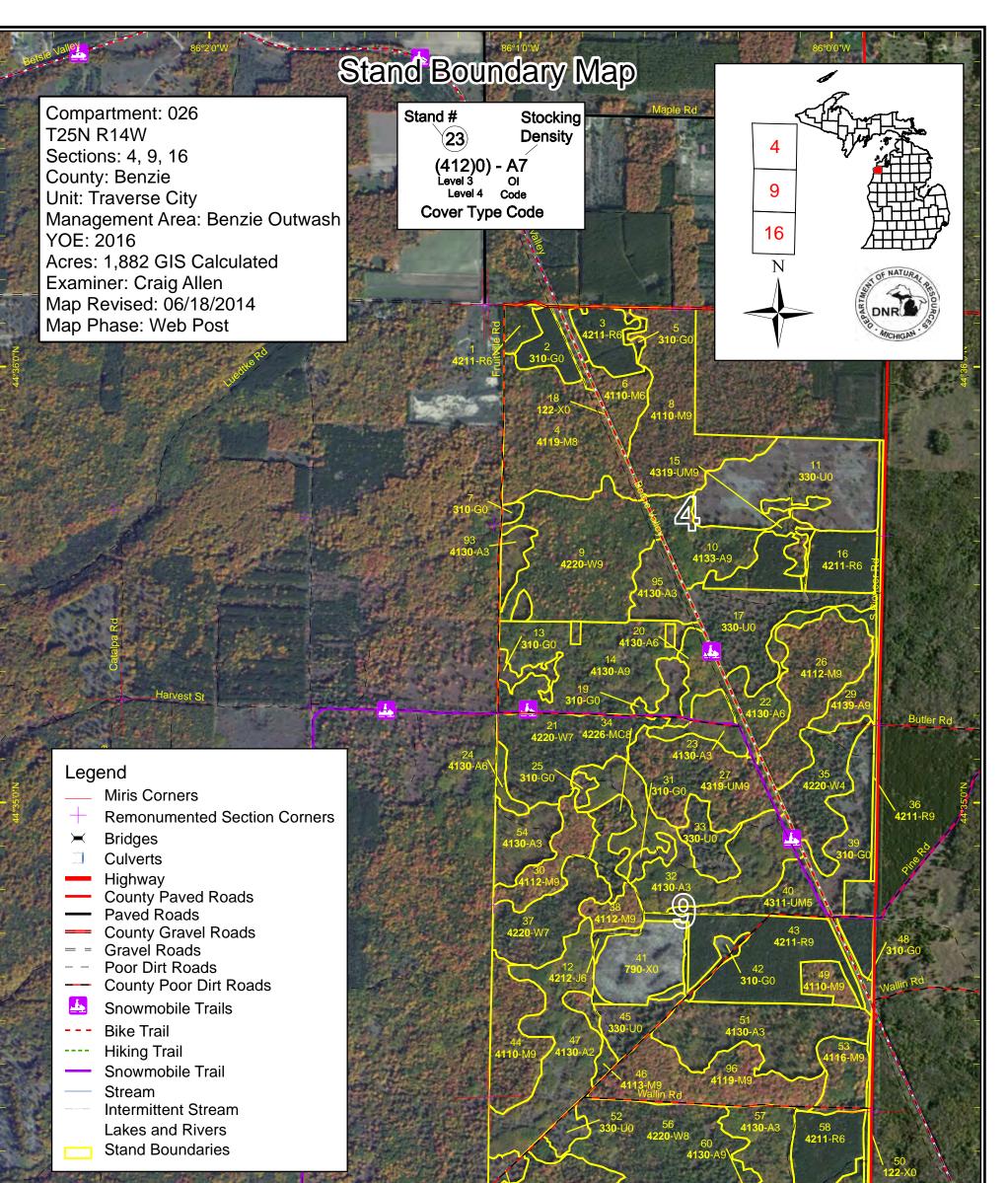
The following information is displayed, where pertinent, on the attached compartment maps:

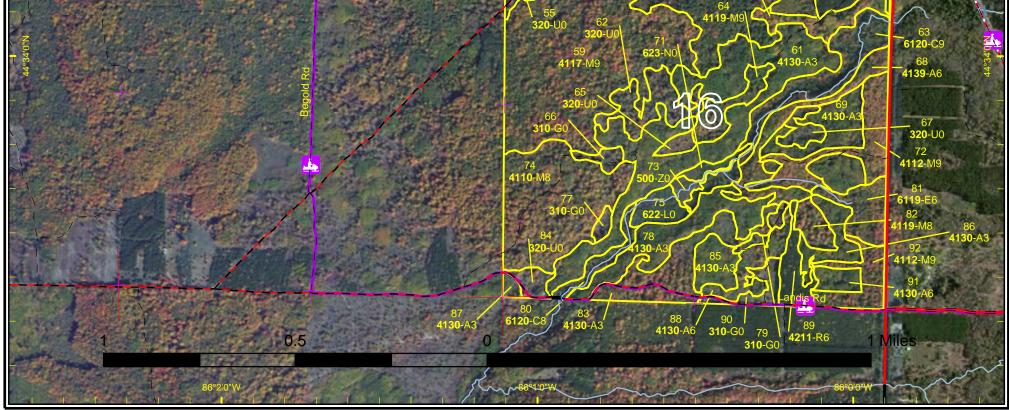
Base feature information, stand boundaries, cover types, and numbers

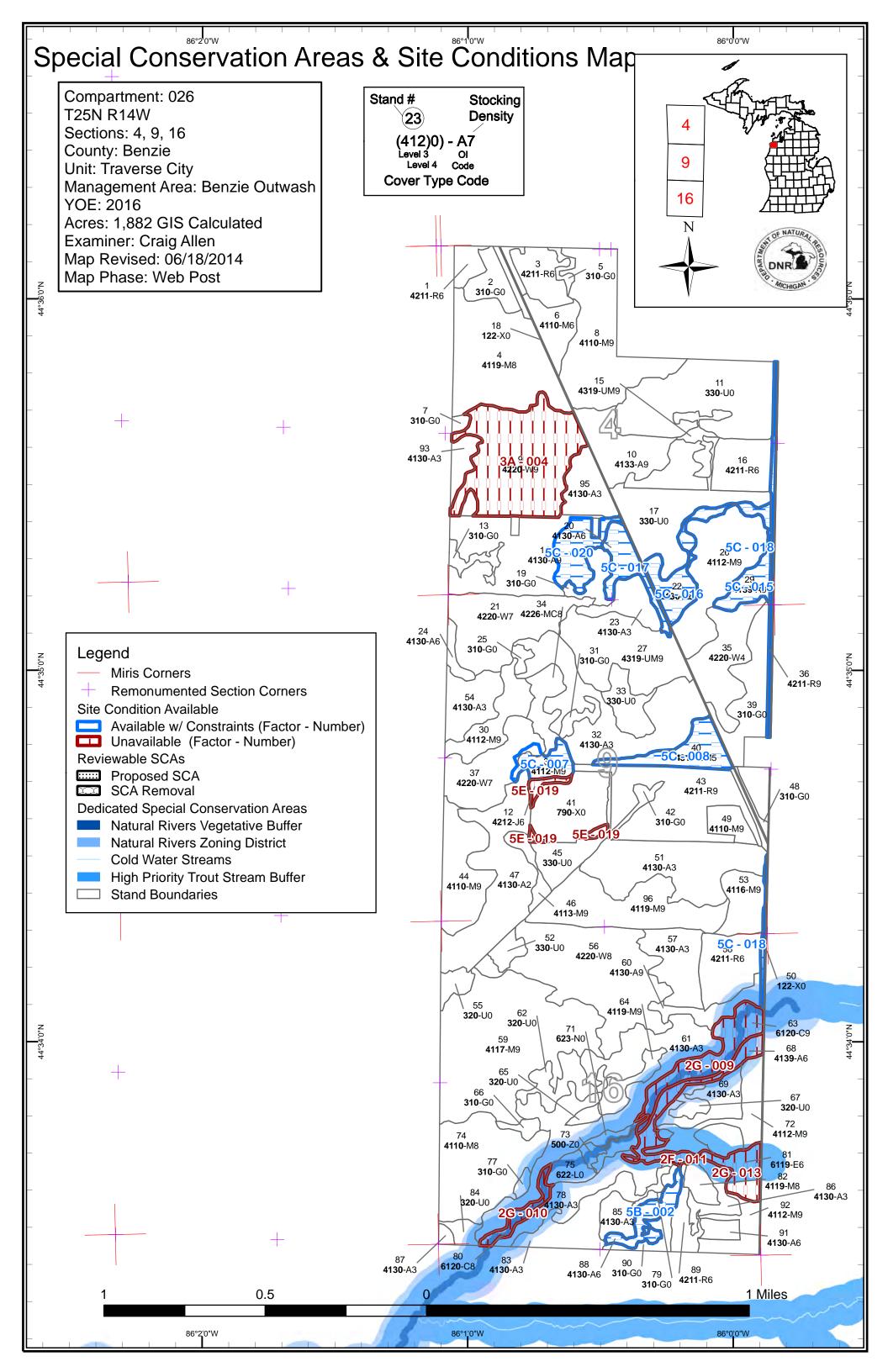
Proposed treatments Site condition boundaries

Details on the road access system









# Report 1 – Total Acres by Cover Type and Age Class

Traverse City Mgt. Unit

**Craig Allen : Examiner** 

# Compartment 026 Year of Entry 2016



Age Class

		a.9	<sup>7</sup> 0,10	10 <sup>2</sup>	ar ar	AD AS	and	89 89 89	100	40 <sup>40</sup>	, 0 <sup>9</sup>	100,100	170,179	20× 150	AND	, <sup>1</sup> €
Aspen	115	0	276	0	4	42	124	0	0	0	0	0	0	0	560	L
Bare/Sparsely Vegetated	27	0	0	0	0	0	0	0	0	0	0	0	0	0	27	L
Cedar	0	0	0	0	0	0	0	0	0	0	0	21	6	0	28	L
Herbaceous Openland	75	0	0	0	0	0	0	0	0	0	0	0	0	0	75	L
Jack Pine	0	0	0	0	0	4	0	0	0	0	0	0	0	0	4	L
Low-Density Trees	130	0	0	0	0	0	0	0	0	0	0	0	0	0	130	L
Lowland Deciduous	0	0	0	0	0	0	0	0	0	0	11	0	0	0	11	L
Lowland Shrub	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7	I
Marsh	7	0	0	0	0	0	0	0	0	0	0	0	0	0	7	l.
Natural Mixed Pines	0	0	0	0	0	0	0	12	0	0	0	0	0	0	12	l.
Northern Hardwood	0	0	0	0	0	15	0	74	173	177	60	0	0	0	499	i
Red Pine	0	0	0	0	0	95	59	10	0	0	0	0	0	0	164	i
Upland Mixed Forest	0	0	0	0	0	0	61	8	0	0	0	0	0	0	68	i
Upland Shrub	31	0	0	0	0	0	0	0	0	0	0	0	0	0	31	i i
Urban	12	0	0	0	0	0	0	0	0	0	0	0	0	0	12	1
Water	3	0	0	0	0	0	0	0	0	0	0	0	0	0	3	I
White Pine	0	0	0	0	0	29	0	0	144	0	0	0	0	72	245	
Total	405	0	276	0	4	185	244	103	317	177	71	21	6	72	1882	



MICHIGAN	Traverse City Mgt. Unit Year of Entry 2016										Compartment Total Compartment Acres:	
				Acre	s by T	reatm	ent Ty	ре				
	Commercial Harvest - 267	Tree Planting - 0		C	Other -	0						
	Habitat Cut - 0	Opening Maintena	ince - ´	15								
				Cov	er Ty	pe by H	larves	st Meth	nod			
				Clear Cut	Colored in the second	and the second	and a standard and a standard a sta	in other	Solution in the second	See Job		
	Aspen Types		80	0	0	0	0	0	80			
	Northern Hardwood		20	0	0	102	0	0	122			
	Planted Pines		0	0	0	0	23	0	23			
	Upland Mixed Forest		42	0	0	0	0	0	42			
		Total	142	0	0	102	23	0	267			

S t			Traverse Cit	y Mgt. Unit	Repo			nents Prescril iting Factor	bed	Compartment: 026 Year of Entry 2016	DIR NATURAL RESOURCES
a n d		itment ame	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
4	61026	004-Cut	20.4 No	4119 - Mixed orthern Hardwoods	Medium Density Log	73	51-80	Harvest	Clearcut with Reserves	4116 - Mixed N. Hardwood - Aspen	Cmpt. Review Proposal
Presc Spece		on site fo	or diversity and		k leave trees	of other	r species	for retention, leavin	g trees of better fo	e majority of good form rm, health and wind firm t may exist.	
<u>Other</u> Comr	nents:			e tops unchipped as nuch as possible.	much as pos	ssible to	provide h	orizontal habitat co	mponent for wildlif	e. Please leave tops in	scattered piles
<u>Next</u> <u>Steps</u>	<u>s:</u>										
Propos Start D		10/01/20 <sup>-</sup>	15								
10	61026	010-Cut	25.2 41	33 - Aspen, Mixed Pine	High Density Log	65	81-110	Harvest	Clearcut with Reserves	4133 - Aspen, Mixed Pine	Cmpt. Review Proposal
Presc Specs	•	form/hea		or where needed to						en regeneration. Select operations and leave any	
<u>Other</u> Comr	<u>nents:</u>	Steve (	Griffith: Pleas ent for wildlife.	e include CWD (dru . Please leave tops	in scattered	piles for	wildlife h	abitat as much as p	oossible. Any aspe	e to provide horizontal h in cuts that are adjacent stand for hare habitat.	
<u>Next</u> <u>Steps</u>	<u>s:</u>										
Propos Start D		10/01/20 <sup>-</sup>	15								
14	61026	014-Cut	47.1	4130 - Aspen	High Density Log	60		Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal
Presc Spece		and pine	. Possibly, co		ntion islands	particul	arily wher	e there is thick adv		ttered retention trees of e or maple. Create son	
<u>Other</u> Comr	<u>nents:</u>	compon	ent for wildlife.	Please leave tops	in scattered	piles for	wildlife ha	abitat as much as p	ossible. Any aspe	e to provide horizontal h n cuts that are adjacent stand for hare habitat.	
<u>Next</u> <u>Steps</u>	<u>::</u>										
Propos Start D		10/01/20 <sup>-</sup>	15								
27	61026	027-Cut	42.0	4319 - Mixed Upland Forest	High Density Log	67	51-80	Harvest	Clearcut with Reserves	4319 - Mixed Upland Forest	Cmpt. Review Proposal
Presc Spece		windfirm	ness. Also, se	elect mark poor form	n/health pine	to cut.	Cut all iro	nwood trees to faci	ilitate harvest opera	retention trees of better ations. Create some CV road and BVT trailleav	VD during
<u>Other</u> Comr	nents:			e tops unchipped as nuch as possible.	much as pos	ssible to	provide h	orizontal habitat co	mponent for wildlif	e. Please leave tops in	scattered piles
<u>Next</u> <u>Steps</u>	<u>s:</u>										
Propos Start D		10/01/20 <sup>-</sup>	15								

Compartment: 026 Traverse City Mgt. Unit **Report 3 -- Treatments Prescribed** Year of Entry 2016 with No Limiting Factor S t а Treatment Acres CoverType Size Stand BA Treatment Treatment Cover Type Approval n Density Method Name Range Objective Status Age Туре d 22.9 42110 - Planted 111-140 4211 - Planted Red Cmpt. Review 58 61026058-High 53 Systematic Harvest Red Pine Cut1 Density Thinning Pine Proposal Pole Prescription -- Craig Allen : Thin stand by select marking. Adjust for variable BA's in the stand, but try to aim for residual BA target of about 110-120. (current Specs: average is 150) Other Comments: Next Steps: Proposed 10/01/2015 Start Date: Cmpt. Review 61026059-Cut 101.7 4117 - Mixed N 88 81-110 Shelter Wood 4117 - Mixed N. 59 High Harvest Hardwood - Pine Density Log with Reserves Hardwood - Pine Proposal Prescription Select mark stand to remove trees of poor form/ health and create openings for advanced regen or for new sprouts. Protect areas of sugar maple advance regen as much as possible. Remaining BA may be quite variable from 20 to 80 depending on location. Create some CWD during harvest Specs: operations and leave any standing dead trees and den trees that may exist. Leave tops unchipped as much as possible to provide horizontal habitat component for wildlife. Please leave tops in scattered piles for wildlife habitat as much as possible. <u>Other</u> Comments: <u>Next</u> Steps: Proposed 10/01/2015 Start Date: 60 61026060-Cut 7.2 4130 - Aspen High 60 Harvest Clearcut with 4130 - Aspen Cmpt. Review Density Log Reserves Proposal Prescription --Craig Allen : Harvest all hardwoods, except mark some retention trees of better form/health. Keep sale boundary a minimum of 100 feet away from Dair Creek. Create some CWD during harvest operations and leave any standing dead trees and den trees that may exist. Specs: Other --Steve Griffith: Please include CWD (drumming log spec) in sale. Leave tops unchipped as much as possible to provide horizontal habitat Comments: component for wildlife. Please leave tops in scattered piles for wildlife habitat as much as possible. Any aspen cuts that are adjacent to a lowland stand please at conclusion of the sale have the logger fell the marked boundary trees in the adjoining lowland stand for hare habitat. <u>Next</u> Steps: **Proposed** Start Date: 10/01/2015 NF 61026013-4.8 3103 - Rubus-Fern Non-Forest **Brush Cutting** 3205 - Mixed Cmpt. Review 13 NonFor Management Upland Shrub Proposal FRD may want to use this stand as a timber landing. Selectively hand fell woody encroachment to maintain upland brush/grassland community. Prescription Specs: 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. Could plant forage crop appropriate for site location and seasonal (i.e. summer vs. winter forage) wildlife uses. May want/need to work around existing beneficial vegetation (i.e. blackberry). Other\_ Comments: <u>Next</u> Maintain as needed with mowing, seeding of native grasses and forbs, fertilizing, burning, or removal of woody encroachment. Steps:

Proposed Start Date: 10/01/2015

S t а

#### **Report 3 -- Treatments Prescribed** with No Limiting Factor

Compartment: 026 Year of Entry 2016

DR NATURAL READER
Approval
Status

a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
17	NF_61026017 NonFor	- 37.6	3302 - Low Density Conifer Trees				Non-Forest Management	Brush Cutting	3205 - Mixed Upland Shrub	Cmpt. Review Proposal
Prese Spec	<u>s:</u> scatte approp	red mast pro priate native	ude this stand in adjace ducing trees and shrubs shrubs and/or mast proc eed to work around exis	s and/or cor ducing trees	hifers for s for wildl	wildlife foo ife food an	d and cover. WLI nd cover. site loca	D can mark trees to	ocut or to leave. Could	plant site
<u>Dthe</u> Com	<u>r</u> ments:									
<u>lext</u> Steps			d with mowing, seeding period as a possible loo						encroachment. This s	tand was
	o <u>sed</u> Date: 10/01/2	015								
19	NF_61026019 NonFor	<b>-</b> 8.2	3103 - Rubus-Fern				Non-Forest Management	Brush Cutting	320 - Upland Shrub	Cmpt. Reviev Proposal
Spec	<u>s:</u> produc wildlife		ble trees. Selectively had shrubs and/or conifers over.							
	ments:									
<u>Vext</u> Step:	<u>s:</u>									
	o <u>sed</u> Date: 10/01/2	015								
31	NF_61026031 NonFor	- 3.9	3105 - Mixed Upland Herbaceous				Non-Forest Management	Brush Cutting	320 - Upland Shrub	Cmpt. Review Proposal
<u>Vext</u> Step: ropo	ments:	015								
33	NF_61026033 NonFor	<b>3-</b> 12.6	3303 - Mixed Low Density Trees				Non-Forest Management	Brush Cutting	320 - Upland Shrub	Cmpt. Reviev Proposal
Prese Spec	cription If FRD		ude this stand in adjace				ne of the white pin		d brush/grassland com	•
<u>Dthe</u>					g					
<u>Vext</u> Step:										
tart l	o <u>sed</u> Date: 10/01/2	015								
39	NF_61026039 NonFor	<b>)-</b> 25.4	3103 - Rubus-Fern				Non-Forest Management	Brush Cutting	320 - Upland Shrub	Cmpt. Reviev Proposal
Prese Spec		plant forage	crop appropriate for Wi	inter Turkey	Food Pl	ot.				
<u>Othe</u> Com	<u>r</u> ments:									
<u>Vext</u> Step:										
Propo		015								

Start Date:

# Report 3 -- Treatments Prescribed with No Limiting Factor

Compartment: 026 Year of Entry 2016

THE MATURAL PRODUCTS
Approval
Status

S t		ľ	raverse	Sity Mgt. Unit	кер			ting Factor	Dea	Year of Entry 2016	DNR MICHIGAN
a n d	Treatm Name		Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
42	NF_6102 NonFe		4.7	31021 - Cool Season Grass				Non-Forest Management	Mowing	31021 - Cool Season Grass	Cmpt. Review Proposal
<u>Prese</u> Spec	<u>s:</u> pr	oducing		shrubs and/or conifer						mmunity. Leave scatter ubs and/or mast produci	
	ments:										
<u>Next</u> <u>Steps</u>	<u>s:</u>										
<u>Propo</u> <u>Start I</u>		01/2015	5								
45	NF_6102 NonFe		12.6	3303 - Mixed Low Density Trees				Non-Forest Management	Brush Cutting	320 - Upland Shrub	Cmpt. Review Proposal
<u>Prese</u> Spec		rvest so	ome of the	e white pine to maintai	n upland bru	ush/grass	land comm	nunity.			
<u>Othe</u> Com	<u>r</u> ments:										
<u>Next</u> Steps	<u>s:</u>										
<u>Propo</u> <u>Start I</u>		01/2015	5								
62	NF_6102 NonFe		14.0	3205 - Mixed Upland Shrub				Non-Forest Management	Other - Specify	320 - Upland Shrub	Cmpt. Review Proposal
Preso Spec	<u>s:</u> ar wi		me of the							nd brush/grassland com ies suited to site and so	
	<u>ments:</u> Mi	aintain a	s needed	with mowing, seeding	of native g	rasses an	d forbs, fe	rtilizing, burning, o	or removal of wood	y encroachment.	
Propo Start I	sed	01/2015	5								
65	NF_6102 NonFe		2.5	3204 - Mast Producing Shrub				Non-Forest Management	Brush Cutting	320 - Upland Shrub	Cmpt. Review Proposal
Prese Spec										ast producing trees and wildlife food and cover	
<u>Othe</u>	<u>r</u> ments:										
<u>Next</u> Steps											
<u>Propo</u> <u>Start I</u>		01/2015	5								
66	NF_6102 NonFe		3.0	3103 - Rubus-Fern				Non-Forest Management	Other - Specify	320 - Upland Shrub	Cmpt. Review Proposal
<u>Prese</u> Spec	s: ar		me of the							nd brush/grassland com ies suited to site and so	
	ments:										
<u>Next</u> Steps	<u>s:</u>	aintain a	s needed	with mowing, seeding	of native g	rasses an	d forbs, fe	rtilizing, burning, o	or removal of wood	y encroachment.	
<u>Propo</u> Start [		01/2015	5								

S t		Traverse	City Mgt. Unit	Repo			nents Prescril ting Factor	bed	Compartment: 026 Year of Entry 2016	DRR DR ATURE COUNTY
a n d	Treatmen Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
67	NF_610260 NonFor	<b>57-</b> 4.8	3204 - Mast Producing Shrub				Non-Forest Management	Brush Cutting	320 - Upland Shrub	Cmpt. Review Proposal
<u>Preso</u> Spec									nast producing trees and r wildlife food and cover	
<u>Other</u> Comi	<u>r</u> ments:									
<u>Next</u> Steps										
<u>Propo</u> <u>Start [</u>		/2015								
75	NF_610260 NonFor	<b>75-</b> 6.7	6220 - Alder/willow				Non-Forest Management	Brush Cutting	622 - Lowland Shrub	Cmpt. Review Proposal
<u>Preso</u> Spec		leclining alder	and willow in order to s	stimulate reg	generatior	n of these l	owland shrubs. C	Cut should take place	ce during the dormant se	eason.
<u>Other</u> Comi	<u>r</u> ments:									
<u>Next</u> Steps										
<u>Propo</u> <u>Start [</u>		/2015								
77	NF_610260 NonFor	<b>77-</b> 1.9	3103 - Rubus-Fern				Non-Forest Management	Brush Cutting	320 - Upland Shrub	Cmpt. Review Proposal
Preso Spec	cription Sele						land community.		nast producing trees and r wildlife food and cover	I shrubs and/or
<u>Other</u> Comi	<u>r</u> ments:									
<u>Next</u> Steps										
<u>Propo</u> <u>Start [</u>		/2015								
79	NF_610260 NonFor	<b>79-</b> 2.7	3105 - Mixed Upland Herbaceous				Non-Forest Management	Brush Cutting	320 - Upland Shrub	Cmpt. Review Proposal
<u>Preso</u> Spec									nast producing trees and r wildlife food and cover	
<u>Other</u> Comi	<u>r</u> ments:									
<u>Next</u> Steps										
<u>Propo</u> <u>Start [</u>		/2015								
90	NF_6102609 NonFor	<b>90-</b> 6.0	3105 - Mixed Upland Herbaceous				Non-Forest Management	Brush Cutting	3105 - Mixed Upland Herbaceous	Cmpt. Review Proposal
Preso Spec			needed by herbiciding s. May want/need to w						n and seasonal (i.e. sum	mer vs. winter
<u>Other</u> Comi	<u>r</u> ments:									
<u>Next</u> Steps		tain as needeo	d with mowing, seeding	g of native g	asses an	d forbs, fe	rtilizing, burning, o	r removal of wood	y encroachment.	
<u>Propo</u> <u>Start [</u>		/2015								

# **Report 3 -- Treatments Prescribed**

S t			Traverse (	City Mgt. Unit	Repo			nents Prescrik ting Factor	Compartment: 026 Year of Entry 2016	DRR PRODUCT	
a n d	Treatr Nan		Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
11	61026 Cut_Pla ve	nt_Sur	29.1	3302 - Low Density Conifer Trees				Regeneration Survey	Artificial Regeneration (1yr)	42110 - Planted Red Pine	Fld. Tr. Bdy.
<u>Pres</u> Spec	<u>cription</u> :s:										
<u>Othe</u>	_	-Craig A	llen : 12/07	/2005 comments:							
<u>Com</u>			,	e these are quality red n and re-plant with red		per the R	led Pine P	roject guidelines, c	change from a sys	tematic thinning to a clea	ırcut, herbicide
<u>Next</u> <u>Step</u> :		-Craig A	llen : 12/20	/2013 comments: will	need reger	n check					
<u>otep</u>		-Craig A	llen : 03/17	/2011 comments: area	has been t	trenched,	just need	s to be planted to r	ed pine FTP # C-	61-489	
Propo Start		4/27/201	4								
12	61026 Cut_Pla ve	nt_Sur	31.5	42120 - Planted Jack Pine	High Density Pole	55		Regeneration Survey	Artificial Regeneration (1yr)	4199 - Other Mixed Upland Deciduous	Fld. Tr. Bdy.

Prescription Specs:

<u>Other</u> Comments:

<u>Next</u>

Steps:

Area has been trenched and next step will be to plant area to red pine. FTP # C-61-489

--Craig Allen : 12/20/2013 comments:

will need regen check

Proposed Start Date:

04/27/2014

	026041- _Plant_Sur vey	24.5	790 - Other Bare/Sparsely Vegetated		Regeneration Survey	Artificial Regeneration (1yr)	42110 - Planted Red Pine	Fld. Tr. Bdy.
Prescription Specs:	<u>n</u>							
<u>Other</u> Comments			<b>o</b> ,	manage as a Red Pine/Oa	ak type. Consider I	eaving a total of 5 a	cres of islands through	nout the stand.
<u>Next</u> <u>Steps:</u>	0		2013 comments: nenow follow up with reg	gen survey				
	area has be to red pine.	en clearc	ut (except for leave island	s) and heavy slash had to l	be burned. Has be	een trenched and no	ow waiting for area to b	be hand planted
Proposed Start Date:	04/27/2014							

**Total Treatment** Acreage Proposed: 503.3

S t		Traverse Ci	ity Mgt. Unit	Repo			ents Prescrib condition	ed	Compartment: 026 Year of Entry 2016	DR NATURAL DURING
a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
		#Type!	#Type!							
<u>Spec</u> Other										
<u>Next</u> Steps										
<u>Prope</u> Start	<u>osed</u> <u>Date:</u> #Type!									
<u>Limiti</u>	ng Factor									
A	Total Treatmo creage Propos		)							

Compartment 026 Year of Entry 2016

## Craig Allen : Examiner

# Availability for Management

Total	Acres	Acres		Dominar	nt Site	e Con	dition	s		
Acres	Available	Not Available		No	5E	5C	5B	3A	2G	2F
560	545	15	Aspen	478		57	10			15
28		28	Cedar						28	
4		4	Jack Pine		4					
11		11	Lowland Deciduous						11	
12	12		Natural Mixed Pines	12						
499	499		Northern Hardwood	491		8				
164	164		Red Pine	154		10				
68	68		Upland Mixed Forest	51		17				
245	176	69	White Pine	174		2		69		
1,591	1,464	127	Total Forested Acres	1,360	4	94	10	69	39	15
	92%	8%	Relative Percent							

\*Due to limitations in the current Site Conditions Analysis tool, all nonforested acres are considered available. Future development will enable analysis of nonforested types.

	Dominant Site Cond Availability	Dominant Site Condition	Acres	Other Site Condition	Other Site Condition	Other Site Condition	Other Site Condition
002	Available	5B: Maintain for regeneration purposes	10				
C	comments:						
L	F- left for natural c	conversion to ash and age cla	ss divers	ty.			
004	Not Available	3A: Potential old growth / biodiversity	69				
C	comments:						
007	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	10				
C	comments:						

Report 5 – Site (	Conditions
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Compartment 026 Year of Entry 2016

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008	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	17		
	omments: otar Survey				
009	Not Available	2G: Too wet (sensitive soils, does not include access issues)	22	3J: Water quality / BMPs (stream, river, or lake)	
Co	omments:				
010	Not Available	2G: Too wet (sensitive soils, does not include access issues)	6	3J: Water quality / BMPs (stream, river, or lake)	
	omments: air creek corridor				
011	Not Available	2F: Too steep	15		
	omments: Terrain and rive	er setback			
013	Not Available	2G: Too wet (sensitive soils, does not include access issues)	11		
	omments: = wet				
015	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	13		
Co	omments:				

Traverse City Mgt. Unit Craig Allen : Examiner				Report 5 – Site Conditions	Compartment 026 Year of Entry 2016	
016	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	16			
Co	mments:					
017	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	13			
Co	mments:					
018	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	10			
Co	mments:					
019	Not Available	5E: Long Term Retention	4			
Co	mments:					
020	Available	5C: Delay treatment for age/size class diversity or exceptional site quality	16			
Co	mments:					



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

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

SCA Name SCA Category Detail Type Recommendation Acres

Comments

Compartment: 026 Year of Entry 2016



# Report 7 – EXISTING SPECIAL CONSERVATION AREA DETAILS

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

Conservation Area	n 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 con- stocked trout populations and those of other coldwater fish spec year to year. Coldwater streams in Michigan typically provide the contributions of groundwater to their stream flows. Such stream designated as trout resources by Fisheries Order 210.	cies (e.g., slimy sculpin) to persist from ese conditions due to substantial
influences the aquatic ecosystem and vice streams and open water wetlands, riparian communities are ecologically and socially s		A transitional area between aquatic and terrestrial ecosystems i influences the aquatic ecosystem and vice-versa. Because of th streams and open water wetlands, riparian areas harbor a high communities are ecologically and socially significant in their effe as aesthetics, habitat, bank stability, timber production, and the	ne unique conditions adjacent to lakes, diversity of plants and wildlife. Riparian acts on water quality and quantity, as well
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from s approved distance from the river centerlines. The Natural River most Natural Rivers. The Vegetative Buffer ranges from 25 to 7 and Vegetative Buffers for each Natural River see the table loca folder.	s Zoning District is a 400 foot buffer for 100 feet. To view specific Zoning Districts

S t	Traverse Cit	y Mgt. Unit		Report 8	– Forested	Stands Compartment: 026 Year of Entry: 2016
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	42110 - Planted Red Pine	High Density Pole	6.3	53	111-140	seedlings=red and sugar maple
						Height= 52' (in 2004)
3	42110 - Planted Red Pine	High Density Pole	25.7	53	111-140	Heights= 57' and 54'
						seedlings= sugar maple and ironwood.
4	4119 - Mixed Northern		61.2	73	51-80	Not much aspen, and it is quite scattered (not much in clones).
	Hardwoods	Density Log				Some Large, old white pine present.
						Some witch hazel present.
6	4110 - Sugar Maple	High Density	13.0	79	51-80	Seedlings=sugar maple
	Association	Pole				Also contains a few aspen and hemlock.
8	4110 - Sugar Maple Association	High Density Log	56.6	93	51-80	Also, Some w. pine super canopy trees.Some hemlock. Seedlings=sugar maple. Thinned = Nov/dec. 2010 2012Maple decline present in standparticularly in north end.
9	42201 - Natural White Pine, Mixed Deciduous	High Density Log	69.0	85	111-140	
10	4133 - Aspen, Mixed Pine	High Density	25.2	65	81-110	Very mixed species stand.
	FILE	Log				Good white pine and good aspen.
						Most of the red pine in the stand is plantation that was taken over by hardwoods.
12	42120 - Planted Jack Pine	High Density Pole	4.3	55		
14	4130 - Aspen	High Density Log	63.3	60		Lots of apple trees were planted on this 80 in what appears as a failed attempt at an orchard, most likely planted pre-depression era.
						seedlings= cherry, wp, rm
15	4319 - Mixed Upland	High Density	7.5	78	51-80	seedlings=maple,beech,ironwood.
	Forest	Log				Quality of hardwoods is low.
						Red pine is plantation that is over taken by hardwoods.
16	42110 - Planted Red Pine	High Density Pole	31.9	53	111-140	
20	4130 - Aspen	High Density Pole	12.7	55		Aspen is doing good. Consider harvest in 10 to 20 years. Want to delay in order to stagger age classes of aspen here.
						seedlings= rm, ironwood

S t	Traverse Cit	Traverse City Mgt. Unit			Forested S	Stands Compartment: 026 Year of Entry: 2016
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
21	42200 - Natural White Pine	Low Density Log	42.0	Uneven Age	51-80	Nice white pine quality, not much for weevil problems.
						Stand was harvest of all aspen and red maple in fall of 2007. Majority of pine was left on site.
22	4130 - Aspen	High Density Pole	15.9	52		Aspen is in good health and condition. seedlings= beech, rm, sm.
23	4130 - Aspen	High Density Sapling	12.4	26		
24	4130 - Aspen	High Density Pole	3.9	40		Seedlings=RM, SM, Cherry
		T OIC				Healthy, young aspen.
26	4112 - Maple, Beech, Cherry Association	High Density Log	42.3	83	51-80	seedlings are primarily sugar maple. Thinned in fall of 2010
27	4319 - Mixed Upland Forest	High Density Log	43.8	67	51-80	seedlings=rm, sm, beech, ironwood
		C C				Handful of elm trees in stand.
						Many very large DBH ironwood.
29	4139 - Aspen, Mixed Deciduous	High Density Log	13.1	52	81-110	Seedlings= sugar, red maple, ironwood, white pine.
		209				Nice quality in all tree species.
30	4112 - Maple, Beech, Cherry Association	High Density Log	18.1	93	81-110	Medium quality maple.
32	4130 - Aspen	High Density Sapling	56.9	26		
34	42260 - Natural Pine, Mixed Deciduous	Medium Density Log	11.6	70	51-80	seedlings= red maple, cherry
35	42200 - Natural White Pine	Low Density Pole	28.7	50	1-50	seedlings=mostly white pine and some cherry.
36	42110 - Planted Red Pine	High Density Log	10.1	72	200+	
37	42200 - Natural White Pine	Low Density Log	29.7	Uneven Age	51-80	

S t	Traverse City	Traverse City Mgt. Unit			– Forested	Stands Compartment: 026 Year of Entry: 2016
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
38	4112 - Maple, Beech, Cherry Association	High Density Log	8.2	83	81-110	Mid to lower quality N. hardwoods.
		209				Heavy ironwood content.
						seedlings= ironwood, sugar maple.
						Took 6 different BA's for avg of 105.
40	4311 - Pine, Aspen Mix	Medium Density Pole	16.8	60	51-80	
43	42110 - Planted Red Pine	High Density Log	59.0	61	111-140	Very good quality.
		Log				seedlings= sugar maple.
44	4110 - Sugar Maple Association	High Density Log	29.0	103	51-80	
46	4113 - R.Maple, Conifer	High Density Log	6.0	80	51-80	
47	4130 - Aspen	Medium Density	51.9	26		
49	4110 - Sugar Maple Association	High Density Log	8.0	95	51-80	Also has a few ash, basswood, and cherry.
		209				Not much indicator plants.
						seedlings= ironwood, sugar maple.
51	4130 - Aspen	High Density Sapling	49.5	6	1-50	
53	4116 - Mixed N. Hardwood - Aspen	High Density Log	15.2	55	81-110	seedlings=sugar maple.
		_09				Aspen=65' tall
54	4130 - Aspen	High Density Sapling	18.0	7		Stand was harvest of all aspen and red maple in fall of 2007. Majority of large old white pine was left on site.
56	42200 - Natural White Pine	Medium Density Log	75.4	80		
57	4130 - Aspen	High Density Sapling	22.0	24		Scattered (mostly log-sized) white pine trees left when this was cut.
						Also, scattered natural openings.
58	42110 - Planted Red Pine	High Density Pole	22.9	53	111-140	Heights: 55' and 50'
59	4117 - Mixed N. Hardwood - Pine	High Density Log	101.7	88	81-110	Medium to low quality hardwoods intermixed with good white pine. Most likely a low site index for the hardwoods.
						Also contains some beech.

S t	Traverse Cit	Traverse City Mgt. Unit			– Forested	Stands Compartment: 026 Year of Entry: 2016
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
60	4130 - Aspen	High Density Log	10.3	60		East end = aspen large and starting to show signs of decline. Scattered w. pine saps in understory.
61	4130 - Aspen	High Density Sapling	64.1	24		
63	6120 - Lowland Cedar	High Density Log	21.5	115		
64	4119 - Mixed Northern Hardwoods	High Density Log	8.6	83	51-80	Seedlings= cherry, ironwood.
68	4139 - Aspen, Mixed Deciduous	High Density Pole	15.5	60		
69	4130 - Aspen	High Density Sapling	22.1	24		Forbs= raspberry, Brachen, trout lilly
		Saping				Also some scattered white pine pole/sawlog trees were left when this stand was cut.
72	4112 - Maple, Beech, Cherry Association	High Density Log	19.1	103	81-110	Also has: scattered witch hazel, white pine saps, ash
						sweet cicely, trout lilly, violet.
74	4110 - Sugar Maple	Medium	50.0	90	51-80	Dry site
	Association	Density Log				scattered openings
78	4130 - Aspen	High Density Sapling	22.2	24		
80	6120 - Lowland Cedar	Medium Density Log	6.3	120		
81	6119 - Mixed Lowland Deciduous Forest	High Density Pole	11.3	103		Lots of puddles of standing water with Marsh Marigold.
82	4119 - Mixed Northern Hardwoods	Medium Density Log	6.0	88	51-80	park-like, with natural openings
	Hardwoods	Density Log				Saplings moving into the openings.
83	4130 - Aspen	High Density Sapling	22.4	7		Stand was cut in June, 2007. Red maple, aspen, cherry was cut (except those trees marked with green paint) Lots more maple and ash in understory in the south end. Medium quality aspen.
85	4130 - Aspen	High Density Sapling	8.4	24		
86	4130 - Aspen	High Density Sapling	9.3	24		

S t	Traverse Cit	Traverse City Mgt. Unit			– Forested	Stands Compartment: 026 Year of Entry: 2016
a n d	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
87	4130 - Aspen	High Density Sapling	1.6	24		This is a very small parcel in SW most corner of compartment that actually is managed by adjacent comapartment (comp 27)
88	4130 - Aspen	High Density Pole	9.9	65		
89	42110 - Planted Red Pine	High Density Pole	8.4	56	81-110	Seedlings= ash, sugar maple, cherry
91	4130 - Aspen	High Density Pole	4.7	24		Also has raspberry.
92	4112 - Maple, Beech, Cherry Association	High Density Log	11.6	102	81-110	Stand was thinned spring of 2009
93	4130 - Aspen	High Density Sapling	9.2	7		
95	4130 - Aspen	High Density Sapling	15.8	7		
96	4119 - Mixed Northern Hardwoods	High Density Log	44.6	90	81-110	Also has some scattered large DBH beech. Has some very large and old white pine scattered locations.

# Report 9 – Nonforested Stands

Compartment: 026 Year of Entry: 2016



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
2	3104 - Degraded	4.7	No	Medium	East portion is degraded, mostly spotted knapweed and sheep's sorrow. West of railroad grade is more mixed grasses/cladonia/spotted knapweed/hoary alysum. Unlisted specie is hoary alysum.
5	3105 - Mixed Upland Herbaceous	2.6	No	Low	A large forest juneberry along edge. Bracken fern in center. A nice forest transition between red pine and maple stands. Unlisted specie is hoary alysum.
7	3103 - Rubus-Fern	1.7	No	Low	Extends west of two-track for an additional acre outside of compartment.
11	3302 - Low Density Conifer Trees	61.6	Plantation	Red Pine	red pine/jack pine strip plantation that was clearcut in Oct.2007. Was roller chopped in fall of 2008 for site prep Was trenched and planted to red pine in spring of 2011
13	3103 - Rubus-Fern	4.8	No	Low	A few apple trees. Bracken fern covered. Some shrub species present.
17	3302 - Low Density Conifer Trees	37.6	No	Low	Trees mostly pole white pine, short and thick at the bases. A few seedling/sapling whitepine mixed in.
18	122 - Road/Parking Lot	5.2			
19	3103 - Rubus-Fern	8.2	No	Low	White pine in clumps to the south. Some aspen regeneration (very light) along perimeter. A few black cherries are dead. Two apple trees to the north. Single elm tree. Unlisted specie is apple.
25	3103 - Rubus-Fern	2.4	No	Low	Deer blind on state land with built-in outhouse. Dead porcupine inside and newspaper (Nov. 15, 2003).
31	3105 - Mixed Upland Herbaceous	3.9	No	Low	Some large white pine along south perimeter. Aspen regenerating in spots. A few areas with clumps of choke cherry/shrubby sapling black cherries. Two young (15ft) hemlock in one spot.
33	3303 - Mixed Low Density Trees	12.6	No	Low	Mostly white pine and black cherry, but there are some nice, large red maples to the north. Ground cover is mostly bracken fern, but less then other openings in area. Spots of cladonia/poverty grass. Some choke cherry, and large forest juneberry, and a snag along south border. Aspen/cherry clumps in SE part.

# Report 9 – Nonforested Stands

Compartment: 026 Year of Entry: 2016



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
39	3103 - Rubus-Fern	25.4	No	Low	Some natural regenerating jack/white pine along east perimeter, too much to cut with chainsaw. Recommend to let succeed. All bracken fern, but allot of cladonia underneath. Variety of shrub species found here. Clumps of autumn olvie to the south and east side. Unknown shrub, 3 total, found here - shaped like witch-hazel, kinda like an apple tree, multi- stemmed like a juneberry.
41	790 - Other Bare/Sparsely Vegetate	26.9	Plantation	Red Pine	formerly a jack pine stand that was clearcut, then slash was burned to prepare area to be trenched and handplanted to red pine seedlings.
					4/28/2011 area planted to red pine (2-0)
42	31021 - Cool Season Grass	4.7	No	Low	Three large white pine. Two apple trees. Big black cherry along perimeter. Old homestead. Finger between pine stands is natural regenerating jack/red pine. Ground cover here is bracken fern/st. john's wort and cladonia/poverty. This part should not be included with the cool summer grass field. First unlisted specie is apple. Second unlisted species is hoary alysum.
45	3303 - Mixed Low Density Trees	12.6	No	Low	Unlisted specie is hawkweed.
48	3105 - Mixed Upland Herbaceous	3.3	No	Low	A couple bluebird houses placed along grade. A few seedling white/red pine along perimeter. Unlisted specie is hoary alysum.
50	122 - Road/Parking Lot	6.4			
52	3301 - Low Density Deciduous Trees	5.3	No	Low	Hodge-podge of stuff. Natural regenerating aspen and cherry. Pole/log size sugar maple left over from previous cut. Aspen in east half. Did not inventory small opening to SE due to time contraints. Unlisted one is mullein. Second unlisted specie is hawkweed.
55	3205 - Mixed Upland Shrub	5.1	No	Low	
62	3205 - Mixed Upland Shrub	14.0	No	Low	First unlisted is hawkweed. Second unlisted is goldenrod.
65	3204 - Mast Producing Shrub	2.5	No	Low	Lots of black cherry and witch-hazel. Ground cover is mostly rubus specie.
66	3103 - Rubus-Fern	3.0	No	Low	Unlisted is a mixture of forbs.

# Report 9 – Nonforested Stands

Compartment: 026 Year of Entry: 2016



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
67	3204 - Mast Producing Shrub	4.8	No	Low	A few nice snags. Some nice, straight white pine. Mostly black cherry shrubland with upland decidious mixed in. Ground cover is dominated by raspberry/blackberry with clumps of goldenrod. Fair amount of mullein found here. Unlisted specie is hawkweed.
71	6233 - Wet Meadow	6.5	No	Low	Seasonally wet, currently has water in it. Mostly sedges with a few alders along perimeter. Dead wood and snags.
73	50 - Water	2.7	No	Low	Beaver lodge. Wood ducks flying around. Beaver activity. This is an old beaver pond with lots of dead wood. Perimeter is covered in sedges. Some cattails, tag alders, and bulrushes.
75	6220 - Alder/willow	6.7	No	Low	Beavers made a second-tier dam. Froms east edge, looks mostly tag alders. Unlisted specie is fern.
77	3103 - Rubus-Fern	1.9	No	Low	Mosty rubus specie with hawkweed and st. john's wort.
79	3105 - Mixed Upland Herbaceous	2.7	No	Low	NE portion (1 acre) is all bracken fern. Rest is mixed-upland herbaceous.First unlisted is Mullein, second unlisted is goldenrod, and third unlisted is hoary alysum.
84	3204 - Mast Producing Shrub	4.1	No	Low	Black cherry with mixed fruiting shrubs underneath. Ground cover is mostly rubus, cladonia, mixed grasses & forbs.
90	3105 - Mixed Upland Herbaceous	6.0	No	Low	South portion has a higher percentage of spotted knapweed/invasive exotics. Might want to do something here or leave as-is. First unlisted is hoary alysum. Second unlisted is mullein.