



**TRAVERSE CITY FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION**

COMPARTMENT # 51 ENTRY YEAR: 2009

Compartment Acreage: 2160 County: Grand Traverse

Stand Examiner: Timothy Webb & Patrick Ruppen

Legal Description: T26N R10W Sections 13, 22 through 26

Management Goals: Most of this compartment falls within a sandy outwash plain, much of which was fire prone oak-pine barrens or pine forest circa 1800. Current vegetation on state lands is dominated by various mixtures of white oak, jack pine, white pine, red oak, aspen, red maple and red pine, much of which is mature to overmature. Treatments during this entry period are geared toward creating a variety of patch sizes and a mixture of regenerating tree species to mimic natural fire disturbances. Some treatments will result in savannah habitats, some will produce blocks of aspen, oak and pine regeneration, while others are designed to release existing understory white pine. Using post-harvest prescribed burning on at least some of these treatments is critical to restoring or perpetuating natural vegetation assemblages to the landscape.

Various recreational facilities, the Boardman River, and the adjacent Brown Bridge Quiet Area provide a high amount of recreational opportunity in and around this compartment. Management activities should be considerate of these recreational and aesthetic values.

Soil and Topography: Soils are predominantly Rubicon sands. Low lying areas in the Boardman River Valley have Kerston muck soils. Topography is generally flat to gently rolling. Some steeper banks, terraces and bluffs are associated with the Boardman River and East Creek.

Ownership Patterns, Development, and Land Use in and Around the Compartment: There are numerous rural residential properties concentrated within the compartment and to the south, most of which are on relatively large lots. Lands to the north and east are mainly state forest. There are also three large tracts of relatively undeveloped land adjacent to the compartment: the Brown Bridge Quiet Area owned by Traverse City, and Boy Scout Camp Greilick and the East Creek Preserve, both owned by Rotary Camps and Properties.

Unique, Natural Features: The Boardman River flows through the north end of the compartment. East Creek, a tributary of the Boardman, cuts across the southwest corner.

Archeological, Historical, and Cultural Features: There are no known significant sites within this compartment. There is some remaining evidence of homesteads and farming from the early to mid-1900s.

Special Management Designations or Considerations: The Boardman River is a state designated Natural River. Its tributary, East Creek, is also encompassed by the Natural River designation.

Watershed and Fisheries Considerations: The Boardman River and East Creek are within this compartment and both are Designated Trout Streams, Natural Rivers, and support cold water fisheries populations such as brown, brook, and rainbow trout. The natural vegetative buffer stipulated by the Natural Rivers designation for East Creek and the Boardman River mainstem within this compartment is 100 feet.

Wildlife Habitat Considerations: Nearly all of compartment 51 consists of a dry sandy outwash plain. The sandy soil found here was often the setting for large wildfires. These fires sustained a variety of fire driven communities. Present habitat types include mixed stands of pine/oak/aspens of various ages interspersed with openings, upland brush, natural pine, and several oak communities. The regeneration of oak and other mast producing species is essential to wildlife species living in this landscape. Timber harvests should be designed to mimic wildfires of various intensities to perpetuate a shifting mosaic of successional stages and age classes of pine-oak-aspens forest and grass-shrub openings. Several aspen, oak, and pine stands will have cutting prescriptions this entry period and will utilize pine, oak, fruiting shrubs, and other species as residuals. The creation of dead and down logs will also be included in harvest operations. Standing dead timber is usually left during harvest operations unless deemed a safety hazard.

Several openings are scheduled for hand felling to set back woody encroachment, leaving scattered mast producing shrubs/trees. Portions of this landscape will be burned post-harvest. By returning fire to the landscape the goal is to perpetuate a mosaic of natural pine, oak, aspen, and non-forested habitats like Oak/Pine Barrens or savannas. Some species found in these early to mid-successional communities include: white-tailed deer, ruffed grouse, eastern bluebird, smooth green snake, wild turkey, long-tailed weasel, and red-tailed hawk. Also, many endangered, threatened, or special concern species can be found in these fire maintained ecosystems. The Boardman River and East Creek run through a portion of this sandy outwash plain. Narrow strips of lowland conifers and lowland brush are found along these bottom lands and create valuable riparian corridors through an otherwise dry landscape.

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 400 and 800 feet. Beneath the glacial drift is the Mississippian Coldwater Shale. The Coldwater does not have a current economic use. Gravel pits are located to the south and there could be potential. The Compartment is located in the prolific Niagaran reef trend. Most of the State land is leased currently. The Antrim Shale has not been developed in this area and may be too deep.

Vehicle Access: Access is quite good throughout the compartment. The only exception is in the north ¼ of section 13 within the Boardman River valley. Low lying areas there are difficult to access for timber management, except perhaps during extended dry periods. In section 13, a road leading to an abandoned oil well pad and a connected unauthorized 2-track are being proposed for closure because of erosion, trash dumping, and ORV damage.

Survey Needs: Corners are reasonably well monumented. There are no specific survey needs known at this time.

Recreational Facilities and Opportunities: Numerous recreational facilities are located within this compartment, including Scheck's State Forest Campground, the Shore to Shore riding/hiking trail, and the Boardman Valley snowmobile trail. Deer and small game hunting, trout fishing, camping, and other dispersed recreation are also popular here. Prescribed burning being proposed for this compartment would not only improve native habitats, but should also improve blueberry picking for the public.

Fire Protection: Most of the sections in this Compartment are in Zone 6. It consists of a mixture of cover types, and is heavy to recreation. The potential here for a large fire exists, particularly with the amount of people that use and travel through this area. Access is adequate in most of this area, with roads at least around most of the sections. There are not a lot of urban interface issues, as not too many residences are in this compartment. Additionally there is the Boardman Valley snowmobile trail that can be used for access. Battalion #2-Grand Traverse Rural Fire Dept. has initial attack responsibility for this area. On high fire danger days and above, DNR Units from Traverse City, Manton, and Kalkaska respond to fires in Zone 6.

Additional Compartment Information: None.

**** Cover type details and proposed treatments are listed in the attached reports:

Cover Type by Age Class

Proposed Treatments – No Limiting Factors

Proposed Treatments – With Limiting Factors

**** The following information is displayed on the attached compartment maps:

Base feature information, stand numbers, cover types

Proposed treatments

Proposed road access system



Stage 1 Acres Summary By Level 3 Cover Type By Age

Traverse City Mgt. Unit

Compartment: 051

Report Date: 03/05/2008

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	0	1-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	> 89	Uneven Age	Grand Total
Aspen Types	0	0	13.9	0	53.4	31.2	2.7	13.8	20.1	0	0	0	135.0
Herbaceous Openland	65.4	0	0	0	0	0	0	0	0	0	0	0	65.4
Low Intensity Urban	11.6	0	0	0	0	0	0	0	0	0	0	0	11.6
Low-Density Trees	8.9	0	0	0	0	0	0	0	0	0	0	0	8.9
Lowland Deciduous Forest	0	0	0	0	0	0	0	72.8	0	0	0	0	72.8
Lowland Shrub	23.5	0	0	0	0	0	0	0	0	0	0	0	23.5
Mixed non-forested wetland	5.1	0	0	0	0	0	0	0	0	0	0	0	5.1
Mixed Upland Deciduous	0	0	0	0	11.3	0	0	0	21.7	0	20.7	143.9	197.6
Natural Pines	0	0	0	0	0	16.9	23.7	267.1	7.0	29.5	0	347.4	691.5
Northern Hardwood	0	0	0	0	0	0	0	4.3	0	0	13.9	0	18.2
Oak Types	0	0	0	0	0	2.4	0	0	0	69.4	370.2	233.7	675.8
Planted Pines	0	0	91.4	0	0	119.6	0	0	0	0	0	0	210.9
Upland Mixed Forest	0	0	0	0	0	0	0	0	6.5	29.1	0	0	35.7
Upland Shrub	6.4	0	0	0	0	0	0	0	0	0	0	0	6.4
Water	2.0	0	0	0	0	0	0	0	0	0	0	0	2.0
Grand Total	122.9	0	105.2	0	64.66	170.1	26.36	357.9	55.31	128.0	404.9	725.0	2160.3



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Treatment Name	Acres	Stage1 CovType	Size Density	1st Age	2nd Age	Treatment Method	Treatment Purpose	Cover Type Objective
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3	61051003-Cut	5.8		6	56	85	Low Thinning	Intermediate Cut	Natural Mixed Pine
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Rev
Cmnt:

Rev Mark trees to remove to improve spacing and take out suppressed pole trees. Mark mainly pine, but some oak and other species could also be
Spec: marked. Some better oak could be released. Average residual BA of 100-120. Some oak will remain for retention needs.

Next
Steps: No regeneration is planned or anticipated following this treatment.

7	61051007-Cut	9.3		9	92	0	Seed Tree with Reserves	Regeneration	Natural White Pine, Mixed Deciduous
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Rev --Stephen Griffith : 11/27/2007 comments: Create some coarse woody debris (CWD) in areas of the stand where little or none currently exist, during
Cmnt: harvest operations. Can be cull lengths, tops of significant volume, or whole unmerchantable trees.

Rev Mark mixed pine and oak to leave (plus a few aspen and maple for retention purposes), about 15-30 BA, to act as seed trees, mast producers and
Spec: residual structure. Leave understory white pine intact as much as possible. Cut heavier around existing aspen to encourage resprouting.

Next
Steps: The goal is to release understory white pine and to encourage seeding/sprouting of other species. Any mixture of white pine, aspen, oak, or maple regeneration is desirable. If natural regeneration is too sparse, fill-in planting of red pine is recommended.

8	61051008-Cut	19.4		9	72	102	Clearcut with Reserves	Regeneration	Aspen
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Rev --Timothy Webb : 12/18/2007 comments: per written request of Gr. Traverse Conservation District, coordinate this treatment with proposed harvest on
Cmnt: adjacent Brown Bridge Quiet Area property through GTCD.

--Stephen Griffith : 11/27/2007 comments: Create some (approximately 1-2 trees per acre) coarse woody debris (CWD) during harvest operations, preferably via timber sale specs. CWD trees should be log sized or bigger, the more decay resistant the tree species is the better, and cut approximately at breast height (4.5 feet). The log should be left within 3 feet it's stump.

Rev Clearcut to 2" diameter limit. Leave a couple islands for retention centered on some pine/oak, plus mark some scattered residuals.
Spec:

Next
Steps: Vigorous aspen sprouting is expected and desired. Some oak and pine seedlings and sprouts would also be acceptable complements to the aspen regeneration.

9	61051009-Cut	29.8		9	113	0	Crown Thinning	Release	Red with White Oak
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Rev
Cmnt:

Rev Mark the older age class of oak for removal, releasing oak poles and white pine saplings, moving stand more toward pine. Residual BA about 60. Most
Spec: aspen and red maple can be removed as well; most pine should be retained.

Next
Steps: Understory white pine should predominate the regeneration, with possible pockets of aspen, oak and red maple sprouts.

10	61051010-Cut	9.5		9	86	65	Clearcut with Reserves	Regeneration	Aspen
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Rev --Stephen Griffith : 11/27/2007 comments: Create some (approximately 1-2 trees per acre) coarse woody debris (CWD) during harvest operations,
Cmnt: preferably via timber sale specs. CWD trees should be log sized or bigger, the more decay resistant the tree species is the better, and cut approximately at breast height (4.5 feet). The log should be left within 3 feet it's stump.

Three regeneration cut patches were selected from the original AOI, concentrated on areas of higher aspen BA. The rest of the stand, having more oak and pine, will be left uncut for this entry period, but may need treatment in 10 years.

Rev Clearcut to a 2" diameter limit, marking about 10 BA residual oak and a few pine/aspen/maple for retention.
Spec:

Next
Steps: Vigorous aspen sprouting is expected. Some oak seedlings and sprouts would be acceptable complements to the aspen regeneration.



Treatment Name	Acres	Stage1 CovType	Size Density	1st Age	2nd Age	Treatment Method	Treatment Purpose	Cover Type Objective
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18	61051018-Cut	9.5		8	109	0	Shelter Wood with Reserves	Release	Natural White Pine, Mixed Deciduous
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Rev --Stephen Griffith : 11/27/2007 comments: Create some coarse woody debris (CWD) in areas of the stand where little or none currently exist, during harvest operations. Can be cull lengths, tops of significant volume, or whole unmerchantable trees.
Cmnt:

Rev Shelterwood cut to release understory white pine, leaving some oak for shelter, mast, and possible re-seeding, plus some other mixed residuals.
Spec: Residual BA about 15-30.

Next Steps: The goal is to release understory white pine and to encourage seeding/sprouting of other species. Any mixture of white pine, aspen, oak, or maple regeneration is acceptable. If natural regeneration is too sparse, fill-in planting of red pine is recommended.

21	61051021-Cut	10.6		8	150	78	Seed Tree with Reserves	Ecosystem Restoration	White, Black, N. Pin Oak
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Rev Objective here is to supplement savannah restoration project on neighboring scout camp property to the west, which is being coordinated by WLD staff.
Cmnt: "LIP" biologist should be consulted to ensure complementary treatment results.

Rev Cut all trees except about 10-20 BA of selected reserve mature oak and pine, and maybe some white pine poles and saplings.
Spec:

Next Steps: Periodic prescribed burning should follow timber harvesting.

36	61051036-clearcut	23.8		9	161	62	Seed Tree with Reserves	Regeneration	Natural White Pine, Mixed Deciduous
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Rev Shore-to-Shore trail runs through the north part of the stand.
Cmnt:

Rev Mark 10-20 BA of oak/pine reserve trees for reseeding, mast, and cover, plus retain white pine understory trees as much as possible. Strategically select reserve trees along horse trail to maintain aesthetics. Leave some CWD post-harvest.
Spec:

Next Steps: Any mixture of pine, oak, and aspen regeneration is acceptable, plus perhaps some red maple seedlings and sprouts.

36	61051036-thin	24.2		9	161	62	Group Selection	Regeneration	White, Black, N. Pin Oak
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Rev --Stephen Griffith : 11/27/2007 comments: Create some coarse woody debris (CWD) in areas of the stand where little or none currently exist, during harvest operations. Can be cull lengths, tops of significant volume, or whole unmerchantable trees.
Cmnt:

This portion of the original AOI will be selectively cut to maintain a more mature forest stand to the northeast of the East Creek valley, in contrast with a much heavier cut in the north part of the AOI.

Rev Mark down to about 60-75 BA, taking out some older oaks and creating some regen holes around mature aspen clones, and perhaps releasing some understory white pine.
Spec:

Next Steps: Patches of aspen, white pine, and perhaps oak regeneration should result in harvest patches over time.

**PROPOSED TREATMENTS
NO LIMITING FACTORS**



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Treatment Name Acres Stage1 CovType Size Density 1st Age 2nd Age Treatment Method Treatment Purpose Cover Type Objective Page 3 of 7

40 61051040-Cut 13.1 9 40 59 Clearcut with Reserves Regeneration Aspen, Jack Pine

Rev Cmnt: --Stephen Griffith : 11/27/2007 comments: Create some (approximately 1-2 trees per acre) coarse woody debris (CWD) during harvest operations, preferably via timber sale specs. CWD trees should be log sized or bigger, the more decay resistant the tree species is the better, and cut approximately at breast height (4.5 feet). The log should be left within 3 feet it's stump.

The Shore-to-Shore Trail and a snowmobile trail run through the proposed treatment area. Treatment boundaries and reserve trees can be located to minimize aesthetic impacts.

--Timothy Webb : 12/18/2007 comments: (per compartment review amendments) Verify the location of the Shore to Shore trail near stands 40 & 59 to allow for appropriate cutting specs to be added to treatment.

Rev Spec: Clearcut to a 2" diameter limit. Leave 1 or more small islands for retention, and maybe some scattered individual trees other than quaking aspen or jack pine.

Next Steps: Abundant aspen sprouting, plus some jack pine seedlings should fully regenerate the site. Stand would benefit from a post-harvest burn to enhance JP regeneration and blueberries.

45 61051045-Cut 204.9 6 55 70 Seed Tree with Reserves Ecosystem Restoration Natural Jack Pine, Mixed Deciduous

Rev Cmnt: Much of this compartment is overmature jack pine and oak. A large disturbance, consistent with natural fire, is the goal here. Portions of this stand, as well as other large blocks of jack pine/oak in the compartment, are being left untreated during this entry period.

Rev Spec: Clearcut to a 2" diameter limit, retaining a variety of marked oak and pine seed trees (about 10-20 BA), including some older, large crowned oak, and some oak islands along the Shore-to-Shore Trail.

Next Steps: A variety of oak, pine, and some aspen regeneration is acceptable. Regeneration does not necessarily have to be fully stocked, as this cut should mimic a natural burn and have some savannah characteristics. Follow up burning is highly desirable.

59 61051059-Cut 32.8 8 90 0 Crown Thinning Release White, Black, N. Pin Oak

Rev Cmnt: --Timothy Webb : 12/18/2007 comments: (per compartment review amendments) Verify the location of the Shore to Shore trail near stands 40 & 59 to allow for appropriate cutting specs to be added to treatment.

Rev Spec: Mark down to about 70-80 BA to begin release of understory white pine. Focus on poorer quality oak to be removed. Use slash from harvesting to block illegal vehicle activities within stand.

Next Steps: White pine understory should be released to some degree. Some oak seedlings may also develop in larger canopy gaps. Pursue closure of access road leading to the abandoned oil well pad after treatment is complete.

61 61051061-Cut 40.0 5 66 55 Clearcut with Reserves Regeneration Natural Jack Pine

Rev Cmnt:

Rev Spec: Clearcut, leaving oak, red pine, and some white pine as residuals, maybe some residual islands of jack pine.

Next Steps: Natural reseeding to jack pine is expected, plus some patches of quaking aspen. If natural regeneration is unsuccessful, replanting to jack pine is recommended.

64 61051064-Cut 5.4 9 110 70 Crown Thinning Intermediate Cut White, Black, N. Pin Oak

Rev Cmnt:

Rev Spec: Thin to release crowns of better quality oak.

Next Steps: This stand could be burned post-sale along with the adjacent proposed jack pine stand treatment. Whether burned or not, development of oak seedlings would be desirable. If not burned, development of understory white pine along with some oak seedlings would be anticipated and OK.

**PROPOSED TREATMENTS
NO LIMITING FACTORS**



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Treatment Name	Acres	Stage1 CovType	Size Density	1st Age	2nd Age	Treatment Method	Treatment Purpose	Cover Type Objective
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68	61051068-Cut	13.9		9	106	0	Single Tree Selection	Regeneration	Sugar Maple Association
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Rev
Cmnt:

Rev Mark down to 80-90 BA. Create some regen holes.
Spec:

Next
Steps: Some establishment of mixed hardwood seedlings in canopy gaps is anticipated.

69	61051069-Cut	20.7		6	100	50	Clearcut with Reserves	Ecosystem Restoration	Oak, Pine
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Rev
Cmnt:

Rev Mark about 10-20 BA residual mature oak and pine, clearcut the rest.
Spec:

Next
Steps: Objective is to recreate savannah-like habitat. Timber harvest should be followed up with periodic prescribed burning to keep the stand opened up. Some patchy, low density jack pine and oak regeneration would be OK.

72	61051072-Cut	49.6		6	40	0	Systematic Thinning	Intermediate Cut	Planted Red Pine
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Rev
Cmnt:

Rev Third-row thin red pine. Retain other species for within-stand diversity.
Spec:

Next
Steps: No regeneration expected from this treatment.

78	61051078-Cut	16.5		8	83	40	Seed Tree with Reserves	Regeneration	Mixed Upland Deciduous with Conifer
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Rev
Cmnt:

Rev Clearcut east of 2-track road with clustered, mixed residuals (+/- 10-20 BA) for seed production, mast, and overstory cover.
Spec:

Next
Steps: Mixed pine regeneration is expected to dominate, but any mixture of natural pine, oak or aspen regeneration is acceptable.

86	61051086-Cut	75.7		5	59	0	Seed Tree with Reserves	Regeneration	Natural Pine, Mixed Deciduous
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Rev
Cmnt:

Rev Clearcut to a 2" diameter limit, retaining 10-20 BA marked residual oak, red pine, and other mixed species for seed, cover, and mast.
Spec:

Next
Steps: Mixed oak and jack pine regeneration is anticipated, with some patches of aspen sprouts OK. A follow-up prescribed burn, especially the SE portion, is highly desirable after harvest to enhance jack pine regeneration and other habitat values.

90	61051090-Cut	11.5		4	50	103	Seed Tree with Reserves	Regeneration	Pine, Oak
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Rev
Cmnt:

Rev Clearcut to a 2" diameter limit, retaining 10-20 BA marked residual oak, red pine, and other mixed species for seed, cover, and mast.
Spec:

Next
Steps: Mixed oak and jack pine regeneration is anticipated, with some patches of aspen sprouts OK. A follow-up prescribed burn is highly desirable after harvest to enhance jack pine regeneration and other habitat values.

**PROPOSED TREATMENTS
NO LIMITING FACTORS**



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Treatment Name	Acres	Stage1 CovType	Size Density	1st Age	2nd Age	Treatment Method	Treatment Purpose	Cover Type Objective
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97 61051097-Burn 11.6 4126 - White, Black, N. Pin Oak 7 96 0 Prescribed Burn Habitat Management

Rev Cmnt: Burning could be in conjunction with post-harvest burns in adjacent timber harvest areas.

Rev Spec: Understory burn, preferably during spring season.

Next Steps: Objective is to enhance bluberry production and promote some understory tree regeneration within the stand, as well as to enhance other habitat values by mimicking natural fire disturbance.

17 NF_61051017-Hand Fell 1.8 Unspecified 0 0 0 Non-Forest Management Opening Maintenance

Rev Cmnt:

Rev Spec: Hand fell woody encroachment. Remove some white pine along with all red maple and select big tooth aspen, especially on SW facing slope to allow sunlight to melt snows in the spring.

Next Steps:

26 NF_61051026-Hand Fell 2.7 Unspecified 0 0 0 Non-Forest Management Opening Maintenance

Rev Cmnt:

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

Next Steps:

39 NF_61051039-Burn 1.1 Unspecified 0 0 0 Prescribed Burn Opening Maintenance

Rev Cmnt:

Rev Spec: Burn, preferably in spring, in conjunction with adjacent timber stand after it has been harvested.

Next Steps: Periodic burns throughout the 10 year planning period would be beneficial to maintain open habitat.

50 NF_61051050-Hand Fell 1.0 Unspecified 0 0 0 Non-Forest Management Opening Maintenance

Rev Cmnt:

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

Next Steps:



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Treatment Name	Acres	Stage1 CovType	Size Density	1st Age	2nd Age	Treatment Method	Treatment Purpose	Cover Type Objective
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54 NF_61051054- Felling and Planting	3.4	Unspecified	0	0	0	Non-Forest Management	Habitat Management	
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Rev
Cmnt:

Rev Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or
Spec: conifers for wildlife food and cover.
Nice area for wildlife planting. Plant to a low maintenance herbaceous cover suitable for wildlife cover and forage.

Next
Steps:

73 NF_61051073- Felling and Planting	7.9	Unspecified	0	0	0	Non-Forest Management	Habitat Management	
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Rev
Cmnt:

Rev Selectively hand fell woody encroachment to maintain upland brush/grassland community. Leave scattered mast producing trees and shrubs and/or
Spec: conifers for wildlife food and cover.
Nice area for wildlife planting. Plant to a low maintenance herbaceous cover suitable for wildlife cover and forage.

Next
Steps:

77 NF_61051077- Revegetate	2.4	Unspecified	0	0	0	Non-Forest Management	Opening Maintenance	
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Rev
Cmnt:

Rev Degraded site. Revegetate to a low maintenance herbaceous vegetation suitable for wildlife forage or cover. Soil will most likely need considerable
Spec: reconditioning.

Next
Steps:

80 NF_61051080- Hand Fell	2.9	Unspecified	0	0	0	Non-Forest Management	Opening Maintenance	
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Rev
Cmnt:

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

Next
Steps:

88 NF_61051088- Burn	2.8	Unspecified	0	0	0	Prescribed Burn	Opening Maintenance	
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Rev
Cmnt:

Rev Burn, preferably in spring, in conjunction with adjacent timber stand after it has been harvested.

Spec:

Next Periodic burns throughout the 10 year planning period would be beneficial to maintain open habitat.

Steps:

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**PROPOSED TREATMENTS
NO LIMITING FACTORS**



Treatment Name	Acres	Stage1 CovType	Size Density	1st Age	2nd Age	Treatment Method	Treatment Purpose	Cover Type Objective
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89	NF_61051089-Burn	2.7	Unspecified	0	0	0	Prescribed Burn	Habitat Management
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Rev
Cmnt:

Rev Burn stand at least once per entry period in order to set back woody encroachment, stimulate native herbaceous vegetation and/or berry production, and
Spec: recycle nutrients.

Next
Steps:

91	NF_61051091-Burn	1.6	Unspecified	0	0	0	Prescribed Burn	Opening Maintenance
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Rev
Cmnt:

Rev Burn, preferably in spring, in conjunction with adjacent timber stand after it has been harvested.

Spec:

Next Periodic burns throughout the 10 year planning period would be beneficial to maintain open habitat.

Steps:

94	NF_61051094-Burn	1.4	Unspecified	0	0	0	Prescribed Burn	Opening Maintenance
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Rev
Cmnt:

Rev Burn, preferably in spring, in conjunction with adjacent timber stand after it has been harvested.

Spec:

Next Periodic burns throughout the 10 year planning period would be beneficial to maintain open habitat.

Steps:

**Total Treatment
Acreage Proposed: 669.0**

**PROPOSED TREATMENTS
WITH LIMITING FACTORS**



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Treatment Name	Acres	Stage1 CovType	Size Density	1st Age	2nd Age	Treatment Method	Treatment Purpose	Cover Type Objective	Page 1 of 1
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Limiting Factor
and Comment:

Rev
Cmnt:

Rev
Spec:

Next
Steps:

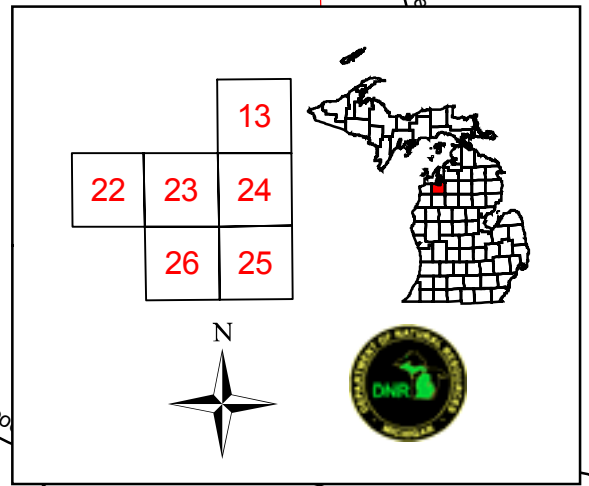
No Treatment
Reason

**Total Treatment
Acreage Proposed: 0**

Field Map

Compartment 051
 T26N, R10W, Sec. 13, 22-26
 County: Grand Traverse
 Unit: Traverse City
 YOY: 2009
 Acres: 2,161 GIS Calculated
 Stand Examiner: Timothy Webb,
 Patrick Ruppen
 Map Revised: 12/19/2007
 Map Phase: Review

Stand # 23
 Stacking Density
 (A)(412)0 - 7
 OI Level 3
 Code Level 4
 Cover Type Code



Legend

- Miris Corners
- Paved Road
- Gravel Road
- Poor Dirt Road
- - - Tra051_snowmobile_Trails
- Intermittent Stream/Drain
- Stream
- Snowmobile Trails
- Hiking Trails
- Horse Trails
- Stands
- SCA - Special Conservation Area
- Clearcut with Reserves
- Crown Thinning
- Low Thinning
- Systematic Thinning
- Single Tree Selection
- Group Selection
- Seed Tree with Reserves
- Shelter Wood with Reserves
- Prescribed Burn
- Opening Maintenance
- Other Treatment - See Comments

Forest Stands

Level 3

- 411 - Northern Hardwood
- 412 - Oak Types
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 430 - Upland Mixed Forest
- 611 - Lowland Deciduous Forest

Non-Forest Stands

Level 3

- 110 - Low Intensity Urban
- 310 - Herbaceous Openland
- 320 - Upland Shrub
- 330 - Low-Density Trees
- 500 - Water
- 622 - Lowland Shrub
- 629 - Mixed non-forested wetland

