



TRAVERSE CITY FOREST MANAGEMENT UNIT COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 243 ENTRY YEAR: 2014

Compartment Acreage: 2410 County: Kalkaska

Stand Examiner: Kelly Standerfer, FRD; Steve Griffith, WLD

Legal Description: T25N,R7W,Sec.12-14, 22-24

Management Goals: This compartment is managed for mixed use however it is heavily influenced by the Manistee River which is a state designated Natural river and also is influenced by a large swamp complex. The South Swamp is a large wetland that contains much of this compartment. Treatments for this year of entry (YOE) are focused on higher risk upland types in the western side of the compartment and some lowland stands will have treatments for habitat improvement and to promote regeneration of the aging resource. Visual management along the Manistee River corridor and erosion control important considerations within this compartment.

Soil and Topography: Newton loamy sand, Saugatuck sand, Griffin sandy loam, Rifle peat, Lupton muck and Rubicon sand are the soils. Topography is flat for the most part. Older soil maps showed the large swamp complex however newer mapping an imagery shows some upland ridges mostly swamp with some upland areas.

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

Mostly block state ownership with some leases and private inholdings along the Manistee river. Land use is hunting, fishing, and boating on the Manistee River. Acquisitions: Section 14-NE1/4 and S1/2-South of River; section 22-S1/2SENE-East of River and N1/2SE; section 23-S1/2NENW; section 24-W1/2NENW, E1/2NESW and N1/2SWSW. No lands for disposal are listed. There are 2 leases in this compartment, stands 90 and 91. These leases expire in 2016 and 2011, respectively. The three 20-acre parcels in section 24 would be desirable for purchase.

Unique, Natural Features (include only non-site specific and non-sensitive information):

This compartment is located within with landtype associations (LTAs) 5111 and 5131 in sub-subsection VII.2.2. LTA 5111, a broad flat outwash plain with few kettle lakes and excessively drained sand, occupies only a small portion of the eastern half of section 24. LTA 5131, a broad flat outwash plain with poorly drained sand or sandy loam, dominates the remainder of the compartment. LTA 5131 is one of the least homogeneous LTAs mapped within Subsection VII.2.2. The lack of homogeneity results from complex topography and an intricate mosaic of excessively drained sand, poorly drained sand, and very poorly drained organic soils. In general, topography is level. However, the land surface is often undulating to hummocky and, in these areas, alternates from poorly drained and very poorly drained to well and excessively well drained sands over relatively short distances. The most common soil of the LTA is Saugatuck sand, which is poorly drained. However, soils are extremely variable and inclusions within the LTA range from deep, excessively drained, acidic sands to very poorly drained organic mucks and peats, *e.g.* Rubicon sand, Lupton muck and Rifle peat, respectively. The variety of types which occur reflect the LTAs complexity. Forests of hemlock, usually mixed white pine or beech, were common on poorly drained sands whereas mixed conifer swamps dominated very poorly drained organic soils. Finally, well drained inclusions supported northern hardwood forests of beech and sugar maple while forests of mixed red and white pine

occurred on excessively drained, fire-prone areas within the LTA. The LTA has become quite fragmented and 23% of its surface area now supports cover types with less than 5% individual cover. Hemlock dominated forests have been virtually eliminated whereas aspen/white birch forests, rare *circa* 1800, have become the predominant cover type (35%). Conifer dominated wetlands, which covered more than one quarter of the LTA *circa* 1800, have been reduced to about 8% cover, while formerly absent hardwood and shrub/scrub swamps now collectively cover 24% of the area. The remaining northern hardwood forests, which now occur on only about 5% of the LTA, are second growth, often fragmented, woodlots that lack the original white pine or hemlock component. Finally, another 6% of the LTA is in old fields.

There is potential for nesting [red-shouldered hawks](#) (*Buteo lineatus*, state threatened) and [northern goshawks](#) (*Accipiter gentilis*, state special concern) to occur in this compartment in mixed conifer swamp, swamp hardwoods (red-shouldered hawk) and mature pine (goshawk).

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information): None listed.

Special Management Designations or Considerations: A special river influence zone is designated within this compartment for all stands along the Manistee River and tributaries. All BMP's and Natural River guidelines will be followed for any stands prescribed along these areas.

Watershed and Fisheries Considerations: The Manistee River, Little Cannon Creek, and several other unnamed tributaries to the Manistee River flow through Compartment 243. All are Designated Trout Streams. The Manistee River is a candidate for State Natural Rivers Designation. Therefore, no cutting should be done within 175 feet of the Manistee River (Stand 16). For all the creeks, no clearcutting should be done within the 100 foot restricted area on each side of the creek, and selective cutting should not be done within 50 feet on each side of any creek (Stands 16, 53).

Wildlife Habitat Considerations: This compartment falls primarily on a poorly drained outwash plain (landtype association 5131), typically driven by blowdowns and some flooding and fire. The terrain is mostly low and flat with some low pine ridges. Historical cover types included mesic conifer forests of hemlock and white pine and conifer swamps in the lowlands. The east part of section 24 is on an excessively well drained outwash plain (LTA 5111), dominated by fire-dependent communities of jack pine, mixed pine forest, and barrens.

Currently occupied by extensive cedar and hardwood swamps, this compartment serves as important deer wintering cover as well as habitat for species such as winter wren, brown snake, Swainson's thrush, bobcat, pileated woodpecker, barred owl and snowshoe hare. Some understory regeneration of conifers is desirable but made difficult by repeated browsing. Prolific balsam fir may serve as a surrogate to some degree for once abundant hemlock. Provision of some browse/early successional habitat by regenerating suitable upland stands, while maintaining existing mature cover in lowlands, will help in the short run. However, long-term management of this landscape should emphasize mature mixed conifers as much as possible. Future natural blowdowns may add to the diversity of this landscape and should be left unsalvaged if they occur. Prescribed final harvests should incorporate retention of snags, down logs, saplings, and some sturdy, mature leave trees to mimic natural blowdown patches as much as possible. Some wildlife opening maintenance should continue, but creation of new openings is not necessary. Mature floodplain forest along the Manistee River and Little Cannon Creek should be maintained as riparian habitat for otter, wood turtle, bald eagle, and great blue heron.

Jack pine stands dominate the dry outwash plain. Stands in this compartment are currently brushlands and seedling jack pine planted in conjunction with a Kirtland's warbler management unit to the east. Management for mature and regenerating jack pine forests, along with some minimal wildlife opening maintenance, will benefit species such as Nashville warbler, badger, garter snake, coyote, field sparrow, golden-crowned kinglet, red squirrel, and red-tailed hawk.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of glacial outwash sand and gravel and postglacial alluvium. Glacial drift thickness varies between 200 and 400 feet. Beneath the glacial drift is the Mississippian Michigan Formation. The Michigan is quarried for gypsum. The nearest gravel pit is one mile to the east and gravel potential in the compartment is considered good. The abandoned Cannon Creek Field lies one mile to the south. The field produced over 850,000 mcf gas from the Traverse Limestone. None of the State land is currently leased for oil and gas development as most is surface only. There may be potential for oil and gas in this area.

Vehicle Access: There is only one County Road in the compartment - Dutch John Road. This road runs along the eastern edge of the Manistee River. There are a few two-track roads running off of Dutch John and Sharon Roads into the interior of the compartment. There is an illegal ORV trail running from Dutch John Road easterly into section 24 (see map).

Survey Needs: Section 24 need the private parcels surveyed. The private holding in the W1/2NENW I believe have a cabin and gate on state land (see map), plus there are upcoming timber sales butting up to all of these private holdings.

Recreational Facilities and Opportunities: Sand Banks Access Site is located in the southwestern edge of the compartment which gets a lot of use from fishermen and boaters.

Fire Protection:

Additional Compartment Information:

****** Cover type details, proposed treatments and stands designated as FDF are listed in the attached reports:**

- Cover Type by Age Class**
- Cover Type by Management Objective**
- Compartment Volume Summary**
- Proposed Treatments – No Limiting Factors**
- Proposed Treatments – With Limiting Factors**

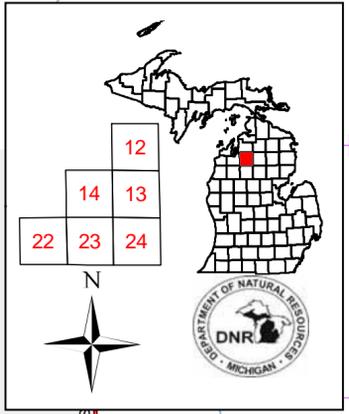
****** The following information is displayed on the attached compartment maps:**

- Base feature information, stand numbers, cover types**
- Proposed treatments**
- Proposed road access system**
- Suggested potential old growth**

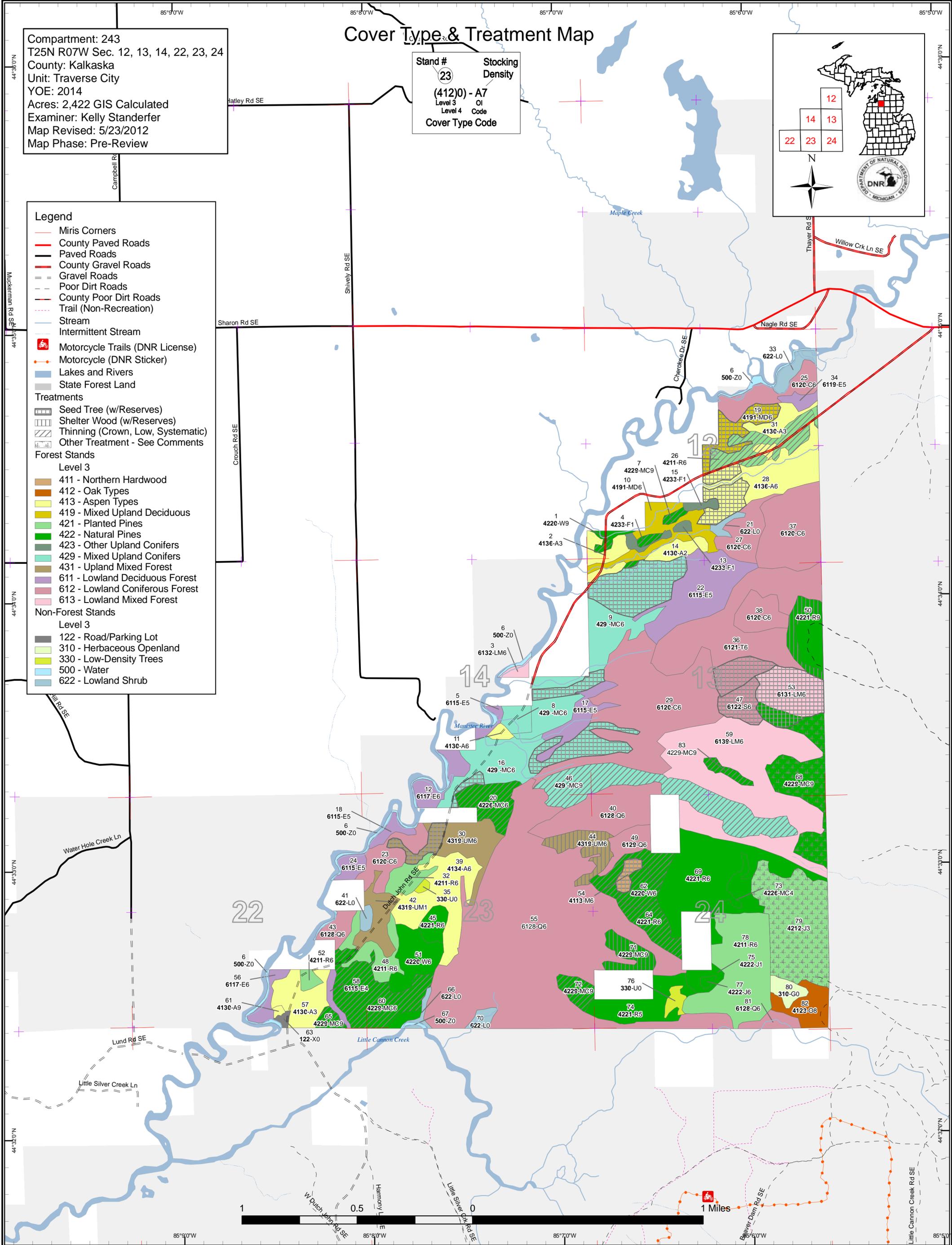
Cover Type & Treatment Map

Compartment: 243
 T25N R07W Sec. 12, 13, 14, 22, 23, 24
 County: Kalkaska
 Unit: Traverse City
 YOE: 2014
 Acres: 2,422 GIS Calculated
 Examiner: Kelly Standerfer
 Map Revised: 5/23/2012
 Map Phase: Pre-Review

Stand #
 (23)
 (412)0 - A7
 Level 3 OI
 Level 4 Code
 Cover Type Code



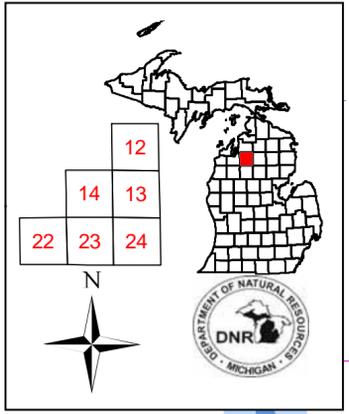
- Legend**
- Miris Corners
 - County Paved Roads
 - Paved Roads
 - County Gravel Roads
 - Gravel Roads
 - Poor Dirt Roads
 - County Poor Dirt Roads
 - Trail (Non-Recreation)
 - Stream
 - Intermittent Stream
 - Motorcycle Trails (DNR License)
 - Motorcycle (DNR Sticker)
 - Lakes and Rivers
 - State Forest Land
- Treatments**
- Seed Tree (w/Reserves)
 - Shelter Wood (w/Reserves)
 - Thinning (Crown, Low, Systematic)
 - 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
 - 423 - Other Upland Conifers
 - 429 - Mixed Upland Conifers
 - 431 - Upland Mixed Forest
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest
 - 613 - Lowland Mixed Forest
- Non-Forest Stands**
- Level 3
- 122 - Road/Parking Lot
 - 310 - Herbaceous Openland
 - 330 - Low-Density Trees
 - 500 - Water
 - 622 - Lowland Shrub



Dedicated & Proposed Special Conservation Area Map

Compartment: 243
 T25N R07W Sec. 12, 13, 14, 22, 23, 24
 County: Kalkaska
 Unit: Traverse City
 YOE: 2014
 Acres: 2,422 GIS Calculated
 Examiner: Kelly Standerfer
 Map Revised: 5/23/2012
 Map Phase: Pre-Review

Stand #
 23
Stocking Density
 (412)0 - A7
 Level 3 OI
 Level 4 Code
Cover Type Code



- Legend**
- Miris Corners
 - Stand Boundaries
 - Forest Stands**
 - Level 3
 - 411 - Northern Hardwood
 - 412 - Oak Types
 - 413 - Aspen Types
 - 419 - Mixed Upland Deciduous
 - 421 - Planted Pines
 - 422 - Natural Pines
 - 423 - Other Upland Conifers
 - 429 - Mixed Upland Conifers
 - 431 - Upland Mixed Forest
 - 611 - Lowland Deciduous Forest
 - 612 - Lowland Coniferous Forest
 - 613 - Lowland Mixed Forest
 - Non-Forest Stands**
 - Level 3
 - 122 - Road/Parking Lot
 - 310 - Herbaceous Openland
 - 330 - Low-Density Trees
 - 500 - Water
 - 622 - Lowland Shrub
 - Proposed Special Conservation Areas**
 - ▨ SCA - Special Conservation Area
 - Special Conservation Areas**
 - Natural Rivers Vegetative Buffer
 - Natural Rivers Zoning District
 - Kirtland Warbler Habitat
 - Cold Water Streams

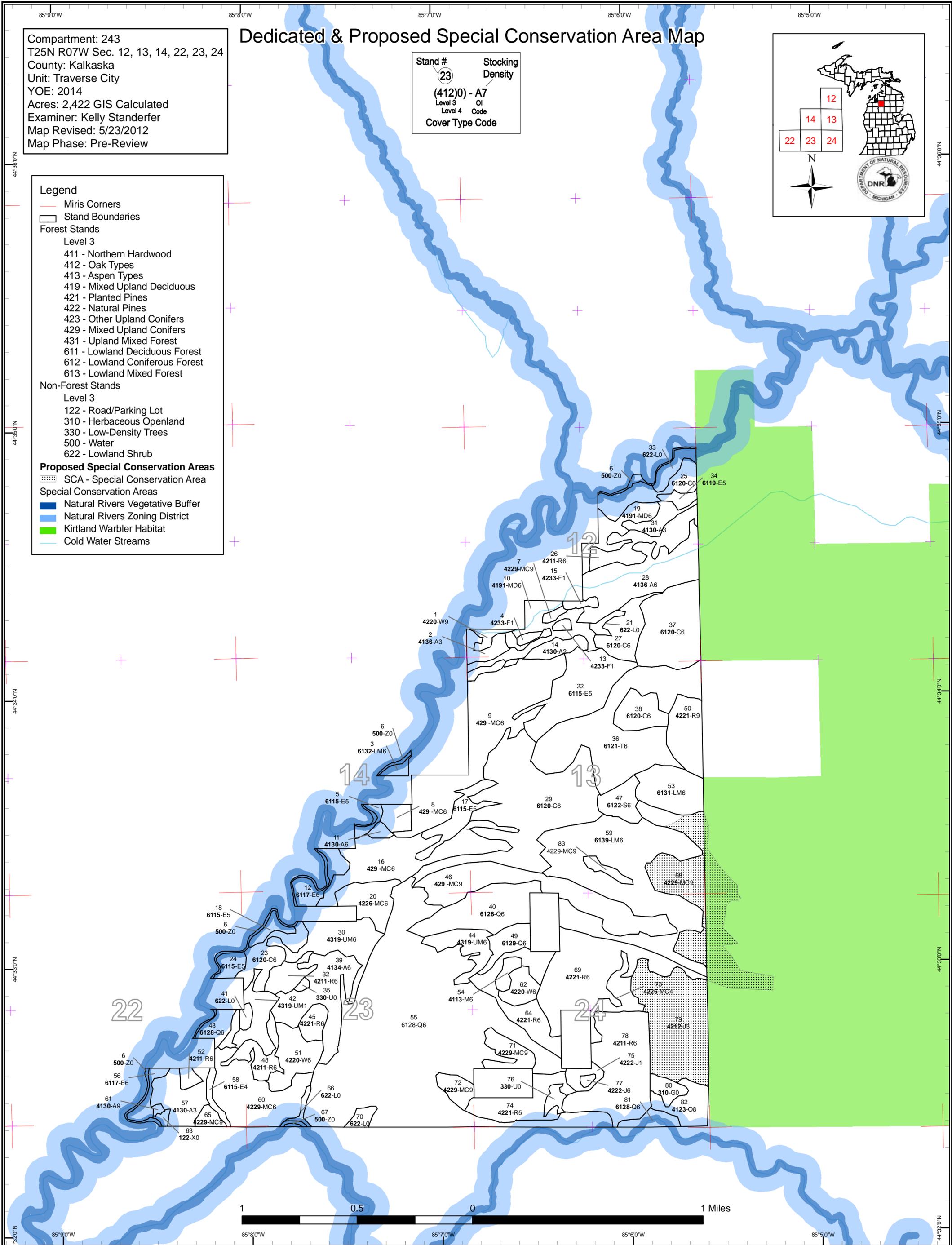


Table 1 – Total Acres by Cover Type and Age Class



	Age Class													Total	
	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120 +		Uneven Age
Aspen	14	37	0	11	111	3	0	1	0	0	0	0	0	0	177
Cedar	0	0	0	0	0	0	0	0	0	47	229	0	0	0	275
Herbaceous Openland	8	0	0	0	0	0	0	0	0	0	0	0	0	0	8
Jack Pine	0	89	0	2	0	0	0	0	0	0	0	0	0	0	90
Low-Density Trees	6	0	0	0	0	0	0	0	0	0	0	0	0	0	6
Lowland Conifers	0	0	0	0	0	0	0	62	9	9	355	0	0	0	435
Lowland Deciduous	0	0	0	0	0	0	35	74	15	0	0	0	0	0	124
Lowland Mixed Forest	0	0	0	0	0	0	177	0	4	0	0	0	0	0	181
Lowland Shrub	24	0	0	0	0	0	0	0	0	0	0	0	0	0	24
Lowland Spruce/Fir	0	0	0	0	0	0	0	15	0	0	0	0	0	0	15
Mixed Upland Deciduous	0	0	0	0	0	19	28	0	0	0	0	0	0	0	47
Natural Mixed Pines	0	0	0	0	0	55	40	30	0	6	5	54	0	0	190
Northern Hardwood	0	0	0	0	0	0	6	0	0	0	0	0	0	0	6
Oak	19	0	0	0	0	0	0	0	0	0	0	0	0	0	19
Red Pine	0	0	0	0	117	53	87	63	0	0	0	0	0	0	320
Tamarack	0	0	0	0	0	0	0	112	0	0	0	0	0	0	112
Upland Conifers	0	0	0	0	0	74	0	105	0	0	71	0	0	0	250
Upland Mixed Forest	19	0	0	0	36	0	20	0	0	0	0	0	0	0	75
Upland Spruce/Fir	0	9	0	0	0	0	0	0	0	0	0	0	0	0	9
Urban	2	0	0	0	0	0	0	0	0	0	0	0	0	0	2
Water	16	0	0	0	0	0	0	0	0	0	0	0	0	0	16
White Pine	0	0	0	0	0	0	37	0	5	0	0	0	0	0	42
Total	107	135	0	12	264	205	429	461	32	62	660	54	0	0	2422



Table 2 – Proposed Treatment Summaries

Traverse City Mgt. Unit
Year of Entry 2014

Compartment 243
Total Compartment Acres: 2422

Acres by Treatment Type

Commercial Harvest - 436	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 82
Habitat Cut - 71	Opening Maintenance - 47	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen	0	0	21	0	30	0	51
Lowland Spruce/Fir	0	0	15	0	0	0	15
Mixed Upland Deciduous	0	0	19	0	0	0	19
Natural Mixed Pines	0	0	39	14	101	0	155
Northern Hardwood	0	0	6	0	0	0	6
Red Pine	0	0	0	13	35	0	48
Tamarack	0	0	16	0	0	0	16
Upland Conifers	0	0	82	0	71	0	153
Upland Mixed Forest	0	0	10	20	0	0	30
White Pine	0	0	0	0	14	0	14
Total	0	0	208	47	251	0	507



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
61243_OutOfY OE_1-Cut	14.9					Harvest	Seed Tree with Reserves	42260 - Natural Pine, Mixed Deciduous	Fld. Tr. Bdy. - Incomplete
<p><u>Prescription</u> mixed red pine n white pine with some scattered deciduous & spruce. Shelterwood cut, green tree leave 10 -20 BA of mixed species. looks to be thinned ~20 years ago. stand continues to the east. cut stands together. Or could thin again and regeneration cut in 10 years.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u> try to promote scarification through timber sale to stimulate red pine natural regen.</p> <p><u>Next Steps:</u> monitor for red pine and white pine regen, may need to interplant with red pine if it doesnt fill in naturally.</p> <p><u>Proposed Start Date:</u> 10/01/2010</p>									
61243_OutOfY OE_2-Cut	0.9					Harvest	Systematic Thinning	42110 - Planted Red Pine	Fld. Tr. Bdy. - Incomplete
<p><u>Prescription</u> This small area was not yet thinned. Row thin with stand to the east. In the 135 Dutch Resinosa sale</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> Unspecified</p>									
61243_OutOfY OE_3-Cut	2.6					Harvest	Clearcut with Reserves	4134 - Aspen, Spruce/Fir	Fld. Tr. Bdy. - Incomplete
<p><u>Prescription</u> North end is Aspen and white pine mix and the south end is more Q typish. North end cutting all but green marked trees, more of a clearcut with reserves and the south end is more of a seed tree harvest with green trees marked as well but a bit thicker than the north end.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> Unspecified</p>									
61243_OutOfY OE-Cut	0.7					Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Fld. Tr. Bdy. - Incomplete
<p><u>Prescription</u> small aspen stand continued into this compartment. Final harvest but save all pine and most oak. Sale set up under Puzzle Piece popple</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> Unspecified</p>									
1 61243001- Cut_small	1.8	42200 - Natural White Pine	High Density Log	82	141-170	Harvest	Crown Thinning	42200 - Natural White Pine	Cmpt. Review Proposal
<p><u>Prescription</u> Red pine stands to the east are being thinned so the south end of this stand will be thinned with them as well. North end wont be treated because of the creek. South ~1/2 of the stand will have the short lived species removed and OK to mark some pine for good crown spacing. Retention will be portion along creek as well as pine that is being left. Very small treatment area</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 10/01/2013</p>									



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
7 61243007-Cut	5.7	42290 - Natural Mixed Pine	High Density Log	95	141-170	Harvest	Crown Thinning	42290 - Natural Mixed Pine	Cmpt. Review Proposal

Prescription Three small islands of dense red pine. Target the removal of the overtopped trees but OK to take some log/ utility poles out as well. Overall a thin
Specs: from below but some holes will exist post harvest due to size of log trees. Push more towards big tree management. Unique stands.

Other
Comments:

Next
Steps:

Proposed
Start Date: 10/01/2013

9 61243009_sm all_1-Cut	9.5	429 - Mixed Upland Conifers	High Density Pole	75		Harvest	Seed Tree with Reserves	4319 - Mixed Upland Forest	Cmpt. Review Proposal
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Prescription Treat 1/3 to 1/2 of the stand this YOE to break up the age of the area. Cut all aspen, red maple, balsam fir 4" and up, Birch 4" and up and save most of the super canopy red and white pine but ok to mark a few to cut in thicker areas. Mark some maple to leave in the pure maple areas.
Specs: Likely will be a green tree mark job. Residual BA will be highly variable but should range from 0-70. Seed tree/ shelterwood cut. Save all cedar and hemlock. Crane mats will likely be needed to cross some of the drain areas, winter cut or extremely dry summer would be best due to drain areas as well as Q type areas of spruce and cedar. Retention will be the leave trees as well as the 1/2 of the stand

Other
Comments:

Next
Steps:

Proposed
Start Date: 10/01/2013

9 61243009_sm all-Cut	43.6	429 - Mixed Upland Conifers	High Density Pole	75		Harvest	Seed Tree with Reserves	42340 - Upland Spruce/Fir	Cmpt. Review Proposal
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Prescription Treat 1/3 to 1/2 of the stand this YOE to break up the age of the area. Cut all aspen, red maple, balsam fir 4-6" and up, Birch 4-6" and up and save most of the super canopy red and white pine but ok to mark a few to cut in thicker areas. Mark some maple to leave in the pure maple areas. Likely will be a green tree mark job. Residual BA will be highly variable but should range from 0-70. Seed tree/ shelterwood cut. Save all cedar and hemlock. Crane mats will likely be needed to cross some of the drain areas, winter cut or extremely dry summer would be best due to drain areas as well as Q type areas of spruce and cedar. Retention is the residual scattered to clump trees and ~1/2 of the stand is being left for age class diversity.

Other
Comments:

Next
Steps:

Proposed
Start Date: 10/01/2013

16 61243016_sm all_1-Cut	3.6	429 - Mixed Upland Conifers	High Density Pole	55	111-140	Harvest	Seed Tree with Reserves	4319 - Mixed Upland Forest	Cmpt. Review Proposal
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Prescription some is upland and some is lowland, mostly upland, but east end has more spruce. drain areas have the thicker cedar and hemlock and upland
Specs: more mixed, fir, maple, birch aspen and pine. Cut approximately 1/3 of the stand this YOE for age class and habitat diversity. May need crane mats to access the far east end drain doesnt appear to be bed and banky. Old skid trail through middle of the stand that should work good for access. This portion of the stand has more aspen, white pine and maple. green tree some of the nicer pine to leave and cut all the aspen and maple. Retention will be the green trees throughout the sale area.

Other
Comments:

Next
Steps:

Proposed
Start Date: 10/01/2013



Stand	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
16	61243016_sm all-Cut	25.1	429 - Mixed Upland Conifers	High Density Pole	55	111-140	Harvest	Seed Tree with Reserves	4319 - Mixed Upland Forest	Cmpt. Review Proposal
<p><u>Prescription</u> some is upland and some is lowland, mostly upland, but east end has more spruce. drain areas have the thicker cedar and hemlock and upland</p> <p><u>Specs:</u> more mixed, fir, maple, birch aspen and pine. Cut approximately 1/3 of the stand this YOY for age class and habitat diversity. May need crane mats to access the far east end drain doesn't appear to be bed and banky. Old skid trail through middle of the stand that should work good for access. Mark 0-30BA for seed and diversity. Where advanced regen is present less residual is needed but in areas void of regen mark 20-30BA for seed and retention. Save most of the big white pine but OK to cut some.</p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
19	61243019-Cut	19.2	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	54	81-110	Harvest	Seed Tree with Reserves	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal
<p><u>Prescription</u> SW end has some smaller A4/F4/F5/W6/M5. Not all aspen appears to be 54 yrs old, some is smaller but should be merchantable. Drain area @</p> <p><u>Specs:</u> SW end of stand, didn't look bed and banky but buffer defined areas out of sale for retention. Aspen is in rough shape in some areas so treat this YOY. Final harvest/ seed tree, green tree a mix bag of species for seed and retention. Save all conifer under 4 or 5" and green tree some of the nicer oak and red pine and white pine to leave. Cut most or all red maple and aspen. Far east end of stand will be more of a seed tree/shelterwood as there is some nice oak and pine mixed with red maple, leave it a bit thicker here, ~50BA. might need a survey for private corner</p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
20	61243020-Cut	22.8	42260 - Natural Pine, Mixed Deciduous	High Density Pole	65	171-200	Harvest	Crown Thinning	42260 - Natural Pine, Mixed Deciduous	Cmpt. Review Proposal
<p><u>Prescription</u> Variable stand. Some nice aspen in areas. Cut out most or all maple, birch and aspen. Cut fir over 4-6" dbh and mark the rest down to ~ 90-</p> <p><u>Specs:</u> 120BA. Mainly a removal from below, save the nicer poles and small log sized trees. More of a thinning in most areas however the areas heavy to maple birch and aspen will be more of a regeneration cut. Should result in nice mix of poles/ logs and regeneration areas to increase deer browse potential. Save most or all of the bigger white pine but OK to cut some.</p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
28	61243028_sm all_1-Cut	21.1	4136 - Aspen, Mixed Conifer	High Density Pole	46	111-140	Harvest	Seed Tree with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal
<p><u>Prescription</u> Drain through north end of stand. Some M6 areas of red maple. Overall A5/A6/W5/W6 over F3. Most should hold good 10 years. Far west end</p> <p><u>Specs:</u> seems to be more mature so cut ~1/3 of the stand this year to break up to diversify the aspen age in this area. Cut all balsam 4" and up. Ok to cut some red and white pine but save the majority of it for diversity and seed. Leave thicker with green trees along drain area or buffer right out of sale (~25' each side) if its bed and banky. Very narrow wet area should be easily crossed with crane mats or some temporary roundwood to freeze in a skid trail. Cut all aspen, red maple, birch but green tree a few throughout sale for seed and diversity where needed. Retention will be east 2/3 of the stand, green trees and drain buffer.</p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
28	61243028_sm all-Cut	30.3	4136 - Aspen, Mixed Conifer	High Density Pole	46	111-140	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Row thinned last YOE. Some is ready for a thin and some isnt quite ready. Overall should be ready for a light thin. will likely need to be marked.
Specs: take out the poor formed and for overall tree spacing. Cut the aspen clumps along the road as some are in rough shape.

Other
Comments:

Next
Steps:

Proposed
Start Date: 10/01/2013

30	61243030_sm all-Cut	9.6	4319 - Mixed Upland Forest	High Density Pole	45	81-110	Harvest	Seed Tree with Reserves	4319 - Mixed Upland Forest	Cmpt. Review Proposal
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Prescription Some is upland and some is lowland. Drain areas are more Qtypish but upland portions are mixed, fir, aspen, spruce, pine, maple... Treat the area on the west side fo the road. Shelterwood/seed tree harvest. Cut all aspen, birch, red maple and fir over 4-6"dbh. OK to mark some poor quality pine to cut as well to promote good regen. Area to the east of the road should hold good 10 years.

Other
Comments:

Next
Steps:

Proposed
Start Date: 10/01/2013

36	61243036_sm all-Cut	16.0	6121 - Tamarack	High Density Pole	75	111-140	Harvest	Seed Tree with Reserves	6121 - Tamarack	Cmpt. Review Proposal
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Prescription Some is more open and very wet. Some is very thick and relatively dry. Cut a small portion with stands to the southeast to promote mixed Q type regen. Main goal is mixed tamarack and spruce but any Q type mix is acceptable. Treat approx 10% of this 112 acre stand, Mark mixed bag of seed trees in clumps/ scattered, or possibly by specification. will be 0-30BA post harvest.

Other
Comments:

Next
Steps:

Proposed
Start Date: 10/01/2013

44	61243044-Cut	19.9	4319 - Mixed Upland Forest	High Density Pole	65	111-140	Harvest	Shelterwood	4319 - Mixed Upland Forest	Cmpt. Review Proposal
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Prescription Alot of the overstory fir is already on the ground. Cut all fir over 4-6" dhb and green tree the rest down to 20-60 BA. Seed tree/ shelterwood harvest/ overstory removal. Don't cut any cedar or hemlock. NE end has more of a E5/E6 type along drain. Marka mixed bag of seed trees for seed, diversity & retention.

Other
Comments:

Next
Steps:

Proposed
Start Date: 10/01/2013



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
46	61243046-Cut	71.0	429 - Mixed Upland Conifers	High Density Log	105	141-170	Harvest	Low Thinning	42260 - Natural Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Stand could use a light thin. Remove red maple, most birch, and spruce and fir over 4-6" dbh and OK to mark a few big red and white pine to be removed. OK to dip out into adjacent E/Q type slightly where there is an opportunity to cut red maple to increase browse potential. Some of the very thick red pine areas will be more of a thin from below. Overall goal is to remove short lived species to increase browse potential and promote some red and white pine regen where the big pine is removed to maintain the natural pine covertype. Best access looks to be from the east, one small drain to crossm but should be pretty easy with crane mats. Do Not cut any cedar or hemlock. Island portion of stand has nice Spruce pocket @ west end, OK to mark some bigger spruce to leave for seed if there isnt enough advanced regen present in areas.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2013

47	61243047-Cut	15.3	6122 - Black Spruce	High Density Pole	75	111-140	Harvest	Seed Tree with Reserves	6129 - Mixed Coniferous Lowland Forest	Cmpt. Review Proposal
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Prescription East and South end have some bigger white pine, mainly spruce type but mixed Q type overall. Alot of the balsam has already fallen out of stand. Seed tree stand, should fill in nicely, cut all trees 4-5" and up and save green marked trees for seed, retention and diversity. Any mix of Q type/ E type regen is OK post harvest. Goal is to get some of the lowland types regenerating and to increase the browse potential in the deer yard.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2013

50	61243050-Cut	12.9	42210 - Natural Red Pine	High Density Log	75	141-170	Harvest	Shelterwood	42210 - Natural Red Pine	Cmpt. Review Proposal
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Prescription Stand already set up with a sale to the east. Green trees marked to leave. Shelterwood/seed tree to promote mixed pine regen. West edge of Specs: nice black spruce, green trees marked through this as well, spruce area should regenerate very nicely judging by the cuts to the southeast.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2013

54	61243054-Cut	5.8	4113 - R.Maple, Conifer	High Density Pole	65	141-170	Harvest	Seed Tree with Reserves	4113 - R.Maple, Conifer	Cmpt. Review Proposal
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Prescription More red maple and birch here than surrounding stands. Either mark to cut or mark trees to leave which ever is less work or possibly cut by spec. Specs: Cut most birch and red maple and take some pine as well. Stand will be more open post harvest (0-40BA) but will create nice deer browse and promote mixed conifer and deciduous regen. any of the existing cover type is acceptable mix of regen.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2013



S t a n d	Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
60	61243060-Cut	51.7	42290 - Natural Mixed Pine	High Density Pole	55	141-170	Harvest	Crown Thinning	42260 - Natural Pine, Mixed Deciduous	Cmpt. Review Proposal
<p><u>Prescription:</u> Some is very dense white pine 5-8" dbh and SE end more Qtypish but has some nice spruce. Buffer creek by at least 175 feet. Cut all red maple, aspen and most of the birch. Possibly spec cut white pine 5" and under and mark some of the bigger pine for spacing and overall stand health. Cut fir and spruce over 4-6" dbh and save the understory stuff if possible. More of a thinning in most areas. Target BA around 70-120. Q type areas may be more open and are more of an overstory removal/ shelterwood cut</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
62	61243062-Cut	12.0	42200 - Natural White Pine	High Density Pole	65	171-200	Harvest	Crown Thinning	42201 - Natural White Pine, Mixed Deciduous	Cmpt. Review Proposal
<p><u>Prescription:</u> Some dense areas of younger white pine and some is a bit bigger. Possibly spec out white pine under 4-6 inch dbh to minimize marking time. orange tree or green tree the remainder down to a BA of ~80-120. cut most of the red maple and birch but ok to save a few for diversity.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
64	61243064-Cut	35.4	42210 - Natural Red Pine	High Density Pole	75	171-200	Harvest	Crown Thinning	42211 - Natural Red Pine, Mixed Deciduous	Cmpt. Review Proposal
<p><u>Prescription:</u> NE end of stand is very dense natural red pine. NW end has some big super canopy red mixed with white pine. South end is mroe open mixed with whtie pine. May be able to spec out pine under 4 or 5 inches for operability and mark the remainder down to 90-120BA. OK to poke ina few regen holes. OK to take some ofthe big red pine @ the NW but save at least half as they are unique trees.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										
65	61243065-Cut	5.2	42290 - Natural Mixed Pine	High Density Log	75	171-200	Harvest	Crown Thinning	42290 - Natural Mixed Pine	Cmpt. Review Proposal
<p><u>Prescription:</u> Nice mixed log sized white and red pine. Take out the short lived species and thin the rest down... Green tree or orange tree mark, target BA 80-140BA post harvest. OK to put ina a few regen holes but overall more of a thin. Pine stand goes slightly into compartment to the south, thin this portion as well.</p> <p><u>Specs:</u></p> <p><u>Other Comments:</u></p> <p><u>Next Steps:</u></p> <p><u>Proposed Start Date:</u> 10/01/2013</p>										



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
68 61243068_sm all-Cut	39.4	42290 - Natural Mixed Pine	High Density Log	110	200+	Harvest	Seed Tree with Reserves	4113 - R.Maple, Conifer	Cmpt. Review Proposal

Prescription Some is upland and some is fairly wet. Wet drain through the center of the stand, either buffer this out or mark heavy with green along edges, didn't appear to be bed and bankey but more of a LO/Ash swail but it was winter when examined, should be able to cross with crane mats or brush in the winter months. Northeast end of stand also has a wet drain area that will need to be protected during cutting operations, cedar drain area. Some nice big red and white pine in mid portion of stand. Save all cedar and hemlock and save ~ 1/2 of the big red and white pine. Green tree or spec cut the remaining portions down to 0-20 BA depending on amount of advanced regen. Pine area will likely be 30-50 BA post harvest. should regenerate nicely to mixed maple, fir, spruce & pine.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2013

71 61243071-Cut	14.4	42290 - Natural Mixed Pine	High Density Log	75	141-170	Harvest	Shelterwood	42260 - Natural Pine, Mixed Deciduous	Cmpt. Review Proposal
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Prescription Nice mixed pine stand on ridges. OK to dip into surrounding Q type where the ground looks treatable to promote Q type regen and in crease browse for deer. Do not cut any cedar. Likely spec cut birch, maple, fir, spruce over 4-6" and mark some pine to take out as well. Some will be a thinning and some will be more open to promote mixed pine and deciduous regen. Some will be shelterwood/ seed treed and soem will be more of a thinning in thicker pine areas.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2013

72 61243072-Cut	10.1	42290 - Natural Mixed Pine	High Density Log	75	141-170	Harvest	Crown Thinning	42260 - Natural Pine, Mixed Deciduous	Cmpt. Review Proposal
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Prescription Nice natural mixed pine stand with some birch, maple, fir and spruce mixed in. OK to dip into adjacent Q type where its nice spruce to regenerate some of the lowland. Spec out birch, red maple spruce and fir over 4-6" dbh and mark some of the pine to take out as well. OK to poke in some openings to promote pine regen but leave BA between 50-120 where its thicker pine. Areas without much pine can be left with a lower BA to promote mixed regen. Residual trees will be retention.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2013

83 61243083-Cut	5.5	42290 - Natural Mixed Pine	High Density Log	105	171-200	Harvest	Crown Thinning	42260 - Natural Pine, Mixed Deciduous	Cmpt. Review Proposal
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Prescription West end has spruce pocket. Treat similar to stand 26. Leave spruce @ edge of spruce area and some scattered for seed. If there is advanced spruce regen less or no seed trees will need to be left. Mark some of the bigger pine but mostly a short lived species removal. Cut birch, fir & Maple over 4-5" and thin pine areas. spruce area will be more of a seed tree/ clearcut with reserve.

Other Comments:

Next Steps:

Proposed Start Date: 10/01/2013



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
68 61243068-NonFor	46.6	42290 - Natural Mixed Pine	High Density Log	110	200+	Non-Forest Management	Other - Specify	42290 - Natural Mixed Pine	Cmpt. Review Proposal

Prescription Northwest finger of stand has more maple and birch mixed in. Treat this area with stand to the north and west. Cut the red maple, birch and ok to mark some pine to be cut as well. Cut spruce and Fir over ~4-5 inch as well. Treatment area should increase browse potential for the winter deer yarding area. South end of the stand is very nice mixed white pine super canopy log trees (16-20"dbh) over some dense areas of cedar and hemlock, stand should hold nicely for a while, functioning as a nice deer yarding area.. Unique stand, doesnt look to have been cut since back in the day, very tall trees but diameters arent real huge. Stand goes into two adjacent compartment as well. Manage for big tree management and dense deer cover, stick nest of some sort in a white pine. Possible Type 2 Old Growth-SCA due to uniqueness of the stand

Other Comments: Work with wildlife too see if this indeed should be typed as type 2 old growth.

Next Steps:

Proposed Start Date: Unspecified

79 61243079-Other	81.8	42120 - Planted Jack Pine	High Density Sapling	10		Other	Unspecified	42120 - Planted Jack Pine	Cmpt. Review Proposal
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Prescription KW opposing weave planted for Endangered Species Kirtland Warbler

Other Comments:

Next Steps:

Proposed Start Date: Unspecified

**Total Treatment
Acreage Proposed: 654.3**

**Table 4 -- Treatments Prescribed with
a Limiting Factor**



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Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
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#Error

Prescription
Specs:

Other
Comment:

Next
Steps:

Proposed
Start Date: #Error

Limiting Factor and No
Treatment Reason

**Total Treatment
Acreage Proposed: 0**

**Out of YOE -- Treatments
Prescribed with No Limiting Factor**

Year of Entry: 2014



Treatment Name	Acres	CoverType	Size Density	Stand Age	BA Range	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
61043_OutOfY OE-Cut	2.1					Harvest	Clearcut with Reserves	4131 - Aspen, Oak	Cmpt. Review Proposal - Incomplete

Prescription

Specs: retain some pine and oak for mast and seed production, Follow WLD guidance for CWD creation. Harvest all stems that are not retained.

Other New stand should have mix of oak, pine, aspen and maple.

Comments:

Next

Steps:

Proposed

Start Date: 09/01/2009

61231_OutOfY OE-Thin	4.6			0		Harvest	Low Thinning	4122 - Oak, Pine	Cmpt. Review Proposal
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Prescription Within harvest area, remove all aspen. Heavily thin oak and maple to a residual BA of about 50 sf. Leave retention in patches or strips sufficient to meet minimum retention goals.

Other Topography is rather hilly. Combine with treatment in Compartment 133.

Comments:

Next

Steps:

Proposed

Start Date: 10/01/2013

**Total Treatment
Acreage Proposed: 6.7**

Stand	Traverse City Mgt. Unit		5 – Forested Stands			Compartment: 243	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2014	
1	42200 - Natural White Pine	High Density Log	4.6	82	141-170		Small stand of maturing timber in a harvest area. Should hold good ten years. North end has bed and banky drain that was buffered out fo the sale and wouldnt be harvestable. Hold 10 yrs.
2	4136 - Aspen, Mixed Conifer	High Density Sapling	13.6	4			Stand cut last YOE. A3 mixed with F4 W4/W5. Drains buffered out of sale. Regenerated nicely.
3	6132 - Mixed Lowland Forest with Cedar	High Density Pole	3.6	82	81-110		landlocked swampy E/Q type. Along river will never be managed, Ravine with drain @ south end of stand.
4	42330 - Upland Fir	Low Density Sapling	3.5	10			Go filling in with Balsam & white pine. Still some open areas but overall calling a forested stand this YOE.
5	6115 - Lowland Ash	Medium Density Pole	4.0	75	1-50		LO/E5 along Manistee river.
7	42290 - Natural Mixed Pine	High Density Log	5.7	95	141-170		Nice second growth red pine, Big pine stumps throughout. Push more towards big tree management. 3 small pockets of maturing mixed pine. Could use a light thin, thin from below but OK to cut some of the pine that is in rougher shape and ok to put in some regen holes. cut out most birch and maple but ok to save a few for retention. Ok to leave BA a bit higher than a normal thinning.
8	429 - Mixed Upland Conifers	High Density Pole	9.0	55	111-140		
9	429 - Mixed Upland Conifers	High Density Pole	105.1	75			Highly variable stand. Drain areas throughout, some are bed and banky and will need to be buffered and some are LO/E4 seasonal drains that are not bed and bankey. Some Hemlock and cedar along drain areas and some mixed Q types as well. Scattered super canopy white pine & red pine. Some areas of blown down fir.
10	4191 - Mixed Upland Deciduouos with Conifer	High Density Pole	27.7	65			Most is upland but stand has many drains throughout. Some should be treatable as many of the drains are not bed and bankey but more LO/E4 drains. hold this YOE, maple is still pretty small, should hold good 10 years.
11	4130 - Aspen	High Density Pole	3.2	55	141-170		
12	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	14.7	75			Lowland ash with two clumps of conifer. Natural river corridor.
13	42330 - Upland Fir	Low Density Sapling	2.1	10			stand filling in with mixed conifer adna few clumps of aspen and red maple.
14	4130 - Aspen	Medium Density	10.3	14			Stand slow to fill back in, most has aspen present, open areas filling in with spruce, fir, white pine. wet areas of stand have LO
15	42330 - Upland Fir	Low Density Sapling	3.4	14			stand slow to fill back in but most of site has regenerated to a nice mix of fir, spruce and pine. South east end more Q regen. middle of stand has maple strip. let it continue to fill in.



S t a n d	Traverse City Mgt. Unit		5 – Forested Stands			Compartment: 243	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2014	
16	429 - Mixed Upland Conifers	High Density Pole	65.4	55	111-140		
17	6115 - Lowland Ash	Medium Density Pole	18.9	60		Very wet drain areas, some is LO with tag and some is scattered ash, maple with occasional conifer, WET!	
18	6115 - Lowland Ash	Medium Density Pole	6.1	60		Lowland ash along manistee river	
19	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	19.2	54	81-110	SW end has some smaller A4/F4/F5/W6/M5. Not all aspen appears to be 54 yrs old, some is smaller but should be merchantable. Drain area @ SW end of stand, didnt look bed and bankey but buffer defined areas out of sale for retention. Aspen is in rough shape in some areas so treat this YOE.	
20	42260 - Natural Pine, Mixed Deciduous	High Density Pole	22.8	65	171-200		
22	6115 - Lowland Ash	Medium Density Pole	55.0	75	1-50		
23	6120 - Lowland Cedar	High Density Pole	23.1	95			
24	6115 - Lowland Ash	Medium Density Pole	7.5	85		Lowland E4-E5 along river	
25	6120 - Lowland Cedar	High Density Pole	23.5	95		Lots of blow down cedar. Nice C type along manistee river.	
26	42110 - Planted Red Pine	High Density Pole	28.4	45	141-170	Row thinned last YOE. Some is ready for a thin and some isnt quite ready. Overall should be ready for a light thin. will likely need to be marked. take out the poor formed and for overall tree spacing. Cut the aspen clumps along the road as some are in rough shape.	
27	6120 - Lowland Cedar	High Density Pole	23.0	100			
28	4136 - Aspen, Mixed Conifer	High Density Pole	61.7	46	111-140	Drain through norht end of stand. Some M6 areas of red maple. Overall A5/A6/W5/W6 over F3. Most should hold good 10 years. Far west end seems to be more mature so cut ~1/3 of the stand this year to break up to diversify the aspen age in this area.	
29	6120 - Lowland Cedar	High Density Pole	131.2	100	171-200		
30	4319 - Mixed Upland Forest	High Density Pole	36.2	45	81-110		
31	4130 - Aspen	High Density Sapling	10.7	37	51-80		
32	42110 - Planted Red Pine	High Density Pole	12.8	45	111-140		



S t a n d	Traverse City Mgt. Unit		5 – Forested Stands			Compartment: 243	General Comments:
	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	Year of Entry: 2014	
34	6119 - Mixed Lowland Deciduous Forest	Medium Density Pole	5.2	65	51-80		
36	6121 - Tamarack	High Density Pole	111.8	75	111-140		
37	6120 - Lowland Cedar	High Density Pole	55.4	100	81-110		
38	6120 - Lowland Cedar	High Density Pole	19.1	100	141-170		
39	4134 - Aspen, Spruce/Fir	High Density Pole	49.4	45	51-80		
40	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	48.0	75	111-140		
42	4319 - Mixed Upland Forest	Low Density Sapling	18.8	5			
43	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	9.4	95	51-80		
44	4319 - Mixed Upland Forest	High Density Pole	19.9	65	111-140		
45	42210 - Natural Red Pine	High Density Pole	9.3	63	111-140		
46	429 - Mixed Upland Conifers	High Density Log	71.0	105	141-170	scattered big stumps throughout with fire scars. Nice natural pine, some areas thick to white pine and some red pine. Mixed, Super canopy trees mixed with pole sized trees. red maple, birch, fir, spruce, cedar and hemlock in areas.	
47	6122 - Black Spruce	High Density Pole	15.3	75	111-140		
48	42110 - Planted Red Pine	High Density Pole	19.4	53	111-140		
49	6129 - Mixed Coniferous Lowland Forest	High Density Pole	13.5	75	200+		
50	42210 - Natural Red Pine	High Density Log	27.8	75	141-170		
51	42200 - Natural White Pine	High Density Pole	25.2	63	111-140		
52	42110 - Planted Red Pine	High Density Pole	4.0	53	111-140		



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Traverse City Mgt. Unit

5 – Forested Stands

Compartment: 243
Year of Entry: 2014

Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
6131 - Hemlock, White Pine, Maple, Birch	High Density Pole	32.2	65		
4113 - R.Maple, Conifer	High Density Pole	5.8	65	141-170	
6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	355.2	100	111-140	variable stand. Large swamp complex. Some E typish and some dense cedar areas as well as some mixed Q type areas
6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	7.6	85	81-110	
4130 - Aspen	High Density Sapling	26.4	17		
6115 - Lowland Ash	Low Density Pole	4.7	65	1-50	
6139 - Mixed Lowland Forest	High Density Pole	145.1	65	51-80	
42290 - Natural Mixed Pine	High Density Pole	55.3	55	141-170	
4130 - Aspen	High Density Log	1.2	70	141-170	Along natural river and has an outhouse in it for the access site.
42200 - Natural White Pine	High Density Pole	12.0	65	171-200	
42210 - Natural Red Pine	High Density Pole	35.4	75	171-200	
42290 - Natural Mixed Pine	High Density Log	5.2	75	171-200	
42290 - Natural Mixed Pine	High Density Log	53.9	110	200+	
42210 - Natural Red Pine	High Density Pole	77.4	65	81-110	
42290 - Natural Mixed Pine	High Density Log	14.4	75	141-170	
42290 - Natural Mixed Pine	High Density Log	10.1	75	141-170	
42260 - Natural Pine, Mixed Deciduous	Low Density Pole	16.7	65	1-50	
42210 - Natural Red Pine	Medium Density Pole	29.9	58	51-80	cut last YOE. Most is pretty open yet. mixed red and white pine regenerating to a mix of pine.

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Traverse City Mgt. Unit

5 – Forested Stands

Compartment: 243
Year of Entry: 2014

	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
75	42220 - Natural Jack Pine	Low Density Sapling	7.0	10	1-50	
77	42220 - Natural Jack Pine	High Density Pole	1.7	30		
78	42110 - Planted Red Pine	High Density Pole	75.4	45	81-110	row thinned last YOE. Not yet ready for another thin.
79	42120 - Planted Jack Pine	High Density Sapling	81.8	10		KW opposing weave jack pine planting.
81	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	8.5	80	111-140	Buffer stand on Little cannon Creek.
82	4123 - Red Oak	Medium Density Log	19.0	7	1-50	Mixed M3/A2 under scattered to clump red oak and red maple... Red maple, oak cover type so
83	42290 - Natural Mixed Pine	High Density Log	5.5	105	171-200	Similar to ridge to the south.



Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
6	50 - Water	15.1	N/A	Unspecified	
21	622 - Lowland Shrub	3.6	No	Unspecified	
33	622 - Lowland Shrub	8.6	No	Unspecified	
35	330 - Low-Density Trees	1.5	No	Unspecified	
41	622 - Lowland Shrub	3.3	No	Unspecified	
63	122 - Road/Parking Lot	1.9	No	Unspecified	
66	622 - Lowland Shrub	3.3	No	Unspecified	
67	50 - Water	1.0	N/A	Unspecified	Little cannon Creek
70	622 - Lowland Shrub	4.9	No	Unspecified	
76	330 - Low-Density Trees	4.9	Yes	Medium (NonForested)	
80	310 - Herbaceous Openland	8.0	Yes	Medium (NonForested)	



7 – 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.

Stand	SCA Type	SCA Name	Acres	Comments
68	Unique Site - SCA	61243068	46.6	
79	Unique Site - SCA	61243079	81.8	KW plantation



8 – DEDICATED CONSERVATION AREA DETAILS

* This is a list of Dedicated Biodiversity Areas for this compartment along with a 1/4 mile buffer surrounding the compartment. Refer to Dedicated Conservation Area Map for areas that the below listed Conservation Areas are located.

ERA = Ecological Reference Area
HCVA = High Conservation Value Area
SCA = Special Conservation Area

Conservation Area	Type	Description
SCA	Cold Water Stream	A coldwater stream has temperature and dissolved oxygen conditions that allow naturally-reproduced or stocked trout populations and those of other coldwater fish species (e.g., slimy sculpin) to persist from year to year. Coldwater streams in Michigan typically provide these conditions due to substantial contributions of groundwater to their stream flows. Such streams are established by Director's action and designated as trout resources by Fisheries Order 210.
HCVA	Designated Critical Habitat	Critical habitat areas are established via a consultative and cooperative process between the DNR and the U.S. Fish and Wildlife service for the recovery of threatened and endangered species, as governed by Part 365, Endangered Species Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, and the Federal Endangered Species Act of 1973. This is an active program, with proposed species plans in various stages of review. As of now only two exist, Kirtland Warbler Habitat and Piping Plover Habitat.
HCVA	Natural Rivers	There are two Natural Rivers datasets which are derived from spatial buffers set from an established and approved distance from the river centerlines. The Natural Rivers Zoning District is a 400 foot buffer for most Natural Rivers. The Vegetative Buffer ranges from 25 to 100 feet. To view specific Zoning Districts and Vegetative Buffers for each Natural River see the table located on the I:\Documentation\GDSE data folder.