TRAVERSE CITY FOREST MANAGEMENT UNIT
COMPARTMENT REVIEW PRESENTATION

COMPARTMENT # 123 ENTRY YEAR: 2013

Compartment Acreage: 1814 Acres County: Kalkaska

Revision Date: 4/25/2011

Stand Examiner: Kelly Standerfer, Forest Management Division ; Steven Griffith Wildlife Division

Legal Description: T26N,R5W,Sec. 7 & T26N,R6W,Secs. 11,12

RMU (if applicable):

Management Goals:

Manage for both vegetative & wildlife diversity while maintaining the high recreation value within this compartment.

Soil and Topography:

The western half of the compartment is flat to rolling terrain. The eastern half has some larger hills. Soil types are mainly Kalkaska & Newton Loamy Sand, Rifle Peat, Rubicon, Roselawn, Saugatuck, and Emmet Sands.

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

Mostly block state ownership in and around compartment. Land use is mainly recreation: hunting and snowmobiling..

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

None known at this time within the compartment boundary however this area has the potential to harbor many rare plants and animals.

Archeological, Historical, and Cultural Features (include only non-site specific and non-sensitive information):

There is one old homestead site and several old railroad grades throughout the compartment.

Special Management Designations or Considerations:

AT & T buried fiber optic cable follows the old railroad grade at the north edge of the compartment.

Watershed and Fisheries Considerations:

The North Branch of the Manistee River and an unnamed tributary flow through compartment 123. Both are Designated Trout Streams. The North Branch of the Manistee River has naturally reproducing populations of brook and brown trout. The Natural Rivers native vegetation buffer for the North Branch of the Manistee River is 175', so no cutting should occur within 175' of that stream. The buffer for the unnamed tributary is 50'. Also, BMPS should be followed when working in wet areas near the streams.

Wildlife Habitat Considerations:

Mineral Resource and Development Concerns and/or Restrictions:

Surface sediments consist of ice-contact and glacial outwash sand and gravel, postglacial alluvium. The glacial drift thickness varies between 200 and 400 feet. Beneath the glacial drift is the Mississippian Marshall Sandstone. The Marshall has been used as a building stone in the past. The nearest gravel pit is located two miles to the northeast. Gravel potential in the compartment is considered good in the upland areas of Section 7 and 12. This area is located five miles northwest of Garfield 8 Field. The field produces from the Devonian Richfield and the Ordovician PdC. The PdC has produced over 46 Bcf gas. This compartment was leased for oil and gas, but the leases in Section 7 and 12 expired recently.

Vehicle Access:

Overall the area has good road access for recreation and fire protection purposes. Any new roads or currently closed roads will be closed to vehicle traffic upon completion of timber sales.

Survey Needs:

Existing survey markers should be sufficient for this year of entry treatments.

Recreational Facilities and Opportunities:

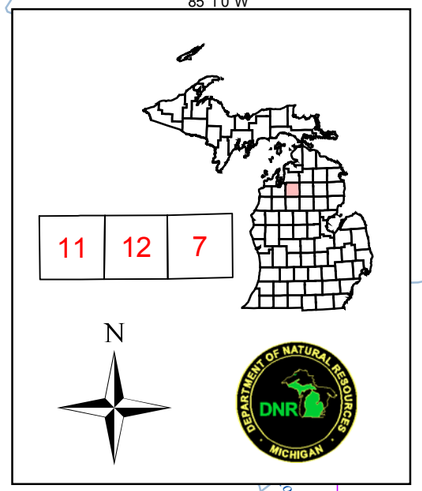
Approximately one mile of the Cranberry Lake Snowmobile Trail and Kalkaska Cycle Trail runs through section 7 of this compartment.

Fire Protection:

Fire protection for this area is assigned to the Kalkaska DNR Field Office. Fire suppression support is also available from the Grayling DNR Field Office as well as local Volunteer Fire Departments. Water access points in the compartment can be used to aid in wildfire suppression if needed. Road access in the area is fair with travel time to the compartment being acceptable from the Kalkaska DNR Office. (Comments made by Rod Rader, MDNR Fire Supervisor, Traverse City Field Office).

Additional Compartment Information:

Cover Type & Treatment Map



Compartment 123
T26N, R05W, Sec. 7
T26N, R06W, Sec. 11-12
County: Kalkaska
Unit: Traverse City
YOE: 2013
Acres: 1,814 GIS Calculated
Stand Examiner: Kelly Standerfer
Map Revised: 5/25/2011
Map Phase: Pre-Review

Legend

- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Fiber Optic Cable
- Powerline
- Intermittent Stream/Drain
- Stream
- Lakes and Rivers
- Berm
- ORV Routes
- ORV Trails
- Snowmobile Trails
- ORV Route
- ORV Trail
- Snowmobile Trail

Treatments

- Thinning (Crown, Low, Systematic)
- Shelter Wood (w/Reserves)
- Selection (Group, Single Tree)
- Seed Tree (w/Reserves)
- Clearcut (w/Reserves, Patch/Strip)

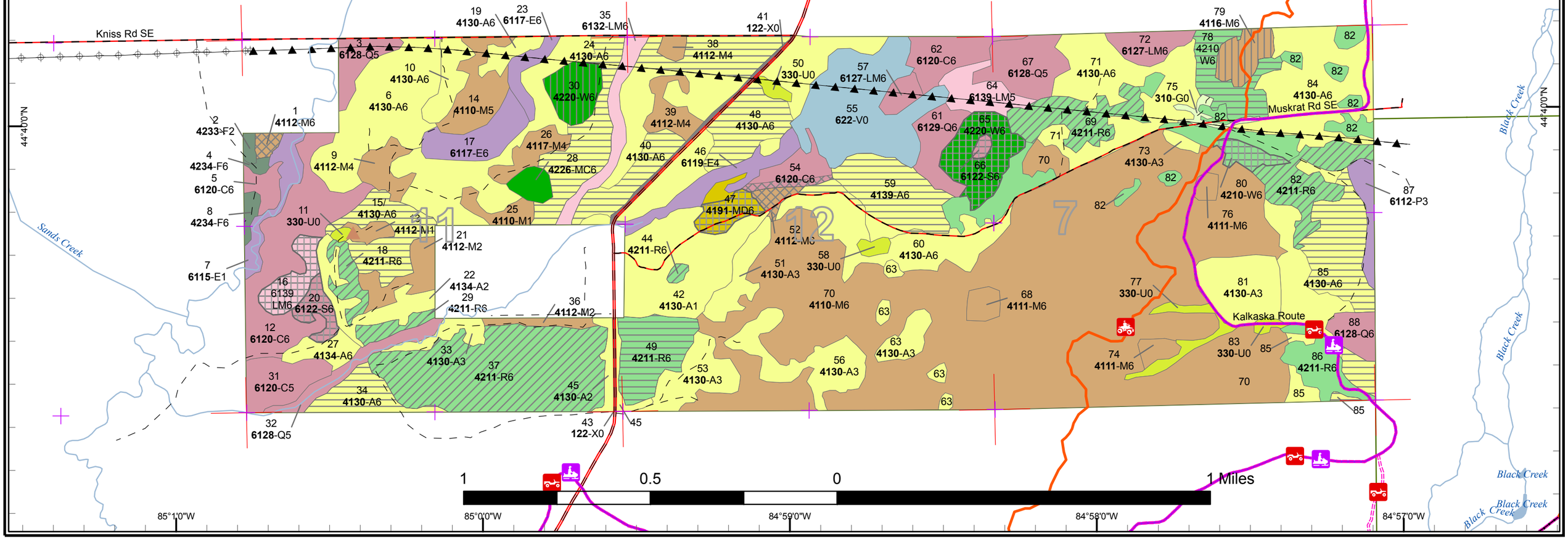
Forest Stands
Level 3

- 411 - Northern Hardwood
- 413 - Aspen Types
- 419 - Mixed Upland Deciduous
- 421 - Planted Pines
- 422 - Natural Pines
- 423 - Other Upland Conifers
- 611 - Lowland Deciduous Forest
- 612 - Lowland Coniferous Forest
- 613 - Lowland Mixed Forest

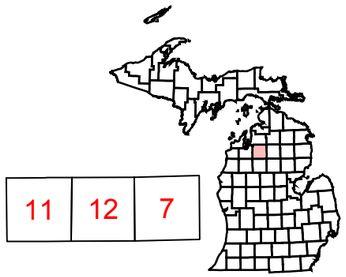
Non-Forest Stands
Level 3

- 122 - Road/Parking Lot
- 310 - Herbaceous Openland
- 330 - Low-Density Trees
- 622 - Lowland Shrub

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



Stand Boundary Map



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Map Phase: Pre-Review

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

Legend

- Miris Corners
- Paved Roads
- County Gravel Roads
- Poor Dirt Roads
- County Poor Dirt Roads
- Intermittent Stream/Drain
- Stream
- Fiber Optic Cable
- Powerline
- Berm
- ORV Routes
- ORV Trails
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- Stand Boundaries

Forest Stands
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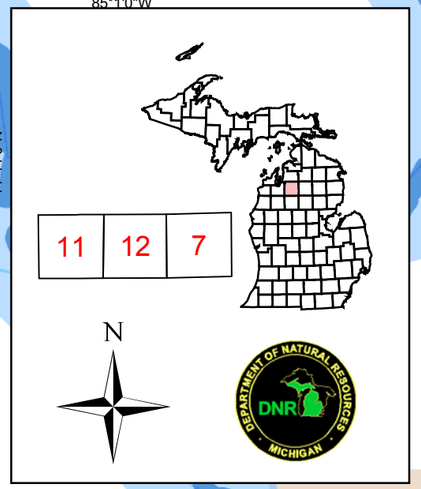
1 2 4233-F2 | 2 4112-M6 | 3 6128-Q5 | 4 4234-F6 | 5 6120-C6 | 6 4130-A6 | 7 6115-E1 | 8 4234-F6 | 9 4112-M4 | 10 4130-A6 | 11 330-U0 | 12 6120-C6 | 13 4112-M1 | 14 4110-M5 | 15 4130-A6 | 16 6139 LM6 | 17 6117-E6 | 18 4211-R6 | 19 4130-A6 | 20 6122-S6 | 21 4112-M2 | 22 4134-A2 | 23 6117-E6 | 24 4130-A5 | 25 4110-M1 | 26 4117-M4 | 27 4134-A6 | 28 4226-MC6 | 29 4211-R6 | 30 4220-W6 | 31 6120-C5 | 32 6128-Q5 | 33 4130-A3 | 34 4130-A6 | 35 6132-LM6 | 36 4112-M2 | 37 4211-R6 | 38 4112-M4 | 39 4112-M4 | 40 4130-A6 | 41 122-X0 | 42 4130-A1 | 43 122-X0 | 44 4211-R6 | 45 4130-A2 | 46 6119-E4 | 47 4191-MD6 | 48 4130-A6 | 49 4211-R6 | 50 330-U0 | 51 4130-A3 | 52 4112-M3 | 53 4130-A3 | 54 6120-C6 | 55 622-V0 | 56 4130-A3 | 57 6127-LM6 | 58 330-U0 | 59 4139-A6 | 60 4130-A6 | 61 6129-Q6 | 62 6120-C6 | 63 4130-A3 | 64 6139-LM6 | 65 4220-W6 | 66 6122-S6 | 67 6128-Q5 | 68 4111-M6 | 69 4211-R6 | 70 4110-M6 | 71 4130-A6 | 72 6127-LM6 | 73 4130-A3 | 74 4111-M6 | 75 310-G0 | 76 4111-M6 | 77 330-U0 | 78 4210-W6 | 79 4116-M6 | 80 4210-W6 | 81 4130-A3 | 82 | 83 330-U0 | 84 4130-A6 | 85 4130-A6 | 86 4211-R6 | 87 6112-P3 | 88 6128-Q6

Kniss Rd SE
Muskrat Rd SE
Kalkaska Trail
Kalkaska Route
Morrison Creek
Black Creek

1 0.5 0 1 Miles

85°1'0"W 85°0'0"W 84°59'0"W 84°58'0"W 84°57'0"W
44°4'10"N 44°4'0"N

Dedicated & Proposed Special Conservation Area Map



Legend

- Miris Corners

Special Conservation Areas

- Cold Water Streams
- Research, Development, and Military Lands
- Boat Access Sites

High Conservation Value Areas

- Natural Rivers Vegitative Buffer
- Natural Rivers Zoning District
- Stand Boundaries

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

Table 1 – Total Acres by Cover Type and Age Class

Traverse City Mgt. Unit **Compartment 123 Year of Entry 2013**

Kelly Standerfer : Examiner

Age Class

	Non-Forested	1-9	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	Total
Aspen	0	81	57	70	197	216	43	0	0	0	0	0	0	0	0	**664**
Bog	52	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**52**
Cedar	0	0	0	0	0	0	0	0	88	0	0	0	0	0	0	**88**
Herbaceous Openland	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**3**
Low-Density Trees	14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**14**
Lowland Aspen/Balsam Poplar	0	0	0	7	0	0	0	0	0	0	0	0	0	0	0	**7**
Lowland Conifers	0	0	0	0	0	0	19	46	0	9	0	0	0	0	0	**74**
Lowland Deciduous	0	0	0	0	0	0	14	0	33	0	0	0	0	0	0	**48**
Lowland Mixed Forest	0	0	0	0	0	0	0	22	12	0	0	0	0	0	0	**35**
Lowland Spruce/Fir	0	0	0	0	0	0	0	1	7	0	0	0	0	0	0	**8**
Mixed Upland Deciduous	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	**10**
Natural Mixed Pines	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	**5**
Northern Hardwood	0	0	0	10	60	0	11	4	445	0	0	0	0	0	0	**530**
Red Pine	0	0	0	0	0	162	46	0	0	0	0	0	0	0	0	**208**
Upland Spruce/Fir	0	0	2	0	0	0	0	0	4	0	0	0	0	0	0	**5**
Urban	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	**6**
White Pine	0	0	0	0	0	35	0	21	0	0	0	0	0	0	0	**56**
Total	**75**	**81**	**59**	**88**	**257**	**418**	**143**	**94**	**589**	**9**	**0**	**0**	**0**	**0**	**0**	**1814**

Table 2 – Proposed Treatment Summaries

Traverse City Mgt. Unit
Year of Entry 2013

Compartment 123
Total Compartment Acres: 1814

Acres by Treatment Type

Commercial Harvest - 429	Site Prep - 0	Tree Planting - 0	Prescribed Burn - 0	Other - 0
Habitat Cut - 13	Opening Maintenance - 0	Tree Seeding - 0	Pesticide - 0	

Cover Type by Harvest Method

	Clearcut	Selection	Seed Tree	Shelterwood	Thinning	Other - Specify	Total Acres
Aspen	181	0	0	0	0	0	**181**
Cedar	0	3	0	0	0	0	**3**
Lowland Mixed Forest	0	0	10	0	0	0	**10**
Lowland Spruce/Fir	0	0	8	0	0	0	**8**
Mixed Upland Deciduous	0	0	8	0	0	0	**8**
Northern Hardwood	6	6	0	11	0	0	**23**
Red Pine	23	0	0	0	132	0	**155**
White Pine	17	0	26	12	0	0	**56**
Total	**227**	**9**	**53**	**23**	**132**	**0**	**443**

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
1	61123001-Cut	2.4	4112 - Maple, Beech, Cherry Association	High Density Pole	71	Harvest	Single Tree Selection	4113 - R.Maple, Conifer	Cmpt. Review Proposal

Prescription Specs: small stand of pulpy red maple and cherry. will make a nice firewood sale or could include in a larger sale with stands to the east. mark down to ~50-70 BA

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
15	61123015-Cut	21.9	4130 - Aspen	High Density Pole	40	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Specs: South end is real nice, north end is in rougher shape. Cut stands 15 and 17 together to try and expand aspen into stand 15. Cut all trees except Fb and Fs to increase stem density. Leave ~3% retention on west end of stand 17 @ north edge of stand 13. Should be lot markers along east edge but may need survey.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
16	61123016-Cut	10.3	6139 - Mixed Lowland Forest	High Density Pole	65	Harvest	Seed Tree	6139 - Mixed Lowland Forest	Cmpt. Review Proposal

Prescription Specs: Tried to cut last YOE but this portion of sale was left uncut. Try it again this YOE, possibly limit equipment to 6 or 8 wheeled or tracked. Looks doable if most of the spruce and fir is harvested as well so the tops will be available to run equipment on. Mark or spec leave a mix bag of seed trees, clumpy to scattered, also leave a fringe of spruce on west edge for seed and retention.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
18	61123018-Cut	6.9	42110 - Planted Red Pine	High Density Pole	45	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: spec or mark ~ 1/4 of the volume for removal while we are cutting in the area.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
20	61123020-Cut	6.6	6122 - Black Spruce	High Density Pole	79	Harvest	Seed Tree with Reserves	6122 - Black Spruce	Cmpt. Review Proposal

Prescription Specs: Nice Black spruce stand. Seed tree cut. Save all cedar and mark a mix bag of species for seed/retention and diversity. Leave strip of price along west edge to help seed in. Retention can be under the 3% due to the small size.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
24	61123024_small-Cut	26.9	4130 - Aspen	High Density Pole	45	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Specs: Save all oak and some or all conifer. Cut the East 1/2 This YOE along with a seed tree in stand 32. Then cut west 1/2 next YOE with stand 29 as it isnt as far along as the east 1/2. Cut most of the cherry as there is alot in areas.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
29	61123029-Cut	4.9	42111 - Planted Red Pine, Mixed Deciduous	High Density Pole	45	Harvest	Crown Thinning	42111 - Planted Red Pine, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: more open than the rest of the red pine but could do a light thin while we are in the area. target removal of ~1/4 of the volume by specification or individual tree marking.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
30	61123030-Cut	12.3	42200 - Natural White Pine	High Density Pole	49	Harvest	Shelterwood	42200 - Natural White Pine	Cmpt. Review Proposal

Prescription Specs: some is open grown weavled white pine and some is pretty nice. green tree leave 20-50 BA of the nicer pine and a few maple and cut the rest as most of the white pine has poor tops. shoudl regen to a mix of A, M & Wp. Save most or all of the supercanopy Wp for diversity and seed.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
34	61123034-Cut	13.4	4130 - Aspen	High Density Pole	57	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Specs: Cut all A, M and cherry to increase stem density. Could save some cherry for retention. Save all or most of the Fb and Fs for diversity. Save ~ 3% retention on west edge along the Q type and stream.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
37	61123037-Cut	76.5	42110 - Planted Red Pine	High Density Pole	45	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Row thinned last YOE. Some is ready to be thinned and some could wait. Cut every 4th or 3rd tree depending on total BA. or mark about 1/4 to 1/3 of the volume for removal deppending on density.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
40	61123040_small_1-Cut	14.5	4130 - Aspen	High Density Pole	45	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Specs: Stands 41 and 49 are the same age. Cut north of the fiber optic line, ~1/3 of the stand as well as the south portion of this stand (~1/3) to break up the age class. Some is smaller diameter and some is ready to go. Remaining portion should hold 10 yrs ok. Position cuts so that they arent directly across the road from each other. Cut mos tof the cherry out and save some or all of the conifers

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
40	61123040_small-Cut	19.7	4130 - Aspen	High Density Pole	45	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Specs: Stands 41 and 49 are the same age. Cut north of the fiber optic line, ~1/3 of the stand as well as the south portion of this stand (~1/3) to break up the age class. Some is smaller diameter and some is ready to go. Remaining portion should hold 10 yrs ok. Position cuts so that they arent directly across the road from each other. Cut mos tof the cherry out and save some or all of the conifers

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
44	61123044-Cut	1.4	42110 - Planted Red Pine	High Density Pole	46	Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: small stand that hasnt been row thinned yet. probably mark the stand to take out the poor quality stems. mark to push it to more of a natural feeling stand.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
47	61123047-Cut	7.8	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	55	Harvest	Seed Tree with Reserves	4191 - Mixed Upland Deciduous with Conifer	Cmpt. Review Proposal

Prescription Specs: North end has smaller LO area to be painted out of sale, LO buffer @ north for ~3% retention. Cut all A, M & cherry. OK to mark some white pine to cut or to mark the nicer white pine to leave, most is poor quality.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
48	61123048-Cut	20.5	4130 - Aspen	High Density Pole	45	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Specs: Stands 41 and 49 are the same age. Cut the middle ~1/3 of this stand. Some is smaller diameter and some is ready to go. Remaining portion should hold 10 yrs ok. Position cuts so that they aren't directly across the road from each other. Cut most of the cherry and save some or all of the conifers and oak. Next YOE look to treat the rest of the stand as well as stand 36 in the compartment to the north (120)

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
49	61123049-Cut	22.8	42111 - Planted Red Pine, Mixed Deciduous	High Density Pole	45	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Red pine with alot of aspen and maple mixed in, could probably clear cut and get it to regenerate fully to aspen however some pine component should be left for stand diversity. Or could cut all aspen and maple as the aspen is getting old and thin ~ 1/3 of the red pine, then do a final harvest in 10-20 years. If clearcut This YOE leave out three pockets at the corners to leave 3-10% retention.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
52	61123052-Cut	3.6	4112 - Maple, Beech, Cherry Association	High Density Pole	65	Harvest	Single Tree Selection	4112 - Maple, Beech, Cherry Association	Cmpt. Review Proposal

Prescription Specs: pretty nice soft maple stand. Worth marking and maintaining in maple cover due to amount of aspen surrounding the stand. target range of 50-90 BA. OK to push north edge into stand to the north to cut out some of the nicer soft maple.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
54	61123054_small-Cut	2.8	6120 - Lowland Cedar	High Density Pole	75	Harvest	Single Tree Selection	6120 - Lowland Cedar	Cmpt. Review Proposal

Prescription Specs: Smaller diameter as you go north due to wetness. South edge has some larger diameter soft maple that can be cut with adjacent stand to increase browse and habitat potential in the stand.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
60	61123060_small-Cut2	30.2	4130 - Aspen	High Density Pole	37	Harvest	Clearcut with Reserves	4139 - Aspen, Mixed Deciduous	Cmpt. Review Proposal

Prescription Specs: Nice stand. Cut area north of Road for age class diversity and habitat mgmt. Save all Pine and OK to green tree leave some other species for diversity. NE end has more soft maple mix with some nicer quality stems, OK to green tree mark this area heavier around the nicer quality stems for sawlog production. . Green trees and buffer portion of stand 56 will count towards ~ 3% retention.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
65	61123065-Cut	20.8	42200 - Natural White Pine	High Density Pole	62	Harvest	Seed Tree with Reserves	42200 - Natural White Pine	Cmpt. Review Proposal

Prescription Specs: West edge has more spruce mixed in. Bowl of upland around Spruce depression. Green tree leave a mix bag of seed trees. Save most of the super canopy white pine. coudl probably be cut by specification or by green tree marking. Target BA of 10-50 BA post harvest but will likely vary quite a bit due to starting density and quality.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
66	61123066-Cut	1.5	6122 - Black Spruce	High Density Pole	61	Harvest	Seed Tree	6122 - Black Spruce	Cmpt. Review Proposal

Prescription Specs: small depression of mainly spruce. should be abel to do an overstory removal as there is quite a bit of advanced regen. Green tree leave a mix bag of species for seed in the areas without advanced regen, or could possibly do this by timber sale specification.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
69	61123069-Cut	20.4	42110 - Planted Red Pine	High Density Pole	45	Harvest	Crown Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Some of the stand was thinned last YOE. Mid section was not and it is ready to be thinned again. Likely needs to be marked to remove poor quality trees as there is a significant # of stems with crooks or Porky damaged tops.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
78	61123078-Cut	17.1	42101 - Planted White Pine, Mixed Deciduous	High Density Pole	45	Harvest	Clearcut with Reserves	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal

Prescription Specs: Poor quality white pine mixed with aspen and maple. Wp is in pretty bad shape from weevil. green tree leave some nice white pine and maple and red pine and cut the rest. Save a pocket of the stand around the vernal pond @ north end as well as the scattered seed trees for ~3% retention. Also buffer homestead slightly @ south end of the stand. Treatment may dip slightly into compartment to the north to utilize the aging aspen resource.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
79	61123079-Cut	10.5	4116 - Mixed N. Hardwood - Aspen	High Density Pole	55	Harvest	Shelterwood	4116 - Mixed N. Hardwood - Aspen	Cmpt. Review Proposal

Prescription Specs: poor quality mixed hardwood with quite a bit of aspen mixed in, aspen is thicker on the south end. Cut all aspen out of stand as it is mature. save all conifer for diversity. Mark some mixed hardwood to cut. Target BA of 40-70. Ok to leave less residual BA in heavy aspen areas.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
80	61123080-Cut	5.6	42101 - Planted White Pine, Mixed Deciduous	High Density Pole	45	Harvest	Seed Tree	4136 - Aspen, Mixed Conifer	Cmpt. Review Proposal

Prescription Specs: South edge more A6ish. Poor quality planted white pine with lots of weavil damage. Some aspen is smaller diameter but some is mature. Green tree leave some of the nicer white pine and a few maple and cut the rest. Seed tree harvest. Mainly chip wood simular to stand 79. M2-M3 understory in areas.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
82	61123082-Cut	21.8	42110 - Planted Red Pine	High Density Pole	51	Harvest	Systematic Thinning	42110 - Planted Red Pine	Cmpt. Review Proposal

Prescription Specs: Portion of stand was left untreated last YOE. Cut all aspen and maple and row thin or mark the portion that was not cut last YOE. some rows are spuratic so may need to be marked but overall it looks doable for a row thin. Treat portino that goes into compartment to the east as well (~4 acres). thinned areas arent yet ready for another thin. See AOI layer.

Other Comments:

Next Steps:

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
85	61123085-Cut	33.8	4130 - Aspen	High Density Pole	39	Harvest	Clearcut with Reserves	4130 - Aspen	Cmpt. Review Proposal

Prescription Specs: Last YOE said stand originated in 1985, looks to be two aged. Some of this stand is very nice and some is smaller diameter yet. NE end is the larger diameter and mature aspen. Treat some this YOE to break up the age class of the area. Cut the NE portion and the portion south of stand 89 and the small sliver @ the south edge of stand 87 as well for some nice habitat improvement cuts and to diversify the ago class of the area. Treatment will continue into adjacent compartment but only for 1 or 2

Other Comments: acres. Save some or all conifer and oak. retention will be the uncut portion of the stand so it is OK if retention is less than the 3-10% Use standard dead and down grouse spec.

Next Steps:

Total Treatment Acreage Proposed: 436.9

Table 4 -- Treatments Prescribed with a Limiting Factor

Stand	Treatment Name	Acres	Stage1 CoverType	Size Density	Stand Age	Treatment Type	Treatment Method	Cover Type Objective	Approval Status
			#Error						

Prescription Specs:

Other Comment:

Next Steps:

Limiting Factor and No Treatment Reason

Total Treatment Acreage Proposed: **0**

Data updated yesterday after 6:00 PM

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
1	4112 - Maple, Beech, Cherry Association	High Density Pole	2.4	71	141-170	
2	42330 - Upland Fir	Medium Density	1.6	15		
3	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Pole	9.5	83		
4	42340 - Upland Spruce/Fir	High Density Pole	1.3	79	81-110	
5	6120 - Lowland Cedar	High Density Pole	5.6	79	111-140	
6	4130 - Aspen	High Density Pole	46.9	26	51-80	
7	6115 - Lowland Ash	Low Density Sapling	10.7	75		
8	42340 - Upland Spruce/Fir	High Density Pole	2.5	79	81-110	
9	4112 - Maple, Beech, Cherry Association	Low Density Pole	8.7	35		Low density cherry and maple. Wildlife may want to keep it as an opening. If so coudl comerchially cut the maple and cherry out of it.
10	4130 - Aspen	High Density Pole	9.8	40	81-110	
12	6120 - Lowland Cedar	High Density Pole	43.1	79		
13	4112 - Maple, Beech, Cherry Association	Low Density Sapling	3.3	35	1-50	
14	4110 - Sugar Maple Association	Medium Density Pole	17.0	35	1-50	
15	4130 - Aspen	High Density Pole	21.9	40	111-140	South end is real nice, north end is in rougher shape. Cut stands 15 and 17 together to try and expand aspen into stand 15. Cut all trees except Fb and Fs to increase stem density. Leave ~3% retention on west end of stand 17 @ north edge of stand 13. Should be lot markers along east edge but may need survey.
16	6139 - Mixed Lowland Forest	High Density Pole	10.3	65	51-80	Tried to cut last YOE but this portion of sale was left uncut. Try it again this YOE, possibly limit equipment to 6 or 8 wheeled or tracked. Looks doable if most of the spruce and fir is harvested as well so the tops will be available to run equipment on. Mark or spec leave a mix bag of seed trees, clumpy to scattered, also leave a fringe of spruce on west edge for seed and retention.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
17	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	16.0	79	111-140	
18	42110 - Planted Red Pine	High Density Pole	6.9	45	141-170	spec or mark ~ 1/4 of the volume for removal while we are cutting in the area.
19	4130 - Aspen	High Density Pole	5.3	40	81-110	
20	6122 - Black Spruce	High Density Pole	6.6	79	111-140	Nice Black spruce stand. Seed tree cut. Save all cedar and mark a mix bag of species for seed/retention and diversity. Leave strip of price along west edge to help seed in. Retention can be under the 3% due to the small size.
21	4112 - Maple, Beech, Cherry Association	Medium Density	10.9	35		Young stump sprouted maple with mixed in cherry, M4-M5ish and some is more ulpand brush. SE end has a pine pocket. Hold ~20 yrs and re-evaluate.
22	4134 - Aspen, Spruce/Fir	Medium Density	14.8	7		A3 mixed with residual Fb and Fs. East finger is more maple stump sprouts. overall very good regen from timber sale.
23	6117 - Lowland Deciduous, Mixed Coniferous	High Density Pole	6.5	79	51-80	
24	4130 - Aspen	High Density Pole	67.2	45	111-140	
25	4110 - Sugar Maple Association	Low Density Sapling	6.2	25	1-50	
26	4117 - Mixed N. Hardwood - Pine	Low Density Pole	8.7	30		
27	4134 - Aspen, Spruce/Fir	High Density Pole	7.4	37	1-50	small pocket of aspen mixed with Fb Fs maple and ash. A5 converting to A6. Should make a nice cut in 10-20 yrs.
28	42260 - Natural Pine, Mixed Deciduous	High Density Pole	5.3	49	81-110	
29	42111 - Planted Red Pine, Mixed Deciduous	High Density Pole	4.9	45		more open than the rest of the red pine but could do a light thin while we are in the area. target removal of ~1/4 of the volume by specification or individual tree marking.
30	42200 - Natural White Pine	High Density Pole	12.3	49	81-110	
31	6120 - Lowland Cedar	Medium Density Pole	15.0	79	51-80	Wet small diameter Mixed Q.
32	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Pole	10.9	67		mixed Q, M and A along creek. Save for good to buffer stream. SW end more Q type, Mid and Northeast is maple and aspen mix.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
33	4130 - Aspen	High Density Sapling	6.4	16		Nice A3
34	4130 - Aspen	High Density Pole	13.4	57		Cut all A, M and cherry to increase stem density. Could save some cherry for retention. Save all or most of the Fb and Fs for diversity. Save ~ 3% retention on west edge along the Q type and stream.
35	6132 - Mixed Lowland Forest with Cedar	High Density Pole	12.3	79	51-80	
36	4112 - Maple, Beech, Cherry Association	Medium Density	4.1	25	1-50	Scattered mix of maple and cherry clump. Poor stocking, parts are Go and parst more M4/M5 mixed with cherry.
37	42110 - Planted Red Pine	High Density Pole	76.5	45	141-170	Row thinned last YOE. Some is ready to be thinned and some could wait. Cut every 4th or 3rd tree depending on total BA. or mark about 1/4 to 1/3 of the volume for removal deppending on density.
38	4112 - Maple, Beech, Cherry Association	Low Density Pole	2.7	35		scattered maple and cherry. Cut merchantable trees out with adjacent sale. soem will stay open and some will likely fill in with aspen and cherry sprouts.
39	4112 - Maple, Beech, Cherry Association	Low Density Pole	8.9	35		scattered maple, cherry and fir. could cut out merchantable trees when adjacent aspen is cut or leave as is to fill in naturally.
40	4130 - Aspen	High Density Pole	59.1	45	81-110	Stands 41 and 49 are the same age. Cut north of the fiber optic line, ~1/3 of the stand as well as the south portion of this stand (~1/3) to break up the age class. Some is smaller diameter and some is ready to go. Remaining portion should hold 10 yrs ok. Position cuts so that they arent directly across the road from each other. Cut mos tof the cherry out and save some or all of the conifers
42	4130 - Aspen	Low Density Sapling	45.0	7		nice A3 mixed with maple, fir. South west end has scattered residual trees.
44	42110 - Planted Red Pine	High Density Pole	1.4	46	200+	
45	4130 - Aspen	Medium Density	7.0	7		nice A3 mixed with some residual balsam and pine.
46	6119 - Mixed Lowland Deciduous Forest	Low Density Pole	14.4	55		LO mixed with small ash and maple. Very wet drain area.
47	4191 - Mixed Upland Deciduous with Conifer	High Density Pole	10.1	55	81-110	

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
48	4130 - Aspen	High Density Pole	52.5	45	81-110	Stands 41 and 49 are the same age. Cut the middle ~1/3 of this stand. Some is smaller diameter and some is ready to go. Remaining portion should hold 10 yrs ok. Position cuts so that they aren't directly across the road from each other. Cut most of the cherry and save some or all of the conifers and oak. Next YOE look to treat the rest of the stand as well as stand 36 in the compartment to the north (120)
49	42111 - Planted Red Pine, Mixed Deciduous	High Density Pole	22.8	45	141-170	
51	4130 - Aspen	High Density Sapling	11.1	16		
52	4112 - Maple, Beech, Cherry Association	High Density Pole	3.6	65	81-110	
53	4130 - Aspen	High Density Sapling	17.1	16		nice A3. aspen clumps cut out of the larger maple stand for habitat improvement and diversity
54	6120 - Lowland Cedar	High Density Pole	10.2	75	141-170	
56	4130 - Aspen	High Density Sapling	22.8	16		same as stand 54
57	6127 - Lowland Pine	High Density Pole	5.0	65	141-170	
59	4139 - Aspen, Mixed Deciduous	High Density Pole	29.5	55	111-140	
60	4130 - Aspen	High Density Pole	37.3	37	81-110	
61	6129 - Mixed Coniferous Lowland Forest	High Density Pole	12.7	62	141-170	
62	6120 - Lowland Cedar	High Density Pole	14.2	75	111-140	
63	4130 - Aspen	High Density Sapling	11.7	6		A3 pockets. clones that were cut out of the big maple stand.
64	6139 - Mixed Lowland Forest	Medium Density Pole	12.1	65	51-80	
65	42200 - Natural White Pine	High Density Pole	20.8	62	111-140	
66	6122 - Black Spruce	High Density Pole	1.5	61	81-110	small depression of mainly spruce. should be abel to do an overstory removal as there is quite a bit of advanced regen. Green tree leave a mix bag of species for seed in the areas without advanced regen, or could possibly do this by timber sale specification.

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
67	6128 - Lowland Coniferous, Mixed Deciduous	Medium Density Pole	18.8	55	51-80	
68	4111 - S.Maple, Hard Mast Association	High Density Pole	4.6	75	141-170	
69	42110 - Planted Red Pine	High Density Pole	35.6	45	141-170	
70	4110 - Sugar Maple Association	High Density Pole	431.9	75	81-110	
71	4130 - Aspen	High Density Pole	45.7	36		Nice A3 converting to A6, in the self thinning phase. Should hold good 10-20 as needed.
72	6127 - Lowland Pine	High Density Pole	9.4	65	81-110	NE and NW end smaller diameter Spruce, Several small VO inclusions. Middle part is denser white pine. will hold good 10-20 yrs,
73	4130 - Aspen	High Density Sapling	2.0	8		
74	4111 - S.Maple, Hard Mast Association	High Density Pole	3.8	75	141-170	
76	4111 - S.Maple, Hard Mast Association	High Density Pole	2.7	75	141-170	
78	42101 - Planted White Pine, Mixed Deciduous	High Density Pole	17.1	45	141-170	
79	4116 - Mixed N. Hardwood - Aspen	High Density Pole	10.5	55	81-110	
80	42101 - Planted White Pine, Mixed Deciduous	High Density Pole	5.6	45	111-140	
81	4130 - Aspen	High Density Sapling	22.9	27		A3 converting to nice A5/A6.
82	42110 - Planted Red Pine	High Density Pole	45.9	51	141-170	
84	4130 - Aspen	High Density Pole	46.2	37	51-80	
85	4130 - Aspen	High Density Pole	60.6	39	111-140	
86	42110 - Planted Red Pine	High Density Pole	14.2	45	111-140	
87	6112 - Lowland Aspen	High Density Sapling	7.4	22		

Stand	Level 4 Cover Type	Size Density	Acres	Stand Age	BA Range	General Comments:
88	6128 - Lowland Coniferous, Mixed Deciduous	High Density Pole	8.0	65	51-80	

Stand	Cover Type	Acres	Managed Site	Management Priority (Objective)	General Comments:
11	3301 - Low Density Deciduous Tree	1.1	No	Unspecified	
41	122 - Road/Parking Lot	4.7	N\A	Unspecified	
43	122 - Road/Parking Lot	1.1	N\A	Unspecified	
50	3301 - Low Density Deciduous Tree	2.2	No	Unspecified	
55	6225 - Bog	52.1	No	Unspecified	
58	3301 - Low Density Deciduous Tree	2.2	No	Unspecified	
75	310 - Herbaceous Openland	3.5	No	Unspecified	
77	330 - Low-Density Trees	7.0	No	Unspecified	
83	330 - Low-Density Trees	1.6	No	Unspecified	

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

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	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.
SCA	Research and Military Areas	These areas provide facilities and lands specifically dedicated for research, or other purposes. They include the 5,847 acre Forest Fire Experiment Station, the 12,000 acre Houghton Lake Wildlife Research Area, the Beaver Islands Archipelago Wildlife Research Area (that includes most of Garden Island, all of High and Hog Islands, all state owned land on Beaver, South Fox and North Fox Islands), the Cusino Wildlife Research Area, the 3,000 acre Hunt Creek Fisheries Research Station, the 125 acre Wyman Nursery, and over 144,000 acres of Military Lands.