Gwinn Forest Management Unit
Compartment Review Presentation
Compartment #020 Entry Year: 2012
Compartment Acreage: 1,968 County: Marquette

Revision Date: July 15, 2010

Stand Examiner: Theresa Sysol

Legal Description: T45N R24W Section(s) 28,32
T44N R24W Section(s) 4,9,16,17

Identified Planning Goals ('Management Area' or 'RMU',if applicable): Sawmill Creek Complex

Management Goals: To maintain forest health, diversity and sustainability while considering wildlife, fisheries, recreational and environmental needs and concerns.

Soil and Topography: Nearly ¾ of compartment is comprised of Carbondale-Tawas and Dawson-Greenwood lowland mucks, with slightly higher grounds mainly AuGres-Deford, Charlevoix, Shoepac-Trenary, Paquin-Finch and Croswell sands and loams.

Ownership Patterns, Development, and Land Use in and Around the Compartment: Some small private landowners in the north and south part of the compartment. Large industrial ownerships in the center of the compartment.

Unique, Natural Features:
Potential for northern goshawk, red-shouldered hawk, spruce grouse, and black-backed woodpecker. Potential for eagle, osprey, and great blue heron rookery. Potential for moose and wolf. Potential for frigga fritillary, freija fritillary, and red-disked alpine in bogs. Potential for wood turtle. Potential for auricled tway-blade, veiny meadow rue, western dock, Farwell's water-milfoil, alternate-leaved water-milfoil, and linear-leaved gentian along riparian areas. Potential for calypso orchid, rayless mountain ragwort, and ram's head lady's-slipper in conifer swamps.

Archeological, Historical, and Cultural Features: None identified with HAL

Special Management Designations or Considerations: Cyr swamp, one of the larger swamps in Michigan, covers part of this compartment.

Watershed and Fisheries Considerations: Sawmill Creek headwaters area

Wildlife Habitat Considerations: Cyr Swamp Management Area and proposed Biological Stewardship Area (Sawmill Creek BSA). For all SCA, biodiversity maintenance stands-maintain as movement corridors for wildlife species and the protection of riparian areas. Promote biological legacies such as old forest characteristics in the form of snags, coarse woody debris, and intact nutrient cycles. Maintain or increase biodiversity in northern hardwood stands through retention of associate species. In stands scheduled to treat this entry period, maintain conifer cover in transitional zones as well as wildlife movement corridors.

Mineral Resource and Development Concerns and/or Restrictions: Surface sediments consist of peat and muck and glacial outwash sand and gravel and postglacial alluvium. The glacial drift thickness varies between 10 and 200 feet. The Cambrian Trempealeau and Munising Formations and the Precambrian Jacobsville Sandstone subcrop below the glacial drift. The Jacobsville has been used as a building stone in the past. There are no gravel pits in the area, and potential appears to be limited. Abandoned iron mines are located one mile to the west, but this compartment has never been leased. There is no economic oil and gas production in the UP.

Vehicle Access: Poor except for the north area along M-35. Access has been available through some of the private lands in the south part of this compartment.

Survey Needs: None at this time.

Recreational Facilities and Opportunities: Some hunting areas in the south mostly controlled by the private land access. Opportunities for non-motorized "communing with nature" abound in this compartment for those people with good waterproof boots and a high-insect tolerance.

Fire Protection: Extremely difficult to access area were there to be a naturally occurring wildfire. Plans should be established to deal with suppression activities in this rather sensitive area.

Additional Compartment Information:

- **The following reports from the Inventory are attached:**
  - **Total Acres by Cover Type and Age Class**
  - **Proposed Treatment Summary**
  - **Proposed Treatments – No Limiting Factors**
  - **Proposed Treatments – With Limiting Factors**
  - **Stand Details (Forested and Nonforested)**
  - **Dedicated and Proposed Special Conservation Areas**

- **The following information is displayed, where pertinent, on the attached compartment maps:**
  - **Base feature information, stand boundaries, cover types, and numbers**
  - **Proposed treatments**
  - **Details on the road access system**

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Michigan Department of Natural Resources - Operations Inventory System
Individual Compartment Report

ESCANABA RIVER STATE FOREST | GWINN FOREST MGT UNIT | MARQUETTE COUNTY | COMPARTMENT: **20**

Table 3

(acres shown in boxes)

STAND AGE CLASS

COVER TYPE	Not Coded	0-9	10-19	20-29	30-39	40-49	50-59	60-69	70-79	80-89	90-99	100-109	110-119	120-129	130-139	140-149	150-159	All Aged	Total
Aspen			67							8									75
Black Spruce									4	9	206	7							226
Cedar										134	307					495			936
Grass	4																		4
Lowlnd Brush	92											16							108
Mx Swmp Cnfr					5				6		95	190			108				404
Non Stocked	8																		8
Spruce Fir								19		20									39
Upland Hdwds																		143	143
White Pine				6						19									25
Total	104		67	6	5			19	10	190	608	213			108	495		143	1968

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Michigan Department of Natural Resources - Operations Inventory System
Individual Compartment Report

ESCANABA RIVER STATE FOREST | GWINN FOREST MGT UNIT | MARQUETTE COUNTY | COMPARTMENT: **20**

Table 3A

(acres shown in boxes)

MANAGEMENT OBJECTIVE TYPE

COVER TYPE	A	S	V	C	G	H	J	I	L	P	N	Q	X	O	B	R	K	Y	F	E	T	D	U	M	Z	W	Total
A Aspen	67					8																					75
S Black Spruce		226																									226
C Cedar				936																							936
G Grass					4																						4
L Lowlnd Brush									108																		108
Q Mx Swmp Cnfr												404															404
X Non Stocked													8														8
F Spruce Fir																			20							19	39
M Upland Hdwds																								143			143
W White Pine																										25	25
Total	67	226		936	4	8			108			404	8						20					143		44	1968

ESCANABA RIVER STATE FOREST GWINN FOREST MGT UNIT MARQUETTE COUNTY COMPARTMENT: **20**

Table 10 - COMPARTMENT VOLUME SUMMARY - ALL STANDS

COMPARTMENT SUMMARY

TOTAL VOLUME		CUT VOLUME	
Hardwood	2999 Cds	Hardwood	525 Cds
Hardwood	218 Mbf	Hardwood	53 Mbf
Softwood	15087 Cds	Softwood	213 Cds
Softwood	166 Mbf	Sum CutVol	844 Cds
Sum TotVol	18854 Cds		

Total Cmpt Acres

1968

Acres Proposed For Cut.....	116
Acres Meeting Silv Criteria.....	662
Acres Not Meeting Silv Criteria.....	1306
Acres Unable to Determine Silv Criteria For.....	

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
1	**F6**	14	59	55	WHITE PINE	TWO AGED	SEED TREE	2	NATURAL REGENERATION	

TREATMENT LIMITING FACTORS: Adjacent landowner denies access
Road needed (resources not presently available)

comnts Fmd **:** W7F4, SELECT CUT#18-78 -1979. 2000: Mixed size with W. pine scattered over smaller spruce and fir etc. possible to cut trees other than W. pine probably next time. 2010: Large WP, WS within - a few PB noted. Patches of M,A regeneration (2" dbh) interspersed from 70's cut, also F/S regeneration all heights and sizes - no WP regen noted. Some of the JP within stand is dead/dying already. Blowdown timber and WP snags throughout. Stand could be treated, with access from the private to the north (school forest lands) most likey. Leave all WP and mark a few large W. spruce to leave; leave all cherry and most PB. Some red maple, tamarack to cut. A small G stand from last entry is now incorporated into this stand, which contains some wolfy JP (G was treated under FTP W32-227 Sp, 1982 with Tordon) and could be re-opened with harvest. There was a timber trespass along the east boundary several years ago - survey corners are now in place. Possible MO long term would be for WP, but mixed species of A,F/S, J, B are acceptable - stand is variable. Scarify to encourage natural seedbed and/or underplant WP when harvest occurs to encourage long term goals, if desired. Treat adjacent grass opening (stand 402) at this time also. 2002: stand 1.

Wld **:**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
4	**F6**	5	66	45	WHITE PINE	MATURE	FINAL HARVEST	3	PLANTING	

TREATMENT LIMITING FACTORS: Influence zones
Inadequate volume due to small acreage

comnts Fmd **:** 2000: strip between RR tracks and M-35. Same as stand 1. 2010: Stand is not very feasible to cut, due to hwy and RR influences - permit will be needed from M-DOT for temporary road access. Some dead A, cherry within. Small F3/S3 (20 - 30' hts) along Hwy ROW to leave, as well as smaller PB and all WP. Mark a few large W. spruce to leave. Leave juneberry. Possible long term MO of WP - hand plant WP seedlings, where possible. Either negotiate cut, or treat with stand 1 when harvested. 2002: stand 10

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
32	**M9**	30	0	65	NORTHERN HARDWOOD	UNEVENAGED	SELECTION	3		Prescribed for FDF treatment

TREATMENT LIMITING FACTORS: Regeneration technology inadequate

comnts Fmd **:** 2000: FDFcut 1995. Some areas good regen other areas not-rubus. Shortage of good poles but well stocked sawtimber. 2010: Same comments as last entry. Stand was cut under t. sale #006-92 "Jacks' Shack Block" in the fall, 1993 (units 4,5). Regeneration gaps still remain, with little to no new M regeneration (only 3' hts where noted) - deer browse pressure. Earlier cut(s)* resulted in maple saplings anywhere from 16-20' hts and 1-2" dbh average now, which look good. (* no record of cut - from elm dying out of stand, per old inventory notes maybe?) Old skid roadways have aspen saplings mainly (2-3" dbh and 25' hts). Stand could use treatment to open up around M saplings, but only if successful new regeneration can be established with selection cut - very light marking. Quite a few snags and wildlife trees present. Sawlog trees with large tops, forked. Soils are Shoepac-Trenary. 2002: stand 32

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
43	**M6**	6	0	58	NORTHERN HARDWOOD	UNEVENAGED	SELECTION	3		

TREATMENT LIMITING FACTORS: Inadequate volume due to low stocking/small diameter/etc.
Regeneration technology inadequate

comnts Fmd **:** T. sale # 034-90 - cut Fall, 1991. Stand also includes strip of P3 (2-4" dbh, 30'hts - some trefoil noted in understory here) which was cut at the same time and will be left. Manage with stand 32 and 47 for marketability and access purposes when cut, or, possibly negotiate when sale to the south is thinned ("Parker End Sale" #012-08). Not much M regeneration; what was noted was heavily browsed/dead. May not be able to regenerate well. Some large diameter, pulp-quality red maple within, as well as YB and basswood. Maintain stand diversity, when marked. Soils are Shoepac-Trenary. 2002: stand 50

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
45	**S6**	7	101	35	BLACK SPRUCE-SWAMP	MATURE	FINAL HARVEST	2		

TREATMENT LIMITING FACTORS: Too wet
Inadequate volume due to low stocking/small diameter/etc.

comnts Fmd **:** Old Comments: "NEARLY PURE STAND OF B SPRUCE POLES & SAPS-LOW,WET-CHECK NEXT PERIOD" 2010: Wet stand - sphagnum, lab tea, iris ground cover. Some small PB, RM regen and small openings with S regeneration (1-3' hts) established. Mixed softwood includes: C, F. Adjacent private harvest came back to S3/T2 ~ 16-20' hts. Harvest only if adjacent stand is treated, due to merchantability (dry summer or winter cut). Soils are Carbondale-Tawas. 2002: stand 45

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
47	**M6**	22	0	59	NORTHERN HARDWOOD	UNEVENAGED	SELECTION	3		Prescribed for FDF treatment

TREATMENT LIMITING FACTORS: Regeneration technology inadequate

comnts Fmd **:** 2000: good regen including older 10 ft regen in spots. Some post logging mortality. Overall good quality stand. 2010: Sale #006-92 "Jacks' Shack Block" (unit 2) - cut Sept, 1993. M regeneration very limited - deer pressure. Aspen regen mainly along old trail roadways. Thin stand lightly and only if adjacent stands are harvested, due to access and merchantability. Mixed hardwood includes basswood, YB. Ground cover of sweet cicely, thistle noted. Soils are Shoepac-Trenary. 2002: stand 43

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
402	**G0**	3	0	53	GRASS	NONSTOCKED		0	OPENING MAINTENANCE	

TREATMENT LIMITING FACTORS: Inadequate volume due to low stocking/small diameter/etc.

comnts Fmd : Some encroachment of JP, RP, and small WP. A few scattered merchantable trees, mainly JP (ranges from 2 - 5" dbh and 8 - 37' hts). If desire to maintain G opening, cut trees when adjacent stand is harvested. Bracken fern, grass, lichen ground cover noted. 2002: stand 402

Total Acres..... 87

GWINN FOREST MGT UNIT | **Proposed Treatments With NO Limiting Factors** | **Compartment: 20** | **Entry Year: 2012**

Stand	Cover Type	Acres	Age	Site Index	Mgt Obj	Condition	Method Cut	Harvest Priority	Cultural Need	FDF Status
50	**M6**	32	0	58	NORTHERN HARDWOOD	UNEVENAGED	SHELTERWOOD-SEED	1		

comnts Fmd **:** 2000: lots of swales. Poor timber quality except 2 acres south end. Hemlock and cedar in spots. 2010: STAND SHOULD BE TREATED WITH COMPARTMENT 19, STAND 1 - 2011 POW. Last examiners comments are accurate - stand is full of swales and vernal areas, which will have to be accessed, in places. Will be difficult to segregate from treatment area, and treatable stand acres will definitely be lower once exclusions are established. There is a nice patch of hardwood at the south end (soils are Escanaba), with some nice cherry stems which will be thinned under marking guidelines. Most A,P should be removed, as it is overmature and dead/dying - some can be left along boundary edges and within any exclusions. Retain components of all species for diversity - either through marking or exclusions. Mark any w. spruce to cut, but remove all BF as it is dead/dying - plenty of regen. Some areas do contain thicker pockets of M regeneration, which should be enhanced, if possible. Access will be through the private corporate lands to the south (which have been thinned within the last year or two), and property lines have already been established - will need permission to cross. Ground cover noted includes: starflower, violets, club moss, princess pine. Winter logging is recommended - in addition, will probably need equalization tube/culvert crossing through center of stand. Soils are Escanaba and Shoepac-Trenary. 2002: stand 34

Total Acres..... **32**

* See "Compartment Packets Glossary of Terms" document link on web site for further descriptions and code definitions.

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
1	F 6	F 2	14	59	9	90	55	white pine	two aged	Y	seed tree	within 0-9 years	2	natural regeneration

Treatment Limiting Factors:
Adjacent landowner denies access
Road needed (resources not presently available)

comnts Fmd **:** W7F4, SELECT CUT#18-78 -1979. 2000: Mixed size with W. pine scattered over smaller spruce and fir etc. possible to cut trees other than W. pine probably next time. 2010: Large WP, WS within - a few PB noted. Patches of M,A regeneration (2" dbh) interspersed from 70's cut, also F/S regeneration all heights and sizes - no WP regen noted. Some of the JP within stand is dead/dying already. Blowdown timber and WP snags throughout. Stand could be treated, with access from the private to the north (school forest lands) most likey. Leave all WP and mark a few large W. spruce to leave; leave all cherry and most PB. Some red maple, tamarack to cut. A small G stand from last entry is now incorporated into this stand, which contains some wolfy JP (G was treated under FTP W32-227 Sp, 1982 with Tordon) and could be re-opened with harvest. There was a timber trespass along the east boundary several years ago - survey corners are now in place. Possible MO long term would be for WP, but mixed species of A,F/S, J, B are acceptable - stand is variable. Scarify to encourage natural seedbed and/or underplant WP when harvest occurs to encourage long term goals, if desired. Treat adjacent grass opening (stand 402) at this time also. 2002: stand 1.

Wld **:**

3	X 0	X 0	4			0		other non-stocked or non-forest or non-productive	nonstocked	N		not scheduled	0	

comnts Fmd **:** Chicago and Northwestern railroad track and ROW

4	F 6	F 3	5	66	8	70	45	white pine	mature	Y	final harvest	within 0-9 years	3	planting

Treatment Limiting Factors:
Influence zones
Inadequate volume due to small acreage

comnts Fmd **:** 2000: strip between RR tracks and M-35. Same as stand 1. 2010: Stand is not very feasible to cut, due to hwy and RR influences - permit will be needed from M-DOT for temporary road access. Some dead A, cherry within. Small F3/S3 (20 - 30' hts) along Hwy ROW to leave, as well as smaller PB and all WP. Mark a few large W. spruce to leave. Leave juneberry. Possible long term MO of WP - hand plant WP seedlings, where possible. Either negotiate cut, or treat with stand 1 when harvested. 2002: stand 10

5	X 0	X 0	4			0		other non-stocked or non-forest or non-productive	nonstocked	N		not scheduled	0	

comnts Fmd **:** M-35 and ROW - ROW clearing under permit #48-66 (for salvage of timber) completed 11/1966.

6	W 8	M 3	6	24	20	60	55	white pine	two aged	N		30-39 years	0	

Treatment Limiting Factors:
Inadequate volume due to low stocking/small diameter/etc.

comnts Fmd **:** CUT UNDER PERMIT 29-85. 2000: Scattered big w. pine left over A3 well-stocked 1"dbh. Some areas mostly red maple and fir under. 2010: Very limited amount of W, H regeneration, but some <2' noted - mostly A, RM, cherry, YB regeneration (2-3" dbh and 25-35' hts) though. Old blue line still visible along south end. 2002: stand 2

7	M 6	F 3	5		10	100	57	northern hardwood	low quality	N		10-19 years	0	

comnts Fmd **:** 75-80% R MAPLE,Poor timber Quality. 2010: Low quality red maple - large diameter, but pulpwood. Occasional H, S, W, YB and cherry within. Ground cover of club moss, princess pine. Fir regeneration ~ 20' ht. When scheduled, should mark leave-tree maple and remove rest - leave all YB, H, WP. 2002: stand 3

8	Q 4	L 2	6	76	6	20	28	mixed swamp conifer	sparse	N		not scheduled	0	

comnts Fmd **:** SPRUCE&TAMARACK,TAG ALDER-GROWING SLOWLY LAST 15 YRS. Edge of bog. 2010: Spruce, tamarack, cedar, bunchberry, lab tea, sphagnum - lots of tagalder. Mistletoe in BS. Occasional C regen noted (<= 1' ht). 2002: stand 4

9	W 9	F 2	19	83	16	80	50	white pine	two aged	N		10-19 years	0	

comnts Fmd **:** SELECTIVELY CUT IN 1978 (Sale #28-77). Ready for another cut in 20 or so years. 2010: No WP regeneration noted; most fir is 20-25' hts. Pocket of 6" dbh aspen. Not a whole lot of volume to remove at this time; when cut is prescribed, schedule scarification to encourage natural WP regeneration and/or follow up with underplanting also. Some dead tops to WP. Ground cover includes: moss, lab tea. Stand also contains cedar, tamarack, cherry, birch. (See access notes from stand 7.) 2002: stand 5

* See "Compartment Packets Glossary of Terms" document link on web site for further descriptions and code definitions.

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
10	Q 5	F 2	5	36	9	50	46	mixed swamp conifer	immature	N		10-19 years	0	

comnts Fmd **:** CLEARCUT 1974-75,COMING BACK POORLY TO ASPEN but well-tocked with fir. Some wet spots. Also some w. birch, tamarack and hardwood. Average 4"dbh. Some residual pine. 2010: Regeneration mainly BF - no aspen. Older A, B within in dead/dying - wet stand. Ground cover of sphagnum, lab tea noted and F/S understory is ~ 10-16' hts. Treat with adjacent stand(s) 9,11 when prescribed. (See access notes from stand 7.) 2002: stand 6

11	S 6	S 1	9	85	7	70	40	black spruce-swamp	two aged	Y		10-19 years	0	

Treatment Limiting Factors:

Adjacent landowner denies access
Inadequate volume due to small acreage

comnts Fmd **:** STARTED STRIPS IN 1975,SCATTERED HDWD,W PINE,ASPEN-GOOD SPRUCE. 2000: Wait and cut with stand 5. 2010: Mixed spps includes PB, T. Sale #001-71 (30 acres) - cut S,F, A, B from 12/71 - 12/74. Scattered strip cuts also prescribed and never completed (sale #043-74 18 acs) - cut ~ 7cords BF and sale closed 1/16/78. Mixed sizes and stocking now. Lower ground is more sphagnum, lab tea - lower BA present. Soils are Carbondale/Tawas and some Croswell sands. Will require private access to treat - wait and treat with stands 10,11. 2002: stand 7

13	Q 4	Q 1	92	131	6	20	27	mixed swamp conifer	old growth (potential or actual)	Y		not scheduled	0	

Treatment Limiting Factors:

Potential or designated old growth
Cedar or Hemlock cutting restraints
Too wet

comnts Fmd **:** SCA = potential old growth - part of Sawmill Creek Complex. Mixed softwood includes spruce and tamarack. Soils are Carbondale/Tawas. 2002: stand 12,13

Wld **:** SCA-Potential Old Growth Stand. Sawmill Creek Complex. No treatment is recommended to allow for natural processes to occur and provide down woody debris forest structure for mammals, amphibians, birds, and insects.

14	L 0	L 0	18		0	0		lowland brush	old growth (potential or actual)	N		not scheduled	0	

comnts Fmd **:** SCA = potential old growth - part of Sawmill Creek Complex. Soils are Carbondale/Tawas. 2002: stand 18

Wld **:** SCA-Potential Old Growth Stand. Sawmill Creek Complex. No treatment is recommended to allow for natural processes to occur and provide down woody debris forest structure for mammals, amphibians, birds, and insects.

15	C 6	Q 2	495	142	7	110	30	cedar	old growth (potential or actual)	N		not scheduled	0	

Treatment Limiting Factors:

Potential or designated old growth
Too wet
Cedar or Hemlock cutting restraints

comnts Fmd **:** SCA = potential old growth - part of Sawmill Creek Complex. Soils are Carbondale/Tawas. 2002: stand(s) 11,8,14

Wld **:** SCA-Potential Old Growth Stand. Sawmill Creek Complex. No treatment is recommended to allow for natural processes to occur and provide down woody debris forest structure for mammals, amphibians, birds, and insects.

16	L 0	L 0	16	103	0	0	30	lowland brush	old growth (potential or actual)	N		not scheduled	0	

comnts Fmd **:** SCA = old growth potential - part of Sawmill Creek Complex. Stand contains Sawmill Creek. Soils are Carbondale/Tawas. 2002: stand 9,16

* See "Compartment Packets Glossary of Terms" document link on web site for further descriptions and code definitions.

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
17	Q 6	Q 1	4	101	7	70	45	mixed swamp conifer	old growth (potential or actual)	Y		not scheduled	0	

Treatment Limiting Factors:
Potential or designated old growth
Cedar or Hemlock cutting restraints
Too wet

comnts Fmd : SCA = old growth potential - part of Sawmill Creek Complex. Soils are Carbondale/Tawas. 2002: stand 17

Wld : SCA-Potential Old Growth Stand. Sawmill Creek Complex. No treatment is recommended to allow for natural processes to occur and provide down woody debris forest structure for mammals, amphibians, birds, and insects.

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
18	Q 4	Q 1	12	104	6	20	26	mixed swamp conifer	old growth (potential or actual)	Y		not scheduled	0	

Treatment Limiting Factors:
Cedar or Hemlock cutting restraints
Too wet
Potential or designated old growth

comnts Fmd : SCA = old growth potential - part of Sawmill Creek Complex. Soils are Paquin-Finch /Paquin. 2002: stand 15

Wld : SCA-Potential Old Growth Stand. Sawmill Creek Complex. No treatment is recommended to allow for natural processes to occur and provide down woody debris forest structure for mammals, amphibians, birds, and insects.

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
19	Q 4	L 1	78	98	6	20	47	mixed swamp conifer	old growth (potential or actual)	Y		not scheduled	0	

Treatment Limiting Factors:
Potential or designated old growth
Too wet
Inadequate volume due to low stocking/small diameter/etc.

comnts Fmd : SCA = old growth potenital - part of Sawmill Creek Complex, contains Sawmill Creek. Soils are AuGrres-Deford. 2002: stand(s) 19,21,22

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
20	Q 6	Q 1	16	131	6	70	28	mixed swamp conifer	old growth (potential or actual)	Y		not scheduled	0	

Treatment Limiting Factors:
Potential or designated old growth
Cedar or Hemlock cutting restraints
Too wet

comnts Fmd : SCA = old growth potential - part of Sawmill Creek Complex. Soils are Carbondale/Tawas. 2002: stand 20

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
21	C 5	Q 2	186	92	5	40	27	cedar	old growth (potential or actual)	N		not scheduled	0	

Treatment Limiting Factors:
Potential or designated old growth
Cedar or Hemlock cutting restraints
Too wet
Bridge needed (portable bridge not available or inadequate)

comnts Fmd : SCA = old growth potential - part of Sawmill Creek Complex. Old inventory comment states: "fair quality cedar - patchy to thick, variable sizes". Soils are Carbondale/Tawas. 2002: stand(s) 21,23,26

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
22	L 2	L 1	26			0		lowland brush	old growth (potential or actual)	N		not scheduled	0	

comnts Fmd : SCA = old growth potential - part of Sawmill Creek Complex. 2002: stand 28

* See "Compartment Packets Glossary of Terms" document link on web site for further descriptions and code definitions.

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
23	M 5	F 3	22		9	60	55	northern hardwood	old growth (potential or actual)	N		not scheduled	0	

Treatment Limiting Factors:
- Bridge needed (portable bridge not available or inadequate)
- Road needed (resources not presently available)
- Blocked by other physical obstacle
- Potential or designated old growth

comnts Fmd **:** SCA = old growth potential - part of Sawmill Creek Complex. Old comment: "mortality of sp and fir. Med. stocked poor timber quality hardwood". No access to stand. Soils are Croswell-Deford. 2002: stand 25

24	M 6	M 2	13		9	100	58	northern hardwood	old growth (potential or actual)	N		not scheduled	0	

Treatment Limiting Factors:
- Bridge needed (portable bridge not available or inadequate)
- Road needed (resources not presently available)
- Blocked by other physical obstacle
- Potential or designated old growth

comnts Fmd **:** SCA = old growth potential - part of Sawmill Creek Complex. No access or roads across Sawmill Creek; hardwood island continues onto private ownership also. Old Comment "MED QUAL HDWD POLES(S MAPLE & CHERRY)-POOR Y BIRCH,S MAPLE LOGS-W SPRUCE POLES & LOGS SCATTERED". 2002: stand 24

25	L 0	L 0	16		0	0		lowland brush	old growth (potential or actual)	N		not scheduled	0	

comnts Fmd **:** SCA = old growth potential - part of Sawmill Creek Complex. Soils are Carbondale/Tawas. 2002: stand 27

26	C 6	E 2	121	89	9	80	18	cedar	old growth (potential or actual)	N		not scheduled	0	

Treatment Limiting Factors:
- Cedar or Hemlock cutting restraints
- Bridge needed (portable bridge not available or inadequate)
- Inadequate volume due to low stocking/small diameter/etc.

comnts Fmd **:** SCA = potential old growth - part of Sawmill Creek Complex. Old comment: "PROBABLY NEVER MERCHANTABLE". Patchy cedar, with black ash, BF noted. Slight ridges separate this stand from surrounding lowland stands. Soils are Carabondale - Tawas. 2002: stand 31

27	F 6	F 3	9	87	8	70	62	spruce-fir (uplands-including upland black spruce)	two aged	Y		not scheduled	0	

Treatment Limiting Factors:
- Bridge needed (portable bridge not available or inadequate)
- Road needed (resources not presently available)
- Influence zones
- Retention of stand for regeneration purposes (ie. shelterwood)

comnts Fmd **:** 2000: Esker. Turns to F NE. Narrow 1 1/2 chains wide with steep sides in part. Can hold 10 years to get profitable. 2010: Aspen,fir dead/dying out of stand, and being replaced by F/S. No need to treat stand - lots of blowdown and little merchantable volume now. Falls within Sawmill Creek Complex. 2002: stand 29

28	C 6	S 2	134	85	7	70	26	cedar	immature	N		not scheduled	0	

Treatment Limiting Factors:
- Cedar or Hemlock cutting restraints
- Road needed (resources not presently available)
- Too wet
- Regeneration technology inadequate

comnts Fmd **:** Some PB, red maple, H, S/F within - perched root system. Ground cover noted includes: sphagnum, iris, tagalder. Soils are Carbondale-Tawas. 2002: stand 30,33

* See "Compartment Packets Glossary of Terms" document link on web site for further descriptions and code definitions.

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
29	S 2	T 2	206	89	3	0	18	black spruce-swamp	immature	Y		not scheduled	0	

Treatment Limiting Factors:

Inadequate volume due to low stocking/small diameter/etc.

comnts Fmd **:** large treed bog with primarily spruce and tamarack (2-4" dbh and 26-32' hts). Ground cover noted: lab tea, iris, sedge. Soils are Greenwood-Dawson. 2002: stand 36

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
30	F 6	F 3	11	87	8	70	62	spruce-fir (uplands-including upland black spruce)	two aged	Y		not scheduled	0	

Treatment Limiting Factors:

Road needed (resources not presently available)

Inadequate volume due to low stocking/small diameter/etc.

Retention of stand for regeneration purposes (ie. shelterwood)

comnts Fmd **:** 2000: Esker. Steep sides down to bog in spots. Will hold to next time due to small volume and large road work,private land etc. 2010: Blowdown everywhere, mainly aspen and fir - understory coming in thick with F/S (4 - 12' hts). Some large aspen (10-12" dbh average) remains, but it is dying fast - birch is dying also; not enough volume anymore to make harvesting feasible. Would need new road access across wet soils to narrow (and steep) ridge. Some large WP,RP within which may seed in naturally; cedar also noted. 2002: stand 40

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
31	A 3	F 1	39	14	2	0	62	aspen (upland)	immature	N		40-49 years	0	

comnts Fmd **:** 2000: mostly well-stocked A3 1" dbh. Some sparse areas with fir seeding in. cut 1995. 2010: Part of sale # 006-92, "Jacks' Shack Block" (unit 3,6). Aspen (including P) is now 24 - 30' hts. Some maple, cherry, willow (4' hts) and T/S (6 - 15' hts) in understory. Wetter areas contain patchy aspen regeneration with more willow, thistle present. Residual maple left in stand. 2002: stand 35

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
32	M 9	M 2	30		12	100	65	northern hardwood	unevenaged	N	selection	within 0-9 years	3	

Treatment Limiting Factors:

Regeneration technology inadequate

comnts Fmd **:** 2000: FDFcut 1995. Some areas good regen other areas not-rubus. Shortage of good poles but well stocked sawtimber. 2010: Same comments as last entry. Stand was cut under t. sale #006-92 "Jacks' Shack Block" in the fall, 1993 (units 4,5). Regeneration gaps still remain, with little to no new M regeneration (only 3' hts where noted) - deer browse pressure. Earlier cut(s)* resulted in maple saplings anywhere from 16-20' hts and 1-2" dbh average now, which look good. (* no record of cut - from elm dying out of stand, per old inventory notes maybe?) Old skid roadways have aspen saplings mainly (2-3" dbh and 25' hts). Stand could use treatment to open up around M saplings, but only if successful new regeneration can be established with selection cut - very light marking. Quite a few snags and wildlife trees present. Sawlog trees with large tops, forked. Soils are Shoepac-Trenary. 2002: stand 32

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
33	Q 6	F 2	33	107	8	70	39	mixed swamp conifer	immature	Y		not scheduled	0	

Treatment Limiting Factors:

Cedar or Hemlock cutting restraints

Too wet

Inadequate volume due to low stocking/small diameter/etc.

comnts Fmd **:** Subtle ridge. Soils are AuGres-Deford. 2002: stand 41

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
34	Q 4	Q 1	95	90	6	30	27	mixed swamp conifer	old growth (potential or actual)	Y		not scheduled	0	

Treatment Limiting Factors:

Cedar or Hemlock cutting restraints

Too wet

Potential or designated old growth

Inadequate volume due to low stocking/small diameter/etc.

comnts Fmd **:** SCA = old growth potential - part of Sawmill Creek Complex. Old comments include: "sparse trees with alder", "good balsam and spruce, scattered w. birch pockets, tagalder and cedar". Soils are AuGres-Deford and Carbondale-Tawas. 2002: stand 38,42

* See "Compartment Packets Glossary of Terms" document link on web site for further descriptions and code definitions.

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
35	Q 5	Q 1	8	105	6	60	28	mixed swamp conifer	old growth (potential or actual)	Y		not scheduled	0	

Treatment Limiting Factors:
Cedar or Hemlock cutting restraints
Road needed (resources not presently available)
Too wet
Potential or designated old growth

comnts Fmd : SCA = old growth potential - part of the Sawmill Creek Complex. Soils are AuGres-Deford. 2002: stand 52

36	Q 5	Q 1	3	105	6	60	28	mixed swamp conifer	old growth (potential or actual)	Y		not scheduled	0	

Treatment Limiting Factors:
Potential or designated old growth
Cedar or Hemlock cutting restraints
Too wet

comnts Fmd : SCA = old growth potential - part of Sawmill Creek Complex and riparian buffer. Soils are Carbondale-Tawas. 2002: stand 53

37	L 0	X 0	28			0	15	lowland brush	old growth (potential or actual)	N		not scheduled	0	

comnts Fmd : SCA = old growth potential - part of Sawmill Creek Complex and contains Sawmill Creek. Old Comments: "LOWLAND BRUSH-EXTENSIVE AREAS IN THIS STAND". Soils are Carbondale-Tawas. 2002: stand 55

38	Q 5	Q 1	10	105	6	50	28	mixed swamp conifer	old growth (potential or actual)	Y		not scheduled	0	

Treatment Limiting Factors:
Cedar or Hemlock cutting restraints
Road needed (resources not presently available)
Too wet
Potential or designated old growth

comnts Fmd : SCA = old growth potential - part of Sawmill Creek Complex. Soils are Carbondale-Tawas. 2002: stand 54

39	L 0	L 0	4			0	15	lowland brush	old growth (potential or actual)	N		not scheduled	0	

comnts Fmd : SCA = old growth potential, part of Sawmill Creek Complex. Lowland stand with riparian influence. Soils are Carbondale-Tawas. 2002: N/A

40	M 5	F 2	5		7	60	58	northern hardwood	unevenaged	N		not scheduled	0	

comnts Fmd : old comment: "poor hardwoods with fir mortality". Mixed conifers (S,F,H,C,W) with lowland hardwoods on a series of subtle ridges within swamp. Soils are Shoepac-Trenary. 2002: N/A

41	Q 6	F 1	42	101	7	80	26	mixed swamp conifer	low quality	Y		not scheduled	0	

Treatment Limiting Factors:
Cedar or Hemlock cutting restraints
Too wet
Road needed (resources not presently available)

comnts Fmd : Old comment: "poor spruce and cedar on low ground between ridges". Mixed softwood includes H,W,S,F. Small S/F and red maple regeneration noted. Cedar ~40 -55' hts. Soils are Tawas-Deford. 2002: stand 49

42	M 5	F 2	8		7	60	58	northern hardwood	unevenaged	N		not scheduled	0	

comnts Fmd : old comment: "poor hardwoods with fir mortality". Mixed conifers (S,F,H,C,W) with lowland hardwoods on a series of subtle ridges within swamp. Soils are Shoepac-Trenary. 2002: stand 51

* See "Compartment Packets Glossary of Terms" document link on web site for further descriptions and code definitions.

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
43	M 6	M 1	6		9	100	58	northern hardwood	unevenaged	N	selection	within 0-9 years	3	

Treatment Limiting Factors:

Inadequate volume due to low stocking/small diameter/etc.

Regeneration technology inadequate

comnts Fmd **:** T. sale # 034-90 - cut Fall, 1991. Stand also includes strip of P3 (2-4" dbh, 30'hts - some trefoil noted in understory here) which was cut at the same time and will be left. Manage with stand 32 and 47 for marketability and access purposes when cut, or, possibly negotiate when sale to the south is thinned ("Parker End Sale" #012-08). Not much M regeneration; what was noted was heavily browsed/dead. May not be able to regenerate well. Some large diameter, pulp-quality red maple within, as well as YB and basswood. Maintain stand diversity, when marked. Soils are Shoepac-Trenary. 2002: stand 50

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
44	A 6	F 2	8	87	8	90	57	hemlock	mature	Y		not scheduled	0	

Treatment Limiting Factors:

Retention of stand for regeneration purposes (ie. shelterwood)

comnts Fmd **:** 2000: aspen mature. Decent understory of hemlock 4-8" dbh. Leave hemlock when cut. Leave red maple too? 2010: Stand will eventually convert if aspen is allowed to die out, otherwise could remove A,B, S/F and some RM. Will need to protect residual species, which may present operability issues. There is quite a bit of hemlock here, in patches, and some WP, C, and H regeneration was noted. May wish to underplant W/H, if harvest. Mixed spps include: WP,YB, S. Soils are Charlevoix-Ensley. 2002: stand 44

Wld **:** This stand contains a good amount of hemlock regeneration. Consider removing this stand from harvest schedule and allow it to convert to Hemlock.

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
45	S 6	S 2	7	101	7	70	35	black spruce-swamp	mature	Y	final harvest	within 0-9 years	2	

Treatment Limiting Factors:

Too wet

Inadequate volume due to low stocking/small diameter/etc.

comnts Fmd **:** Old Comments: "NEARLY PURE STAND OF B SPRUCE POLES & SAPS-LOW,WET-CHECK NEXT PERIOD" 2010: Wet stand - sphagnum, lab tea, iris ground cover. Some small PB, RM regen and small openings with S regeneration (1-3' hts) established. Mixed softwood includes: C, F. Adjacent private harvest came back to S3/T2 ~ 16-20' hts. Harvest only if adjacent stand is treated, due to merchantability (dry summer or winter cut). Soils are Carbondale-Tawas. 2002: stand 45

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
46	A 3	L 0	21	15	3	0	60	aspen (upland)	immature	N		40-49 years	0	

comnts Fmd **:** 2000: mostly well-stocked 1" dbh aspen but some sparse areas with small fir seeding in. cut Fall, 1993. 2010: Part of "Jacks' Shack Block" sale # 006-92 (unit 1) - cut Sept, 1993. Some residual M within. Soils are part Ensley muck. 2002: stand 46

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
47	M 6	M 1	22		10	110	59	northern hardwood	unevenaged	N	selection	within 0-9 years	3	

Treatment Limiting Factors:

Regeneration technology inadequate

comnts Fmd **:** 2000: good regen including older 10 ft regen in spots. Some post logging mortality. Overall good quality stand. 2010: Sale #006-92 "Jacks' Shack Block" (unit 2) - cut Sept, 1993. M regeneration very limited - deer pressure. Aspen regen mainly along old trail roadways. Thin stand lightly and only if adjacent stands are harvested, due to access and merchantability. Mixed hardwood includes basswood, YB. Ground cover of sweet cicely, thistle noted. Soils are Shoepac-Trenary. 2002: stand 43

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
48	S 4	S 1	4	70	6	30	30	black spruce-swamp	sparse	N		not scheduled	0	

Treatment Limiting Factors:

Too wet

Inadequate volume due to low stocking/small diameter/etc.

comnts Fmd **:** sparse; some blowdown. Soils are Dawson-Greenwood. 2002: stand 47

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
49	A 3	F 1	7	15	2	0	57	aspen (upland)	immature	N		40-49 years	0	

comnts Fmd **:** CUT PERMIT 42-94-02 - summer, 1994. Well-stocked 1"dbh. Few scattered 16" w.pine left in stand. 2010: aspen now 2 -3" dbh and ~30' hts. 2002: stand 48

* See "Compartment Packets Glossary of Terms" document link on web site for further descriptions and code definitions.

Stand	Cover Type-Size Dnsty	Under Story-Stkng Level	Acres	Age	avg. DBH	Tot. BA	Site Indx	Mgt Obj	Condition	Silv. Criteria Met?	Method Cut	Trtmt. Period	Harvest Priority	Cultural Need
50	M 6	F 2	32		9	110	58	northern hardwood	unevenaged	N	shelterwood-seed	within 0-9 years	1	

comnts Fmd : 2000: lots of swales. Poor timber quality except 2 acres south end. Hemlock and cedar in spots. 2010: STAND SHOULD BE TREATED WITH COMPARTMENT 19, STAND 1 - 2011 POW. Last examiners comments are accurate - stand is full of swales and vernal areas, which will have to be accessed, in places. Will be difficult to segregate from treatment area, and treatable stand acres will definitely be lower once exclusions are established. There is a nice patch of hardwood at the south end (soils are Escanaba), with some nice cherry stems which will be thinned under marking guidelines. Most A,P should be removed, as it is overmature and dead/dying - some can be left along boundary edges and within any exclusions. Retain components of all species for diversity - either through marking or exclusions. Mark any w. spruce to cut, but remove all BF as it is dead/dying - plenty of regen. Some areas do contain thicker pockets of M regeneration, which should be enhanced, if possible. Access will be through the private corporate lands to the south (which have been thinned within the last year or two), and property lines have already been established - will need permission to cross. Ground cover noted includes: starflower, violets, club moss, princess pine. Winter logging is recommended - in addition, will probably need equalization tube/culvert crossing through center of stand. Soils are Escanaba and Shoepac-Trenary. 2002: stand 34

402	G 0	G 0	3		10	53		grass	nonstocked	N		within 0-9 years	0	opening maintenance

Treatment Limiting Factors:

Inadequate volume due to low stocking/small diameter/etc.

comnts Fmd : Some encroachment of JP, RP, and small WP. A few scattered merchantable trees, mainly JP (ranges from 2 - 5" dbh and 8 - 37' hts). If desire to maintain G opening, cut trees when adjacent stand is harvested. Bracken fern, grass, lichen ground cover noted. 2002: stand 402

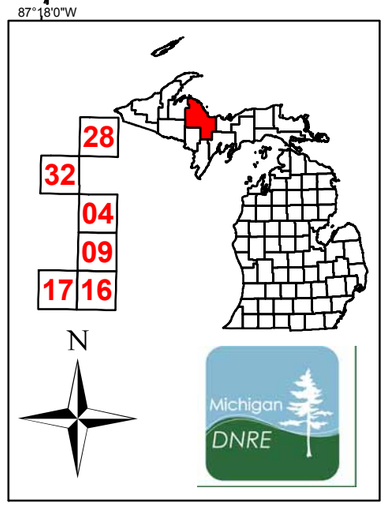
412	G 0	G 0	1		0	53		grass	nonstocked	N		not scheduled	0	

comnts Fmd : Small WP, RM clumps - encroaching F/S/M. 2002: stand 403

Total Acres..... 1968

Covertype & Treatment Map

Compartment 20
T44N, R24W, Sec. 4, 9, 16, 17
T45N, R24W, Sec. 28, 32
County: Marquette
Unit: Gwinn
YOE: 2012
Acres: 1,968 GIS Calculated
Stand Examiner: Theresa Sysol
Map Revised: 8/27/2010
Map Phase: Pre-review

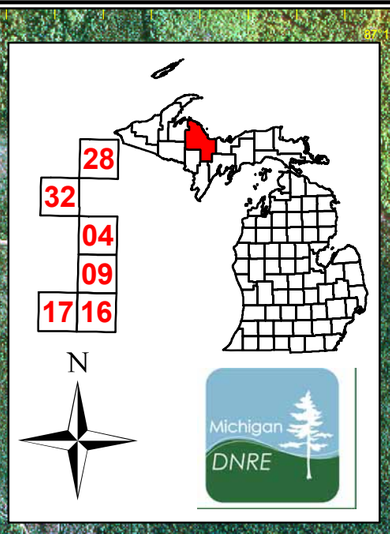


Legend
- RIs Corners
- Miris Corners
- Highway
- Poor Dirt Roads
- Closed Roads
- Houses
- Gates
- State Highway
- Water Features
- Stand Boundary
- 028 - Opening Maintenance
- 100 - Final Harvest
- 111 - Final Harvest/Planting/Hand Tools
- 245 - Seed Tree/Natural Regeneration/Mechanical,other
- 300 - Shelterwood - Seed
- 800 - Selection
- A - Aspen
- C - Northern White Cedar
- F - Upland Spruce or Fir
- G - Grass
- L - Lowland Brush
- M - Northern Hardwoods
- Q - Mixed Swamp Conifers
- S - Black Spruce Swamp
- W - White Pine
- X - Non-Stocked

Lake Cheerio
Sawmill Creek
Saw mill Creek
35
1 Miles
0.5
0
1

Stand Boundary Map

Compartment 20
T44N, R24W, Sec. 4, 9, 16, 17
T45N, R24W, Sec. 28, 32
County: Marquette
Unit: Gwinn
YOE: 2012
Acres: 1,968 GIS Calculated
Stand Examiner: Theresa Sysol
Map Revised: 8/27/2010
Map Phase: Pre-review



Legend
- RIs Corners
- Miris Corners
- Highway
- Poor Dirt Roads
- Closed Roads
- Houses
- Gates
- State Highway
- Water Features
- Stand Boundary

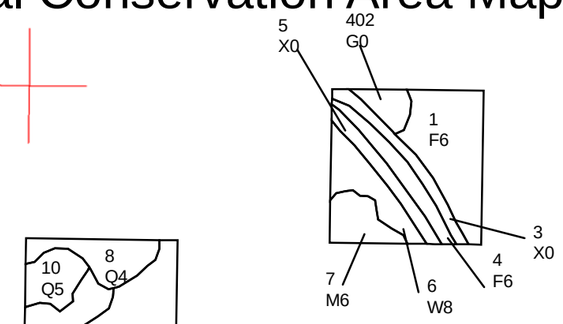
1 0.5 0 1 Miles

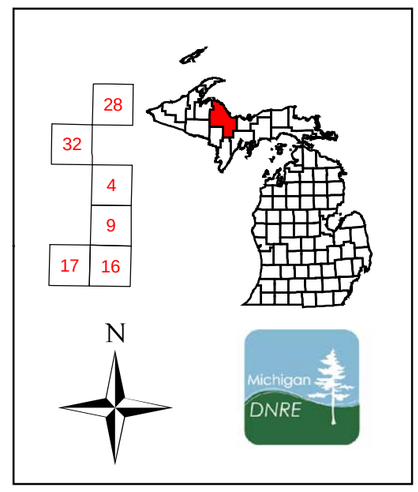
Dedicated & Proposed Special Conservation Area Map

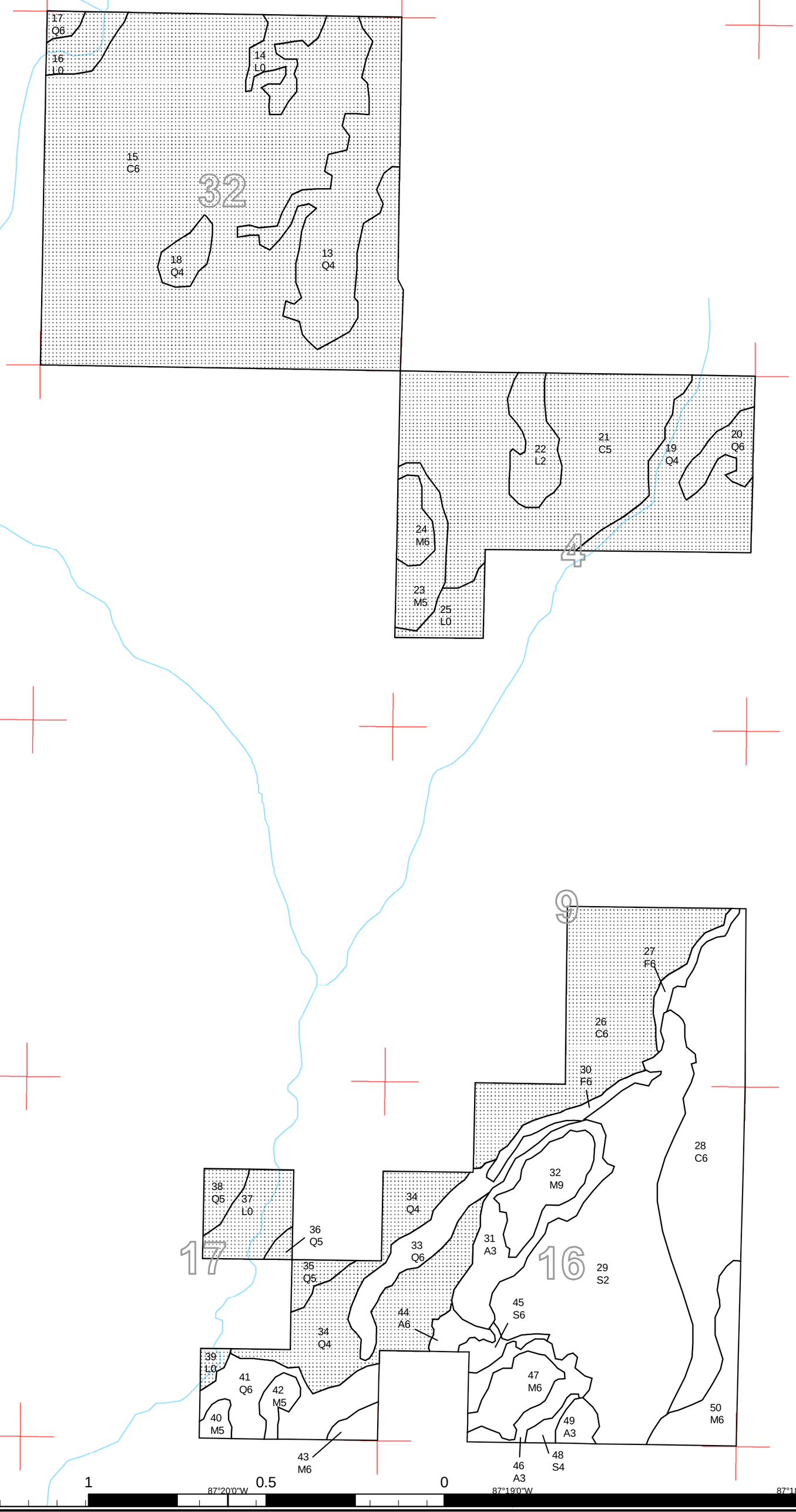
Compartment 20
T44N, R24W, Sec. 4, 9, 16, 17
T45N, R24W, Sec. 28, 32
County: Marquette
Unit: Gwinn
YOE: 2012
Acres: 1,968 GIS Calculated
Stand Examiner: Theresa Sysol
Map Revised: 7/13/2010
Map Phase: Pre-review

Legend
- Miris Corners
- Stand Boundary
- Proposed Special Conservation Areas

Dedicated Special Conservation Areas
- Cold Water Streams
- Ecological Reference Areas
- Boat Access Sites







87°22'0"W 87°21'0"W 87°20'0"W 87°19'0"W 87°18'0"W 87°17'0"W
46°16'0"N 46°15'0"N 46°14'0"N 46°13'0"N
1 0.5 0 1 Miles

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.
SCA	Potential Old Growth Areas	This category contains stands were identified for a broad range of reasons and were coded in the OI database as stand condition 8 as potential old growth (POG). Approximately 310,000 acres have been identified through the Operations Inventory (OI)/Compartment Review process. For stands in Year of Entry 2008 and forward, potential old growth is managed for the identified objective until it is: 1) vetted through the Biodiversity Conservation Planning Process (BCPP) and given a specific designation and objective (as an ERA, HCVA, or other type of SCA) and is released from the potential old growth designation; or 2) it is released from the potential old growth designation via the Compartment Review process.