Appendix A – Analysis Support Documentation

Data

Table A- 1.Comparison of Alternatives, by Area

	Au Sable	Bowman Lake	Briar Hills	Condon Lakes West	Cooke	Hoist Lakes	Manistee River	Reid Lake	South Branch Au Sable	Wakeley Lake	Whalen Lake	White River	Whitewater Creek	Nordhouse Dunes Wilderness
Alternative 1 - No Action (2006 Forest Plan)														
Firearm Hunting Ban	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Snowmobile Trail Closure	No	No	No	No	N/A	N/A	No	N/A	N/A	N/A	N/A	No	No	N/A
Open Road Density standard	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0
Current ROS Inventory Classification	RN	RN	SPM	SPM	SPM	SPM	RN	SPM	SPM	SPM	RN	SPM	RN	SPNM
2006 ROS Inventory Classification	SPNM	SPNM	SPNM	SPNM	SPNM	SPNM	SPNM	SPNM	SPNM	SPNM	SPNM	SPNM	SPNM	P
Existing Management Area (2006 Forest Plan)	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	5.1
Proposed Management Area	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	5.1
Alternative 2 – Proposed Action (Notice of Intent)														
Firearm Hunting Ban	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

	Au Sable	Bowman Lake	Briar Hills	Condon Lakes West	Cooke	Hoist Lakes	Manistee River	Reid Lake	South Branch Au Sable	Wakeley Lake	Whalen Lake	White River	Whitewater Creek	Nordhouse Dunes Wilderness
Snowmobile Trail Closure	Yes	Yes	Yes	Yes	N/A	N/A	Yes	N/A	N/A	N/A	N/A	Yes	Yes	N/A
Open Road Density Standard	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0-1	0
Current ROS Inventory Classification	RN	RN	SPM	SPM	SPM	SPM	RN	SPM	SPM	SPM	RN	SPM	RN	SPNM
2006 ROS Inventory Classification	SPNM	SPNM	SPNM	SPNM	SPNM	SPNM	SPNM	SPNM	SPNM	SPNM	SPNM	SPNM	SPNM	P
Existing Management Area (2006 Forest Plan)	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	5.1
Proposed Management Area	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	5.1
Alternative 3														
Firearm Hunting Ban	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Snowmobile Trail Closure	No	No	No	No	N/A	N/A	No	N/A	N/A	N/A	N/A	No	No	N/A
Open Road Density standard	0-3	0-3	0-2	0-2	0-2	0-2	0-3	0-2	0-2	0-2	0-3	0-2	0-3	0
Current ROS Inventory Classification	RN	RN	SPM	SPM	SPM	SPM	RN	SPM	SPM	SPM	RN	SPM	RN	SPNM

	Au Sable	Bowman Lake	Briar Hills	Condon Lakes West	Cooke	Hoist Lakes	Manistee River	Reid Lake	South Branch Au Sable	Wakeley Lake	Whalen Lake	White River	Whitewater Creek	Nordhouse Dunes Wilderness
2006 ROS Inventory Classification	RN	RN	SPM	SPM	SPM	SPM	RN	SPM	SPM	SPM	RN	SPM	RN	SPNM
Existing Management Area (2006 Forest Plan)	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	5.1
Proposed Management Area	4.3	4.2	6.2	6.2	6.2	6.2	4.2	6.2	6.2	6.2	4.2	6.2	4.2	5.1
Alternative 4 – Preferred Alternative														
Firearm Hunting Ban	No	No	No	No	No	No	No	No	No	No	No	No	No	No
Snowmobile Trail Closure	No	No	No	No	N/A	N/A	No	N/A	N/A	N/A	N/A	No	No	N/A
Open Road Density Standard	0-1	0-1	0-2	0-1	0-1	0-1	0-3	0-1	0-1	0-3	0-2	0-2	0-3	0
Current ROS Inventory Classification	RN	RN	SPM	SPM	SPM	SPM	RN	SPM	SPM	SPM	RN	SPM	RN	SPNM
2006 ROS Inventory Classification	RN	RN	SPM	SPM	SPM	SPM	RN	SPM	SPM	SPM	RN	SPM	RN	SPNM
Existing Management Area (2006 Forest Plan)	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	5.1
Proposed Management Area	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	8.4	4.2	5.1

Table A- 2. Management Area Acreage, by Alternative and Analysis Area

Management Area (M.A.) Designation	Au Sable	Bowman	Briar Hills	Condon Lakes	Cooke	Hoist Lake	Manistee River	Reid Lake	South Branch Au Sable	Wakeley Lake	Whalen Lake	White River	Whitewater Creek	Nordhouse Dunes	Sum
Alternative 1 – M.A. Designation, 2006 Forest Plan															
Acres designated Management Area 5.1 Wilderness	0	0	0	0	0	0	0	0	0	0	0	0	0	3,373	3,373
Acres Designated Management Area 6.1 Semiprimitive Nonmotorized (SPNM)	10,628	1,145	3,494	3,301	2,419	9,862	7,985	3,207	4,008	2,414	2,754	4,825	7,183	0	63,225
Alternative 2 (no change in M.A. designations proposed)															
Alternative 3 – Proposed M.A. Designations															
Acres of M.A. 5.1 Wilderness	0	0	0	0	0	0	0	0	0	0	0	0	0	3,373	3,373
Acres of M.A. 6.1 SPNM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acres of M.A. 6.2 Semiprimitive Motorized	0	0	3,494	3,301	2,419	9,862	0	3,207	4,008	2,414	0	4,825	0	0	33,530
Acres of M.A. 4.2 Roaded Natural	0	1,145	0	0	0	0	7,985	0	0	0	2,754	0	7,183	0	29,695
Acres of M.A. 4.3 Roaded Natural	10,628	0	0	0	0	0	0	0	0	0	0	0	0	0	10,628

Management Area (M.A.) Designation	Au Sable	Bowman	Briar Hills	Condon Lakes	Cooke	Hoist Lake	Manistee River	Reid Lake	South Branch Au Sable	Wakeley Lake	Whalen Lake	White River	Whitewater Creek	Nordhouse Dunes	Sum
Acres of M.A. 8.4 Special Areas	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alternative 4 – Proposed M.A. Designations															
Acres of M.A. 4.2 Roaded Natural	0	0	0	0	0	0	0	0	0	0	0	0	7,183	0	7,183
Acres of M.A. 5.1 Wilderness	0	0	0	0	0	0	0	0	0	0	0	0	0	3,373	3,373
Acres of M.A. 6.1 SPNM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acres of M.A. 6.2 SPM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Acres of M.A. 8.4 Special Areas	10,628	1,145	3,494	3,301	2,419	9,862	7,985	3,207	4,008	2,414	2,754	4,825	0	0	56,042

Table A- 3. Endangered, Threatened and Sensitive Species found in the 14 Analysis Areas and Determinations

Common Name[23]	Scientific Name	Global Status	State Status	Determinations			
				Alt. 1	Alt. 2	Alt. 3	Alt. 4
Alleghany Plum	*Prunus alleghaniensis*	G4T3Q	S2-SC	MI-NT	MI-NT	MI-NT	MI-NT
Bald Eagle (ex - T)	*Haliaeetus leucocephalus*	G5N5	S4-SC	MI-NT	MI-NT	MI-NT	MI-NT
Bald Rush	*Rhynchospora scirpoides*	G4	S2-T	MI-NT	MI-NT	MI-NT	MI-NT
Blanding's Turtle	*Emydoidea blandingii*	G4N4	S3-SC	MI-NT	MI-NT	MI-NT	MI-NT
Cerulean Warbler	*Dendroica cerulea*	G4N4	S3-T	MI-NT	MI-NT	MI-NT	MI-NT
Channel Darter	*Percina copelandi*	G4N4	S1-E	MI-NT	MI-NT	MI-NT	MI-NT
Common Loon	*Gavia immer*	G5N4	S3-T	MI-NT	MI-NT	MI-NT	MI-NT
Dusted Skipper	*Atrytonopsis hianna*	G4N4	S2-SC	MI-NT	MI-NT	MI-NT	MI-NT
Dwarf Bulrush	*Lipocarpha micrantha*	G5	S3-SC	MI-NT	MI-NT	MI-NT	MI-NT
Eastern Box Turtle	*Terrapene carolina carolina*	G5T5N5	S2-SC	MI-NT	MI-NT	MI-NT	MI-NT
Eastern Massasauga (C)	*Sistrurus catenatus catenatus*	G3T3N3	S3-SC	MI-NT	MI-NT	MI-NT	MI-NT
Frosted Elfin	*Callophrys irus*	G3N3	S2-T	MI-NT	MI-NT	MI-NT	MI-NT
Giant Pinedrops	*Pterospora andromedea*	G5	S2-T	MI-NT	MI-NT	MI-NT	MI-NT
Hill-prairie Spittlebug	*Lepyronia gibbosa*	G3G4	S1-SC	MI-NT	MI-NT	MI-NT	MI-NT
Hill's Thistle	*Cirsium hillii*	G3N3	S3-SC	MI-NT	MI-NT	MI-NT	MI-NT
Karner Blue Butterfly (E)	*Lycaeides melissa samuelis*	G2T2	S2-T	M.A.-NLAA	M.A.-LAA	M.A.-NLAA	M.A.-NLAA

[23] See Global and State Status Key at the end of the table

Common Name[23]	Scientific Name	Global Status	State Status	Determinations			
				Alt. 1	Alt. 2	Alt. 3	Alt. 4
Kirtland's Warbler (E)	*Dendroica kirtlandi*	G1	S1-E	M.A.-NLAA	M.A.-NLAA	M.A.-NLAA	M.A.-NLAA
Lake Huron Locust	*Trimerotropis huroniana*	G2N2	S2-T	MI-NT	MI-NT	MI-NT	MI-NT
Louisiana Waterthrush	*Seiurus motacilla*	G5	S2S3-SC	MI-NT	MI-NT	MI-NT	MI-NT
Michigan Bog Grasshopper	*Appalachia arcana*	G2N2	S2-SC	MI-NT	MI-NT	MI-NT	MI-NT
Northern Goshawk	*Accipiter gentilis*	G5N4	S3-SC	MI-NT	MI-NT	MI-NT	MI-NT
Persius Dusky Wing	*Erynnis persius*	G5T1	S3-T	MI-NT	MI-NT	MI-NT	MI-NT
Piping Plover (E)	*Charadrius melodus*	G3	S1-E	NA	NA	NA	NA
Piping Plover Critical Habitat				NA	NA	NA	NA
Pitcher's Thistle (T)	*Cirsium pitcheri*	G3	S3-T	NA	NA	NA	NA
Prairie Smoke	*Geum triflorum*	G4G5	S2S3-T	MI-NT	MI-NT	MI-NT	MI-NT
Prairie Warbler	*Dendroica discolor*	G5N5	S1-E	MI-NT	MI-NT	MI-NT	MI-NT
Purple Milkweed	*Asclepias purpurascens*	G5?	S3-T	MI-NT	MI-NT	MI-NT	MI-NT
Purple Spikerush	*Eleocharis atropurpurea*	G4G5	S1-E	MI-NT	MI-NT	MI-NT	MI-NT
Ram's-head Lady Slipper	*Cypripedium arietinum*	G3N3	S3-SC	MI-NT	MI-NT	MI-NT	MI-NT
Red-shouldered Hawk	*Buteo lineatus*	G5N5	S3-T	MI-NT	MI-NT	MI-NT	MI-NT
River Redhorse	*Moxostoma carinatum*	G4N4	S1-T	MI-NT	MI-NT	MI-NT	MI-NT
Rough Fescue	*Festuca altaica*	G5	S3-T	MI-NT	MI-NT	MI-NT	MI-NT
Slippershell	*Alasmidonta viridis*	G4G5	S2S3-T	MI-NT	MI-NT	MI-NT	MI-NT
Southern Grizzled Skipper	*Pyrgus wyandot*	G1N1	S1-SC	MI-NT	MI-NT	MI-NT	MI-NT

Common Name[23]	Scientific Name	Global Status	State Status	Determinations			
				Alt. 1	Alt. 2	Alt. 3	Alt. 4
Trumpeter Swan	*Cygnus buccinator*	G4N4	S3-T	MI-NT	MI-NT	MI-NT	MI-NT
Whorled Mountain-mint	*Pycnanthemum verticillatum*	G5	S2-SC	MI-NT	MI-NT	MI-NT	MI-NT
Wild Parsnip	*Berula erecta*	G4G5	S2-T	MI-NT	MI-NT	MI-NT	MI-NT
Wood Turtle	*Glyptemys insculpta*	G4N4	S2-SC	MI-NT	MI-NT	MI-NT	MI-NT
Global, State Status Key:	Demonstrably Secure	G5					
	Apparently secure	G4	S4	Typically, > 100 occurrences			
	Vulnerable, Rare	G3	S3	Typically, 21 - 100 occurrences			
	Imperiled	G2	S2	Typically, 6 - 20 occurrences			
	Critically imperiled	G1	S1	Typically, 5 or fewer occurrences			

Table A- 4. Deer Management Area Population 2009

Deer Management Unit	County	SAK Total Deer Population 2009	DNR Deer Population Goal	Over or Under (-) Goal, %	Deer/Vehicle Collisions (DVCs) 2009	Deer per DVC
1	Alcona	25,253	14,000	80.4%	441	1.75
20	Crawford	13,322	14,000	-4.8%	244	1.83
35	Iosco	22,591	17,500	29.1%	393	1.74
43	Lake	20,861	26,000	-19.8%	260	1.25
51	Manistee	23,547	15,500	51.9%	480	2.04
53	Mason	32,163	23,000	39.8%	764	2.38
62	Newaygo	36,130	38,000	-4.9%	808	2.24
64	Oceana	17,555	18,000	-2.5%	527	3.00
68	Oscoda	21,755	15,000	45.0%	154	0.71
83	Wexford	19,294	20,000	-3.5%	416	2.16
452	"Core"	26,200	18,000	45.6%	Included in other DMUs	Included in other DMUs
	Overall	**258,671**	**219,000**	**18.1%**	**4,487**	**1.73**

Maps

Map A-1 through Map A-12 are found on the following pages. Please see the enclosed envelope for full color maps of the 14 analysis areas (Map A-13 through Map A-26) and noise sources in the 14 analysis areas (Map A-27 through Map A-40)

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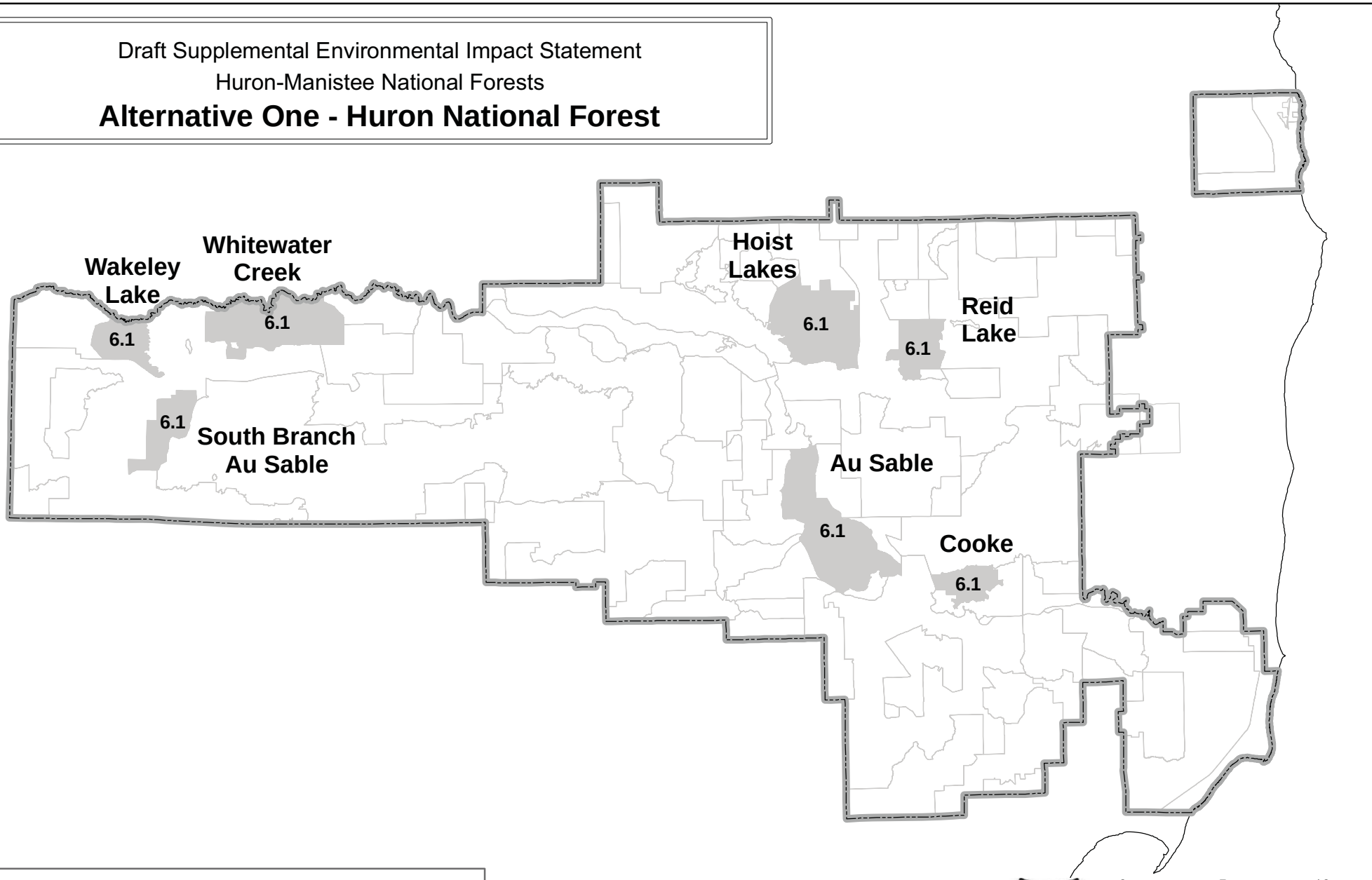
Alternative One - Huron National Forest



Management Area Designation:
6.1 Semiprimitive Nonmotorized

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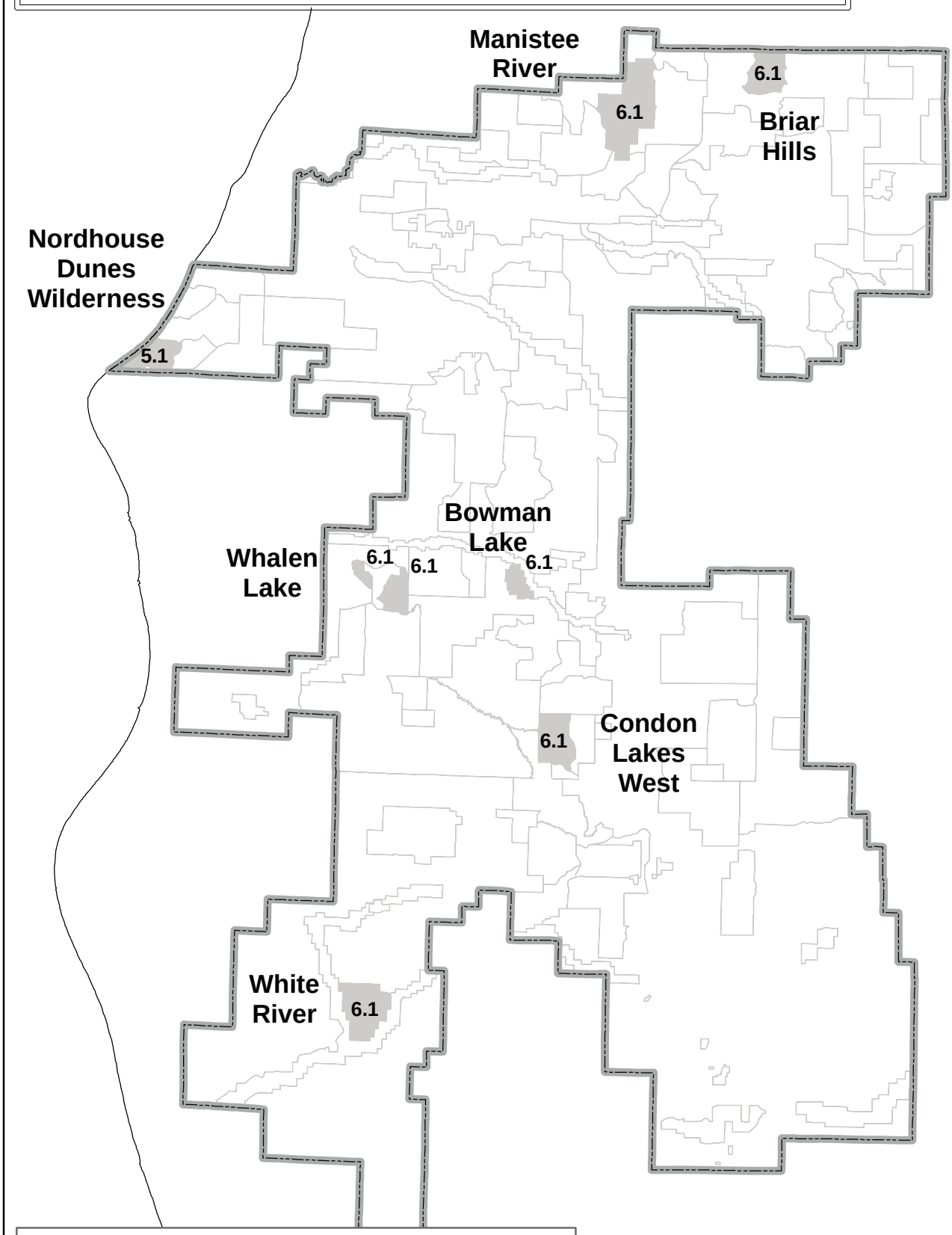

Management Area Designation:

5.1 Wilderness

6.1 Semiprimitive Nonmotorized

0 5 10 Miles

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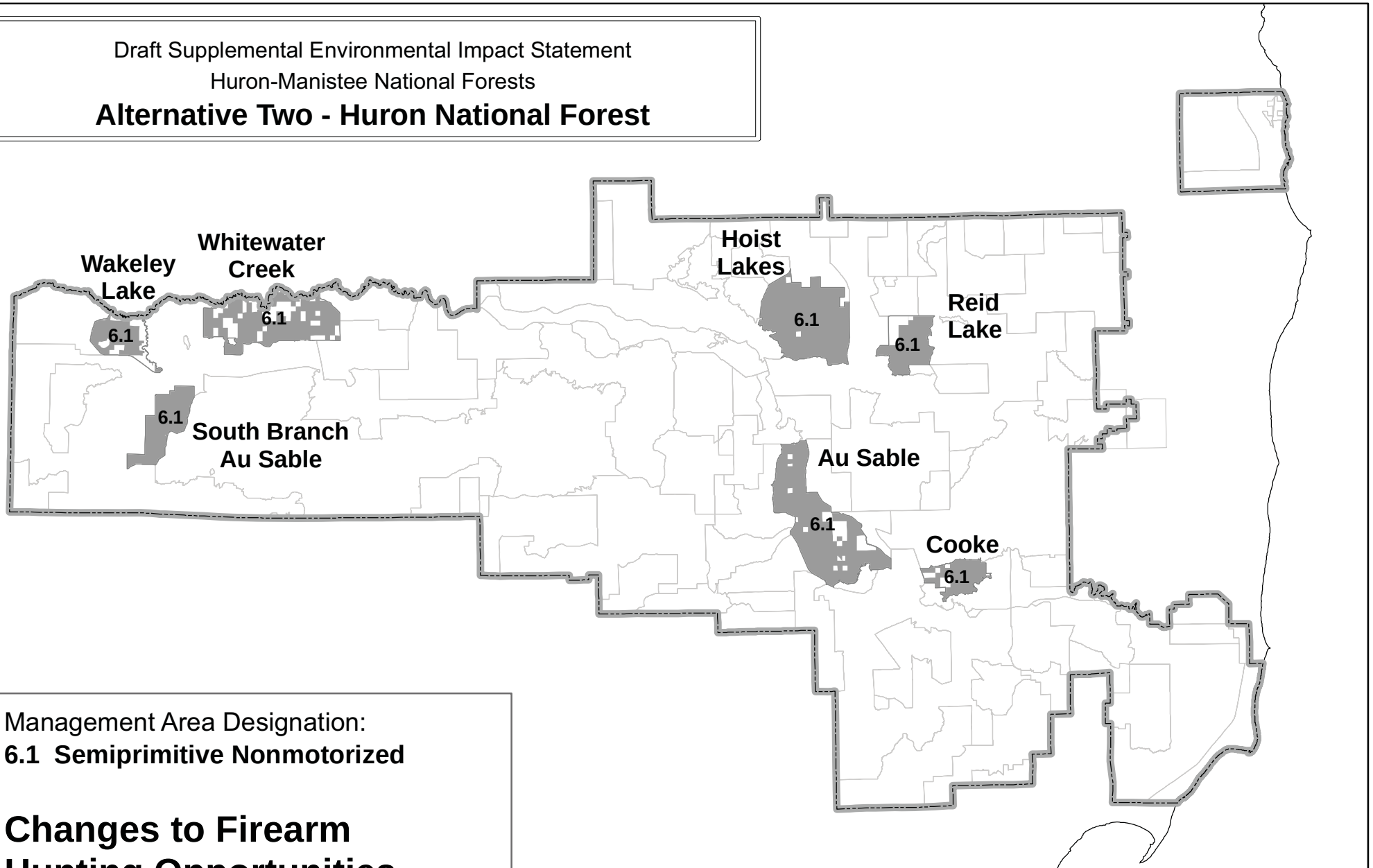
Alternative Two - Huron National Forest



Management Area Designation:
6.1 Semiprimitive Nonmotorized

Changes to Firearm Hunting Opportunities

Firearm Hunting Banned (except for tribal rights)

0 5 10 Miles

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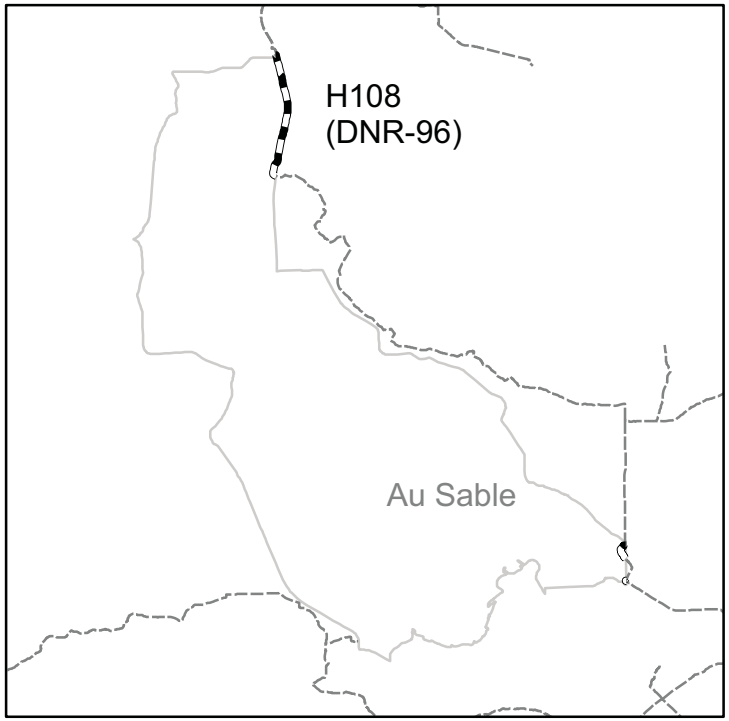
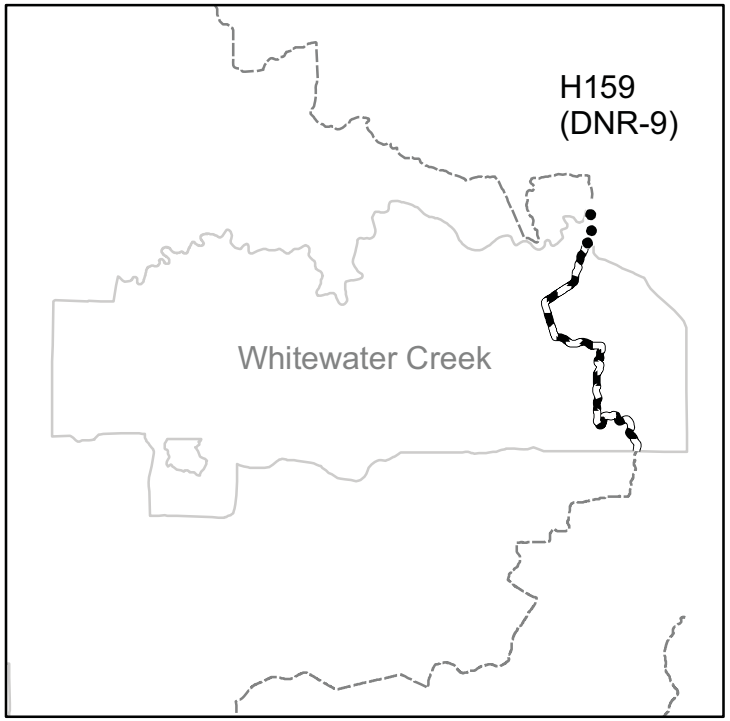
Changes to Snowmobiling Opportunities





Forest Service Jurisdiction - Close Trail
County Jurisdiction - Remove Trail from Forest Service System
Other Snowmobile Trail
Project Area Boundary

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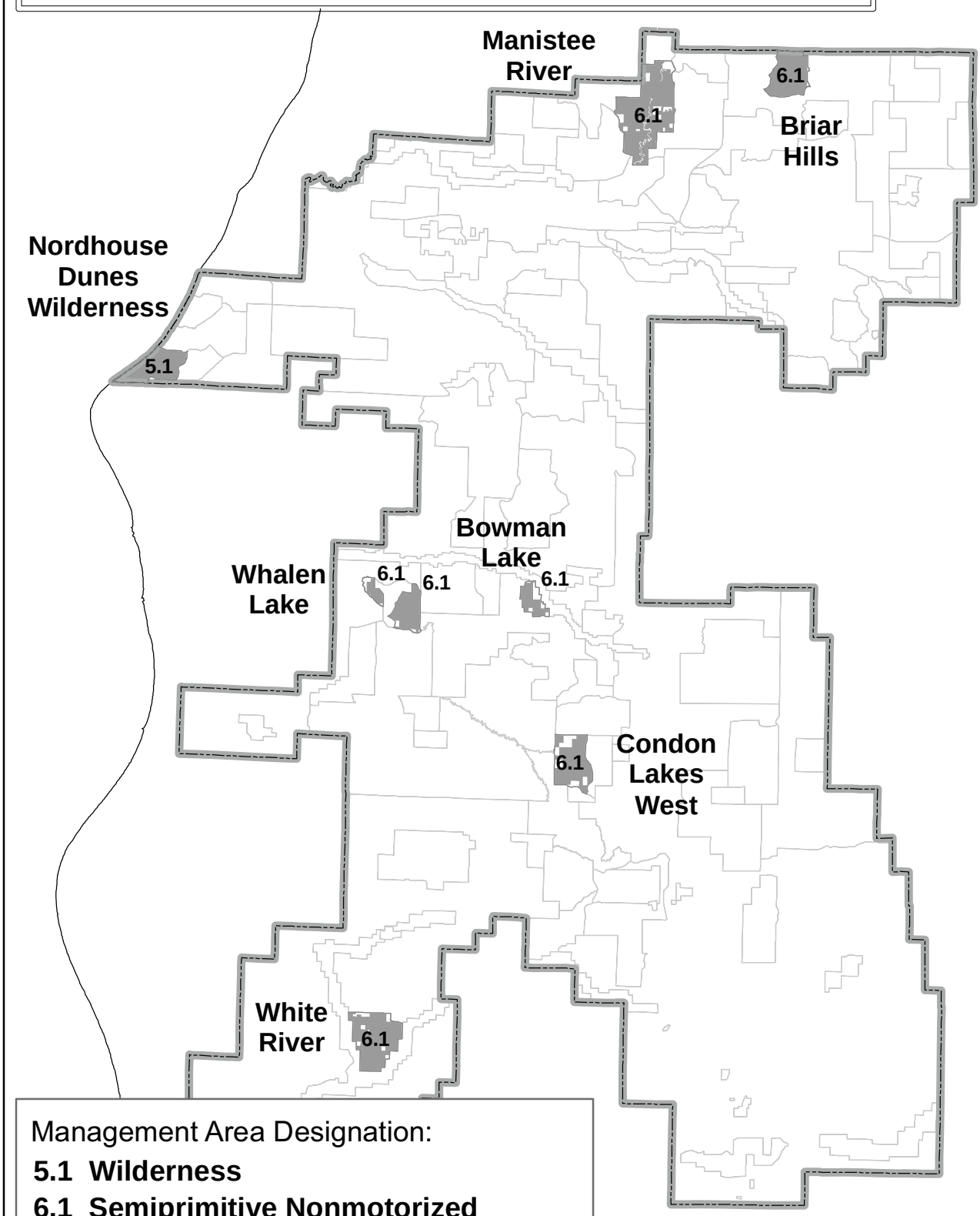

Management Area Designation:

5.1 Wilderness

6.1 Semiprimitive Nonmotorized

Changes to Firearm Hunting Opportunities

Firearm Hunting Banned (except for tribal rights)

0 5 10 Miles

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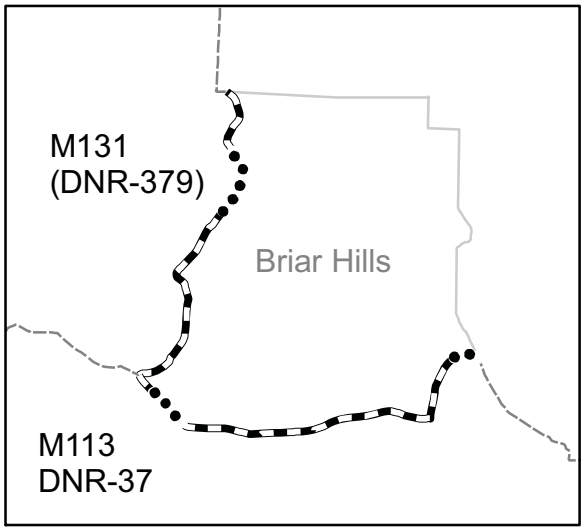

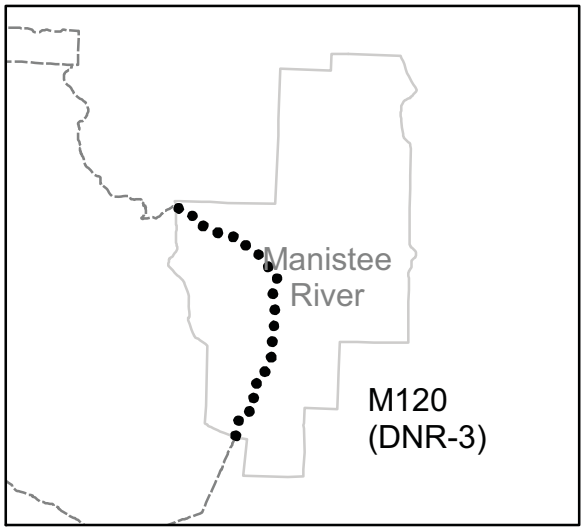

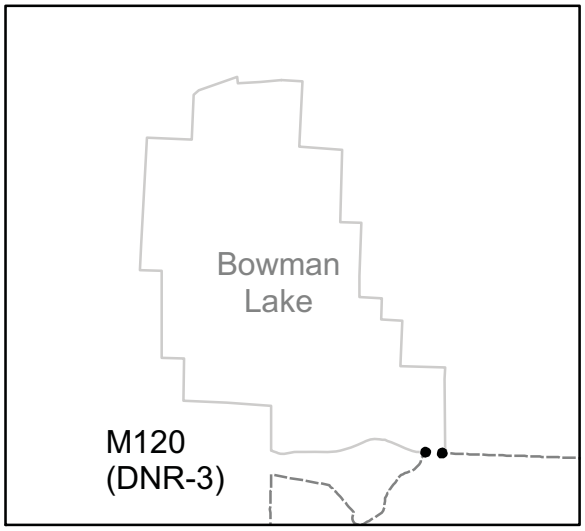

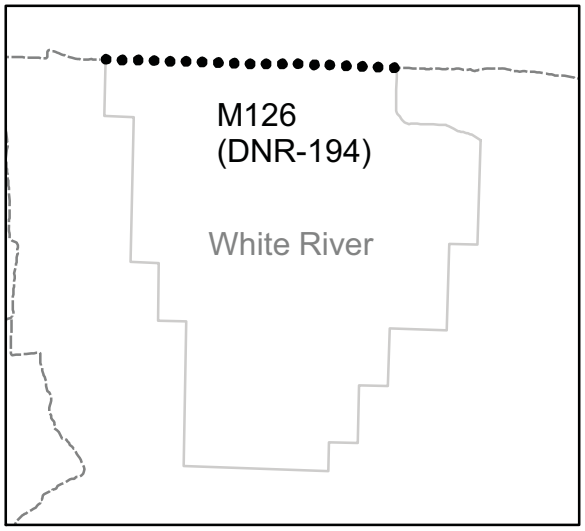

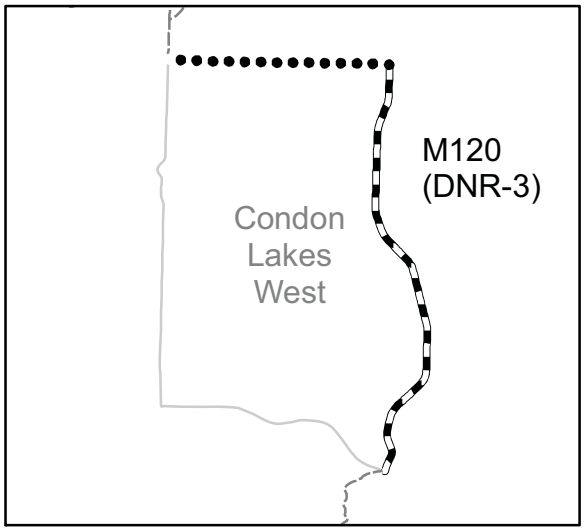

Changes to Snowmobiling Opportunities

- Forest Service Jurisdiction - Close Trail
- County Jurisdiction - Remove Trail from Forest Service System
- Other Snowmobile Trail
- Project Area Boundary

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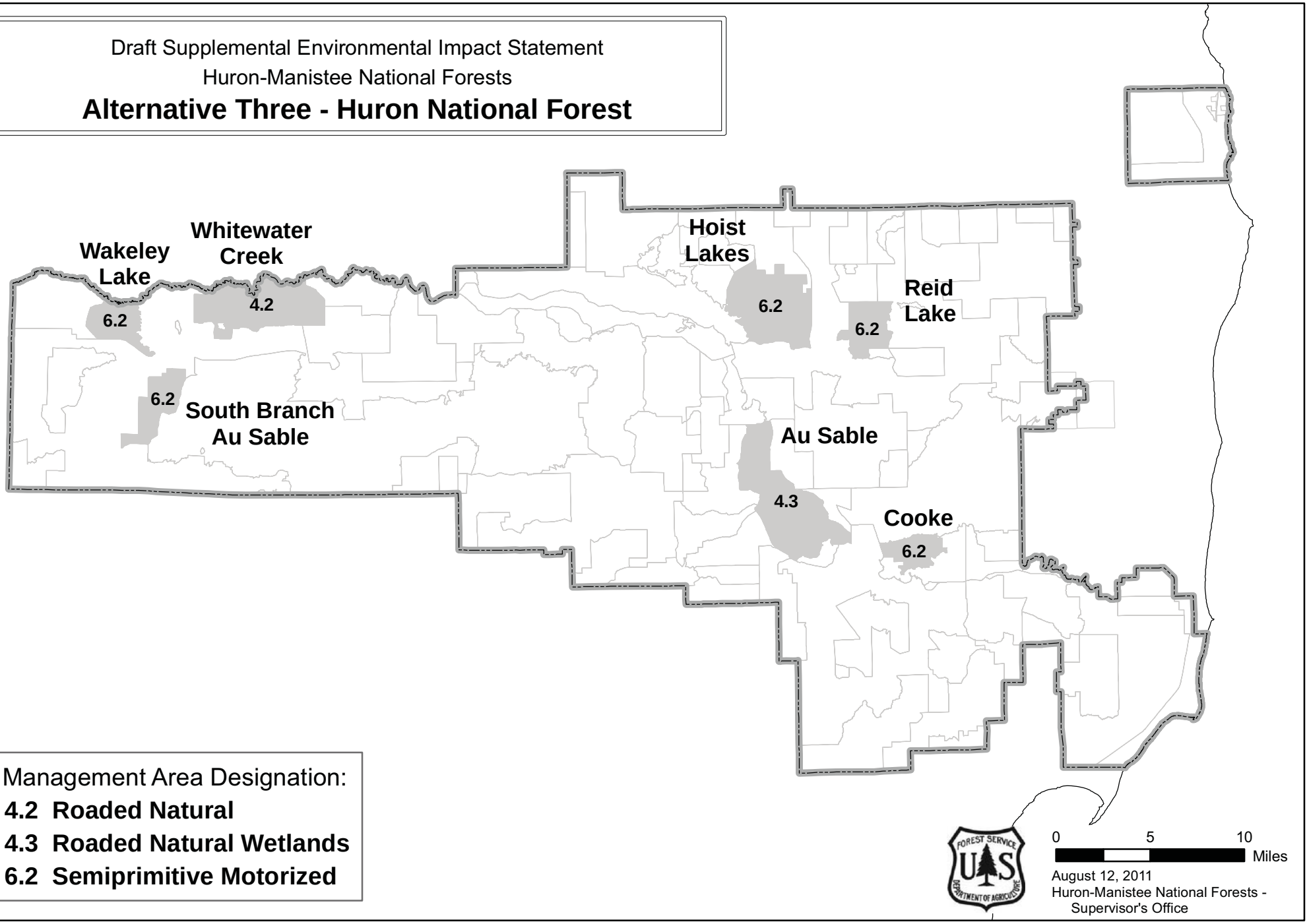
Alternative Three - Huron National Forest



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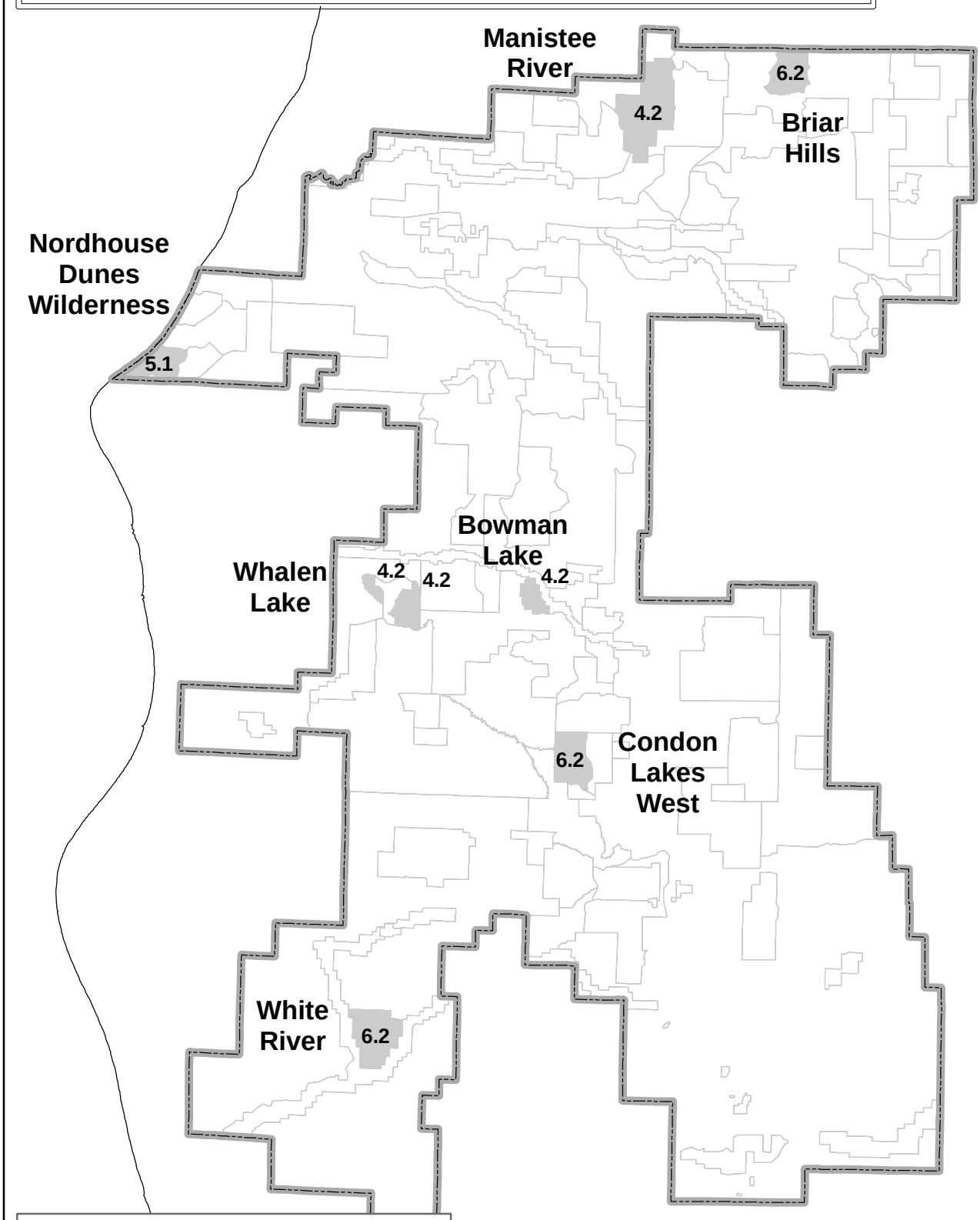
Alternative Three - Manistee National Forest



Management Area Designation:

4.2 Roaded Natural

5.1 Wilderness

6.2 Semiprimitive Motorized

0 5 10 Miles

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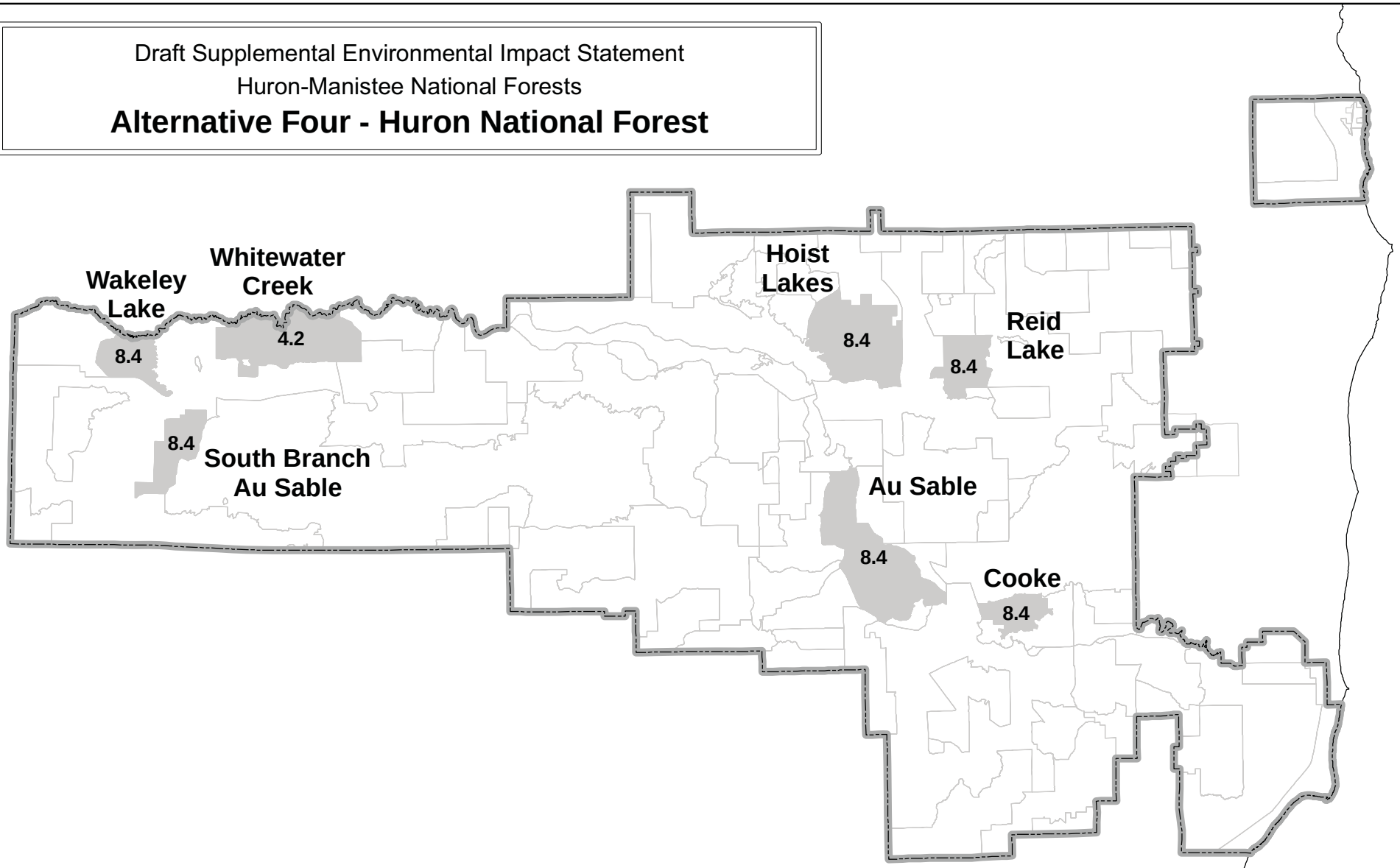
Alternative Four - Huron National Forest



Management Area Designation:
4.2 Roaded Natural
8.4 Special Area

0 5 10 Miles

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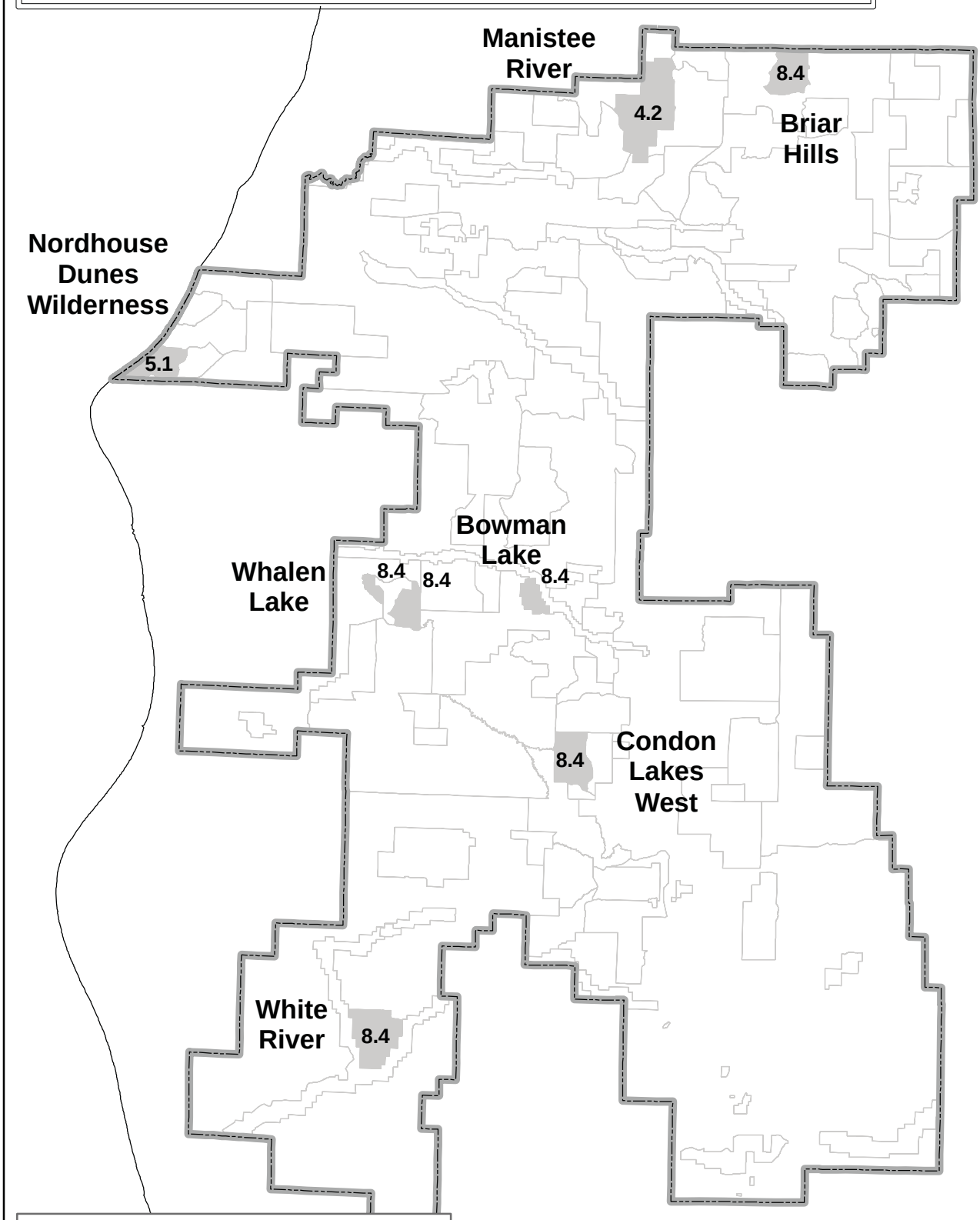
Alternative Four - Manistee National Forest



Management Area Designation:

4.2 Roaded Natural

5.1 Wilderness

8.4 Special Area

0 5 10 Miles

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Michigan DNR Designated Snowmobile Trails

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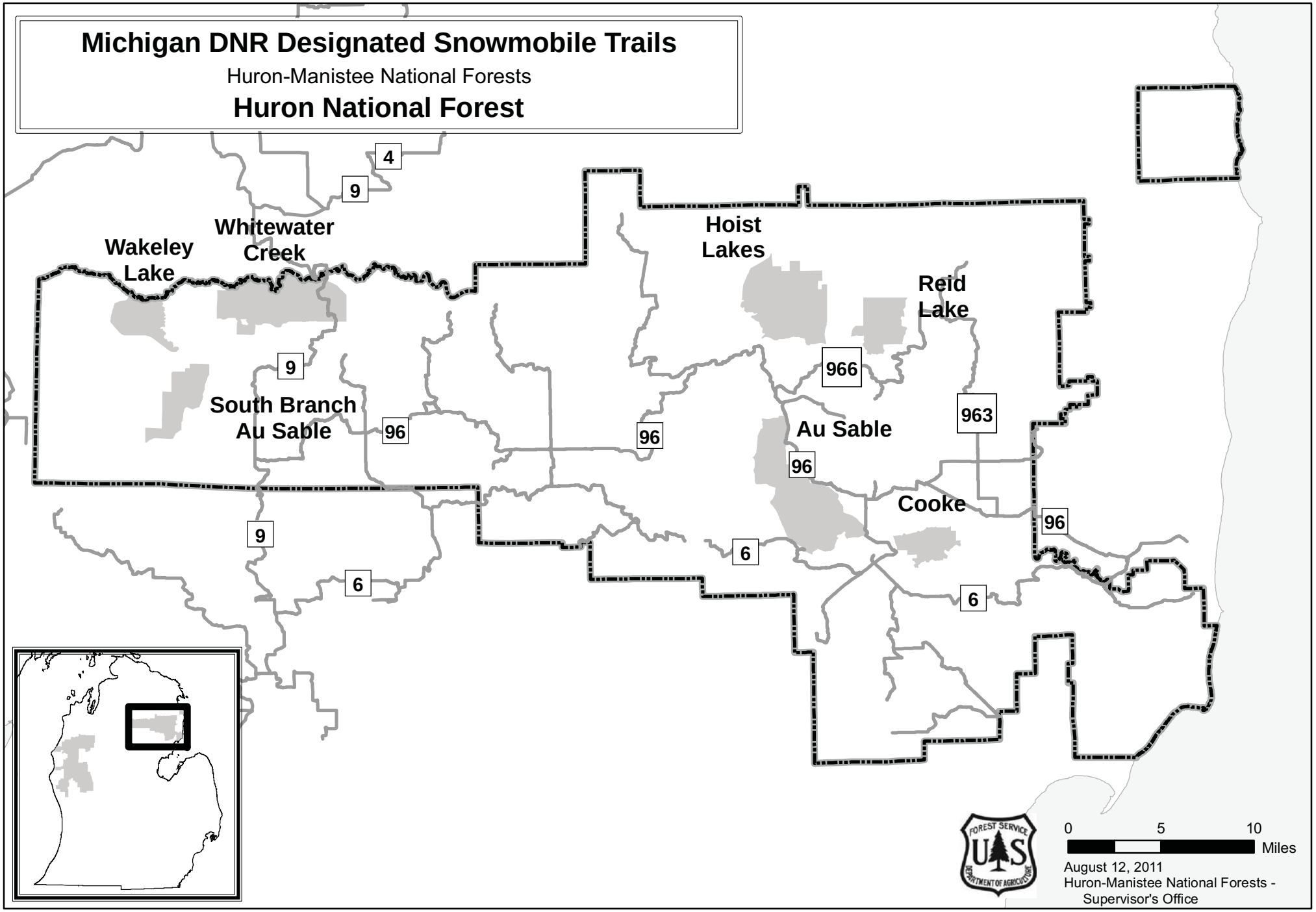
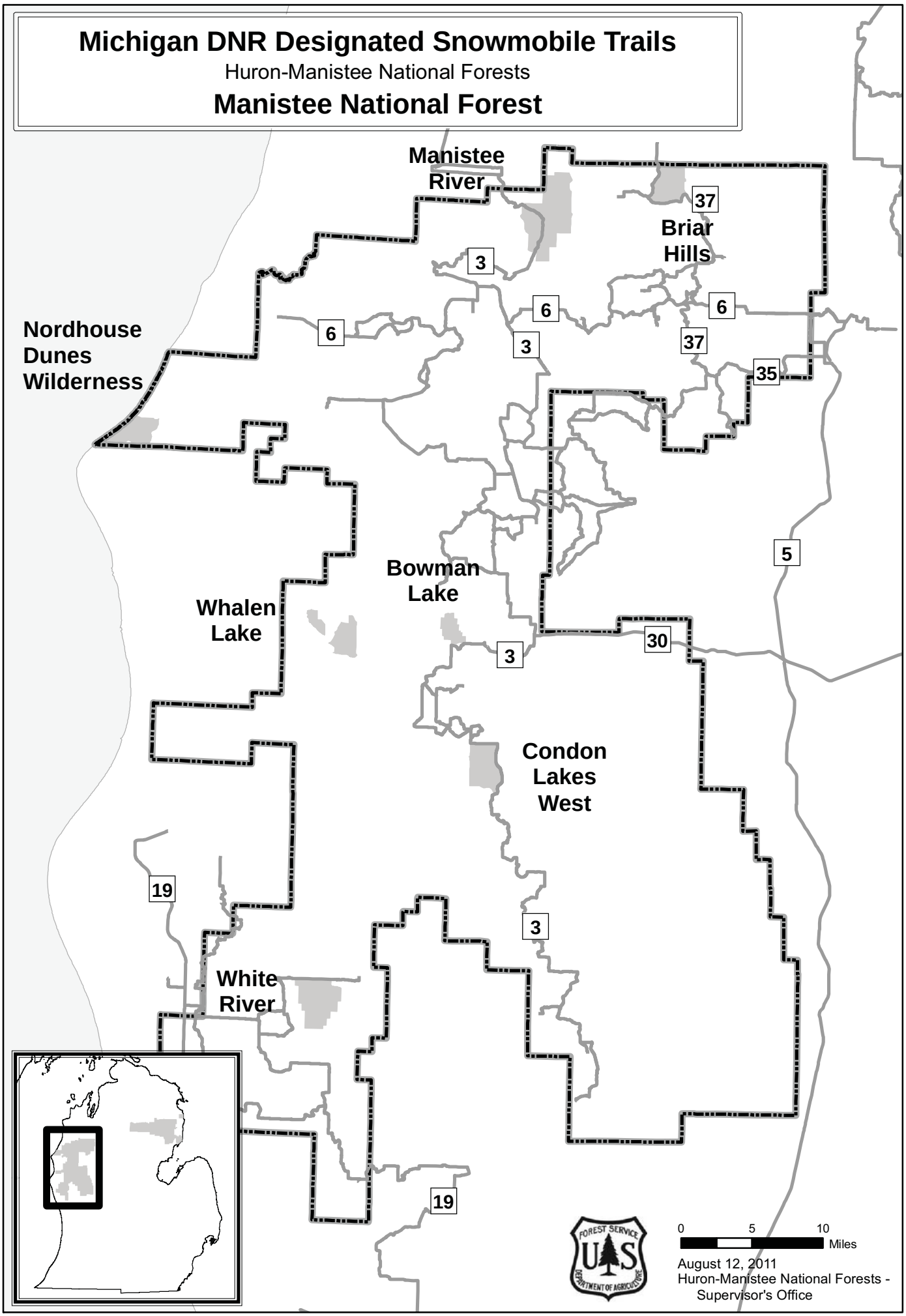
Huron National Forest



Michigan DNR Designated Snowmobile Trails

Huron-Manistee National Forests

Manistee National Forest



Appendix B – Management Area Changes

Introduction

This Appendix depicts changes to the 2006 Forest Plan Management Areas affected by the four alternatives, including their associated Goals and Objectives, Desired Future Condition, and Standards and Guidelines.

This section reproduces only the pertinent 2006 Forest Plan Management Areas (M.A.) that would have a propensity to change with implementation of Alternative 2, 3 or 4. Those M.A.s include :

4.2 – Roaded Natural Sandy Plains and Hills

4.3 – Roaded Natural Wetlands

5.1 – Wilderness

6.1 – Semiprimitive Nonmotorized Areas

6.2 – Semiprimitive Motorized Areas

8.4 – Special Areas

All other 2006 Forest Plan M.A.s are not affected by any of the four Alternatives; they may be reviewed in the 2006 Forest Plan.

Standards and Guidelines from Chapter 2 do not change across alternatives and apply to each of the following management areas as well as the individual management area direction. As in the 2006 Forest Plan, if there are conflicting Standards or Guidelines from Chapter 2, the individual management area direction identified in this chapter takes precedent.

Table B- 1 illustrates the differences among the four Alternatives.

Table B- 1. SEIS Alternatives by Issues by Project Area

Project Area	Firearm Hunting Ban	Snowmobile Trail Closure	Management Area Designation
Alternative 1			
Au Sable	No	No	6.1
Bowman Lake	No	No	6.1
Briar Hills	No	No	6.1
Condon Lakes West	No	No	6.1
Cooke Pond	No	N/A	6.1
Hoist Lakes	No	N/A	6.1
Manistee River	No	No	6.1
Reid Lake	No	N/A	6.1
South Branch Au Sable	No	N/A	6.1
Wakeley Lake	No	N/A	6.1

Project Area	Firearm Hunting Ban	Snowmobile Trail Closure	Management Area Designation
Whalen Lake	No	N/A	6.1
White River	No	No	6.1
Whitewater Creek	No	No	6.1
Nordhouse Dunes Wilderness	No	N/A	5.1
Alternative 2			
Au Sable	Yes	Yes	6.1
Bowman Lake	Yes	Yes	6.1
Briar Hills	Yes	Yes	6.1
Condon Lakes West	Yes	Yes	6.1
Cooke Pond	Yes	N/A	6.1
Hoist Lakes	Yes	N/A	6.1
Manistee River	Yes	Yes	6.1
Reid Lake	Yes	N/A	6.1
South Branch Au Sable	Yes	N/A	6.1
Wakeley Lake	Yes	N/A	6.1
Whalen Lake	Yes	N/A	6.1
White River	Yes	Yes	6.1
Whitewater Creek	Yes	Yes	6.1
Nordhouse Dunes Wilderness	Yes	N/A	5.1
Alternative 3			
Au Sable	No	No	4.3
Bowman Lake	No	No	4.2
Briar Hills	No	No	6.2
Condon Lakes West	No	No	6.2
Cooke Pond	No	N/A	6.2
Hoist Lakes	No	N/A	6.2
Manistee River	No	No	4.2

Project Area	Firearm Hunting Ban	Snowmobile Trail Closure	Management Area Designation
Reid Lake	No	N/A	6.2
South Branch Au Sable	No	N/A	6.2
Wakeley Lake	No	N/A	6.2
Whalen Lake	No	N/A	4.2
White River	No	No	6.2
Whitewater Creek	No	No	4.2
Nordhouse Dunes Wilderness	No	N/A	5.1
Alternative 4			
Au Sable	No	No	8.4
Bowman Lake	No	No	8.4
Briar Hills	No	No	8.4
Condon Lakes West	No	No	8.4
Cooke Pond	No	N/A	8.4
Hoist Lakes	No	N/A	8.4
Manistee River	No	No	4.2
Reid Lake	No	N/A	8.4
South Branch Au Sable	No	N/A	8.4
Wakeley Lake	No	N/A	8.4
Whalen Lake	No	N/A	8.4
White River	No	No	8.4
Whitewater Creek	No	No	4.2
Nordhouse Dunes Wilderness	No	N/A	5.1

Alternative 1 – No Action Alternative (2006 Forest Plan)

This section reproduces only the pertinent 2006 Forest Plan Management Areas (M.A.) that would have a propensity to change with implementation of Alternatives 2, 3 or 4. Those M.A.s include 4.2, 4.3, 5.1, 6.1, 6.2, and 8.4, as highlighted in Table B- 2.

Management Area Direction for M.A.s noted above in Alternative 1 do not change from the 2006 Forest Plan, including Goals and objectives, Desired Future Condition and Standards and Guidelines. Under the No Action Alternative, current management plans would continue to guide management of the project area. No changes to M.A. designation or ROS classification would be implemented to accomplish project goals. Management of the M.A. 6.1 SPNM and 5.1 Wilderness will continue, as guided by the 2006 Forest Plan.

The following table provides a listing of all the management areas located on the Huron-Manistee National Forests.

Table B- 2. Huron-Manistee National Forests' Management Areas, Alternative 1

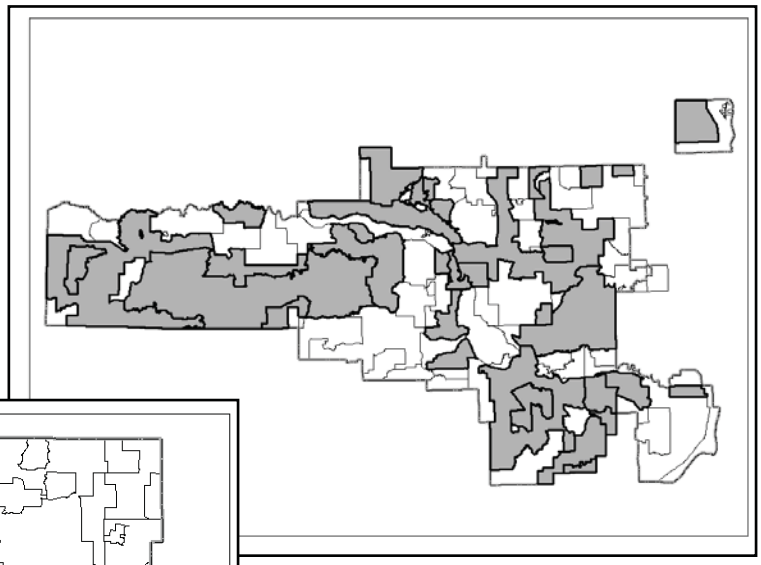
Management Area	Title
2.1	Roaded Natural Rolling Plains and Morainal Hills
4.2	Roaded Natural Sandy Plains and Hills
4.3	Roaded Natural Wetlands
4.4	Rural
5.1	Wilderness
6.1	Semiprimitive Nonmotorized Areas
6.2	Semiprimitive Motorized Areas
7.1	Concentrated Recreation Areas
8.1	Wild and Scenic Rivers
8.2	Research Natural Areas
8.3	Experimental Forests
8.4	Special Areas
9.1	Candidate Research Natural Areas
9.2	Wild and Scenic Study Rivers

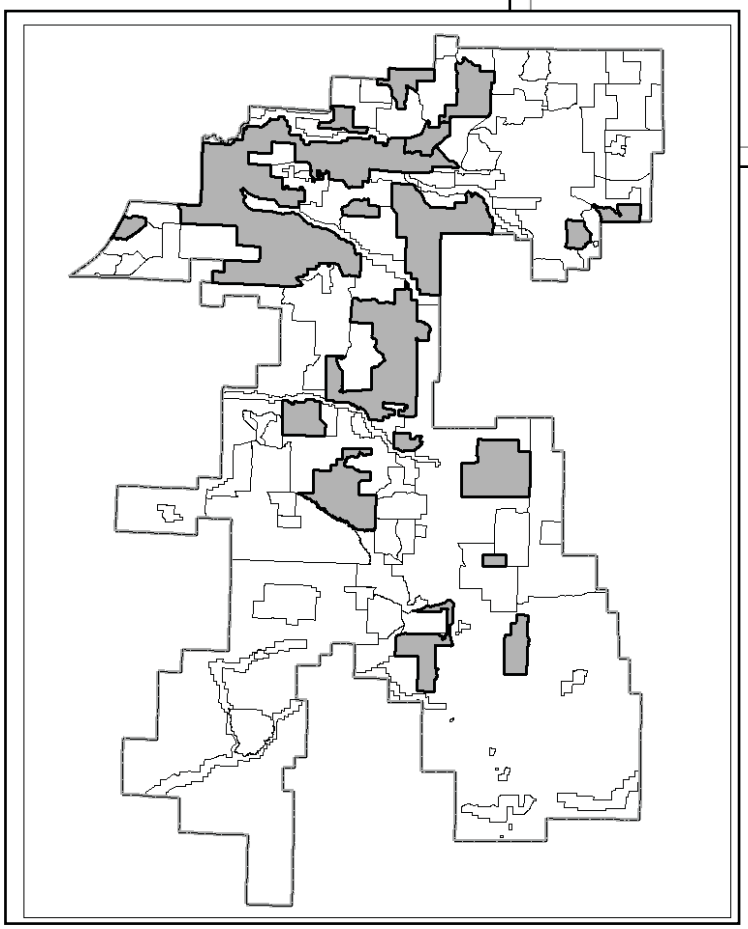
Management Area 4.2 - Roaded Natural Sandy Plains and Hills

Maps:

Shaded area depicts Management Area 4.2.

Map B- 1. Management Area 4.2 on the Huron National Forest





Map B- 2. Management Area 4.2 on the Manistee National Forest

Purpose:

Management activities enhance and increase the variety of wildlife habitats with emphasis given to managing deer, grouse, wildlife and Kirtland's warbler essential habitat. High volumes of timber products are produced. Emphasis includes reducing life-threatening and property-damaging wildfire potential and providing a variety of recreational opportunities.

On the Huron National Forest, management activities maintain and develop essential nesting habitat for the Kirtland's warbler. Moderate to high volumes of softwood and low volumes of hardwood timber products are produced in Kirtland's warbler emphasis areas.

Landscape Description:

Dry, sandy plains and low, dry, sandy hills that support red and jack pines, oak, and aspen typify this area.

A considerable portion of the dry sand outwash plains on the Huron National Forest in Management Area 4.2 will be managed as essential habitat for the Kirtland's warbler. Management activities maintain and develop essential nesting habitat for the Kirtland's warbler in compliance with the provisions of Section 7 of the Endangered Species Act (P.L. 93-205) and as outlined in the Kirtland's Warbler Recovery Plan and the Strategy for Kirtland's Warbler Habitat Management.

This prescription area contains approximately 42 percent of all National Forest System lands on the Huron-Manistee National Forests, which includes approximately 136,000 acres of Kirtland's warbler emphasis areas.

Emphasis areas within Management Area 4.2 are displayed in Table B- 3.

Table B- 3. Emphasis Areas Within Management Area 4.2

Emphasis Area	Location	Objectives
Kirtland's Warbler Management Areas	7 areas on the Huron National Forest.	• Maintain and develop essential nesting habitat for the Kirtland's warbler in compliance with the Kirtland's Warbler Recovery Plan. • Create approximately 1,600 acres of essential breeding habitat each year. Approximately 15,960 acres of essential breeding habitat will be available at any one time into the foreseeable future. This will enable the Forests to provide for a minimum of 420 pairs of Kirtland's warblers.
Grouse	Huron-Manistee National Forests	• Manage aspen intensively to provide quality grouse habitat.
Deer	Huron National Forest	• Manage intensively to provide quality deer habitat with special emphasis on providing winter thermal cover.
Wildlife Emphasis Areas: approximately 8,000 acres.		

Emphasis Area	Location	Objectives
Railroad Lake	Manistee National Forest	• Manage for potential eagle territories.
Red Bridge (East Portion)	Manistee National Forest	• Manage for the American marten. • Manage for wildlife habitats.
Red Bridge (West Portion)	Manistee National Forest	• Manage for wildlife habitats.
White River	Manistee National Forest	• Encourage landowners to request the advice of state and federal biologists on any activities that may affect the bald eagle's nesting territory. • Manage for bald eagle territories and limited deer range.
Alcona Pond	Huron National Forest	• Manage for eagle territories.
Sprinkler Lake	Huron National Forest	• Manage for wildlife habitats; specifically loon, osprey, and bald eagle. • Manage for age class diversity throughout the area and retain some 25 to 30 percent of the oak as over-mature or old growth. • Maintain or develop permanent openings; five (5) percent of the area should ultimately be in grass/forb/shrub openings.

Goals and Objectives and Desired Future Condition:

Goals and Objectives:

- Provide opportunities for dispersed recreational opportunities.
- Provide low amounts of developed recreational opportunities.
- Provide for water-related recreational opportunities.
- Provide a roaded natural recreational experience.
- Provide vegetative age diversity in all vegetation classes.
- Manage permanent openings and/or grasslands to meet species viability needs. Distribution of openings will recognize the contribution of adjacent private lands.
- Provide recreation opportunities consistent with essential habitat maintenance.
- Fulfill the Forests' responsibilities in the interagency effort outlined in the "Strategy for Kirtland's Warbler Habitat Management."

- Management will strive to increase utilization of wood residues and other currently non-merchantable material, when not needed for resource concerns such as soil productivity and wildlife habitat, for fuelwood and other special forest products.
- Quality sites and opportunities for intensive timber management practices will be identified commensurate with the site's ecological capabilities.
- Provide opportunities for mineral exploration and development.

Desired Future Condition

Each prescription area usually contains 1,000 acres or more and ownership is primarily National Forest. Human activities such as vegetative management, facilities, structures, utility corridors, mineral exploration and mineral development are evident. Users are aware of ecosystem processes, habitat management techniques, area closures, visitor information and other services provided. The area will provide roads and trails appropriate for motorized and non-motorized uses. Road closures are evident.

Timber stands are dominated by red, white and jack pines; red, white and black oaks; and aspen. The dominant trees in stands are the same age and about the same size. Stands differ in age and are irregular in size and shape, giving the landscape a mosaic appearance. Openings are interspersed throughout the area. There are approximately 27,700 acres of designated old growth in this management area.

Standards and Guidelines:

1900 PLANNING

I Vegetation Management

A Native prairies–jack pine barrens–may be established where prairie plant species, such as rough fescue, pale agoseris, big and little bluestem, are abundant. **G**

2200 RANGELAND MANAGEMENT

I Grazing will not be permitted in essential Kirtland's warbler habitat. **G**

2300 RECREATION, WILDERNESS AND RELATED RESOURCE MANAGEMENT

I Kirtland's warbler:

A Occupied Kirtland's warbler habitats will be closed to public entry during the breeding and nesting seasons, except for approved tours. **G**

B Closed areas and roads will be posted. Where necessary, roads will be gated. **G**

II Provide for dispersed recreational opportunities consistent with essential habitat maintenance. **G**

III Trails

A General Management

1 Do not construct new trails in Kirtland's warbler essential habitat. **G**

2 Off-Highway Vehicles and motorcycle trails in essential **G**

habitat will be relocated to areas outside of essential habitat where possible.

3 Kirtland's warbler nesting habitat will not be developed within 100 feet of Off-Highway Vehicle and motorcycle trails that cannot be relocated outside of essential habitat. **G**

B Off-Highway Vehicles, Including Snowmobiles

1 Allow competitive use of Off-Highway Vehicles where appropriate. **G**

IV River Road National Scenic Byway

A Federal oil and gas leases will contain a no-surface-occupancy stipulation within 300 feet along the River Road National Scenic Byway. **G**

2400 TIMBER MANAGEMENT

I The following Standards and Guidelines apply to both even-aged and uneven-aged silvicultural systems.

A Uneven- and even-aged systems will be used. They will be consistent with area management objectives and the following restrictions:

1 Even-aged management will be the primary silvicultural system used. **G**

2 The uneven-aged system will normally be used only in northern hardwoods. **G**

3 Stand size in wildlife emphasis areas may be less than 10 acres. **G**

4 Seasonal restrictions on time of entry for timber harvests may be applied to protect other resources, activities and facilities. **G**

5 Standard cutting methods such as single-tree and group selection, shelterwood, seed-tree and clearcutting may be used. **S**

6 Major considerations of sale layout are logging system feasibility; road system adequacy and feasibility; adjacent landowners; visual aesthetics and resource protection, use and facilities. **G**

7 Silvicultural standards will incorporate genetic improvement principles, practices and programs. **G**

8 Regeneration activities:

a Site preparation activities can include mechanical, prescribed fire, hand and chemical. **G**

b For revegetation, use native vegetative species for timber production purposes. Revegetation activities can include natural– **G**

preferred–artificial or seeding methods.

c Fertilization may be used to establish vegetation on disturbed areas. Manage use of fertilizers or soil enrichments to prevent movement into lakes and streams. **G**

II The following Standards and Guidelines apply only to the even-aged silvicultural system:

A Temporary openings created by the application of the even-aged silvicultural system:

1 Will be separated by a stand of at least 10 acres, except in wildlife emphasis areas. **G**

2 Regeneration harvests will be 40 acres or less, except in Kirtland's Warbler Management Areas. **G**

3 In deer, grouse and wildlife emphasis areas, temporary openings created by even-aged management will generally not exceed 15 acres. They may be as large as 40 acres in major deer wintering or adjacent areas, or for golden-winged warbler may be 25 acres. **G**

B Firewood gathering will be allowed except in old growth areas. A permit is required. **G**

C Intermediate treatment guidelines include:

1 Using mechanical, chemical or hand release methods in all vegetative types. **G**

2 Pruning for timber visual improvement, safety and wildlife. **G**

3 Thinning. **G**

4 Using precommercial thinnings to maintain winter thermal cover for deer in lowland hardwood and conifer types. **G**

D Harvest guidelines include the following: (See Appendix B for a discussion of each harvest method):

1 The clearcutting method may be used only for jack, red and white pines; oak; aspen; lowland conifers and northern hardwoods with adequate advanced regeneration; **G**

2 The seed-tree cutting method may be used only for jack, red and white pines and lowland conifers; and **G**

3 The shelterwood cutting method may be used only for jack, red and white pines; all oak; northern hardwoods; lowland conifers and lowland hardwoods. **G**

E Allow commercial thinning in all vegetative types. Precommercial thinning in all types is allowed if necessary to meet objectives of timber, wildlife and/or visual quality objectives. **G**

2600 WILDLIFE, FISH AND SENSITIVE PLAN HABITAT MANAGEMENT

I General Management

A Mesic Grasslands

1 Manage mesic grassland habitats as areas 250 acres or larger. **G**

2 If 250-acre areas are not attainable, provide multiple patches 75 acres or larger, which total at least 250 acres within a 640-acre area. **G**

3 Manage multiple habitat areas within one mile of each other to increase suitability if possible. **G**

B Dry Grasslands **G**

1 Manage dry grassland habitat, 250 acres or larger in Landtype Associations 1 and 2. Manage multiple habitats as blocks when they are within one mile of each other to increase suitability. **G**

C Provide for waterhole development or restoration where surface runoff and soil conditions permit. **G**

II Endangered and Threatened Species and Their Management

A Kirtland's Warbler

1 Management of essential habitat will be consistent with the Strategy for Kirtland's Warbler Habitat Management, the Kirtland’s Warbler Recover Plan and the guidelines below. **G**

2 Develop Kirtland's warbler breeding habitat by designing and configuring treatment blocks that mimic the regeneration effects of wildfire. **G**

3 Prepare treatment blocks for regeneration by clearcutting. **G**

4 Treatment blocks will be no greater than 550 acres unless reviewed by the Regional Forester. **G**

5 If temporary openings created by adjacent treatment blocks exceed 550 acres, one block will be stocked before the other is sold. **G**

6 Harvesting of immature stands is permitted to create large treatment blocks. **G**

7 Provide 15 to 25 snags per acre in treatment blocks. Table III-4 displays wildlife structure and forage prescriptions for Management Area 4.2KW. **G**

Table B- 4. Wildlife Structure and Forage Prescriptions by Vegetative Treatment for Management Area 4.2 KW

Structural Component	Regeneration Harvest		Intermediate Harvest	
	Number 1/	DBH 2/	Number	DBH
Snags	15-25	> 6	9	9
Mast/Den Trees (All Except)	4		4	
Down Wood	3	10	3	10

1/ Numbers are per acre minimums.

2/ Diameter Breast Height (DBH) = Minimum size objectives are displayed. Diameters should be representative of the largest trees in the stand.

8 The target jack pine seedling density is 1,452 or more trees per acre–5 x 6 spacing over 75 percent of the treatment block–excluding planned openings. **G**

9 Create openings in plantation and in treatment blocks that have regenerated naturally. Openings will be from 0.1 to .25 acre in size, and well distributed over 25 percent of the treatment block. **G**

B Piping Plover

1 Active nest sites and areas used for raising young will be protected from human disturbance and pets. Pets will be required to be on a leash between April 1 and August 31, and at any time near an active nest. **s**

2 The following access restrictions will apply from April 1 to August 31 and any time around active nest sites: **s**

a Except for emergency administrative use, vehicle traffic will be prohibited along the beach. Efforts will be made to coordinate emergency administrative use with individuals knowledgeable of nest sites. **s**

b Trail management and construction will direct the public away from active nest sites. **s**

c Pedestrians will be prohibited from leaving trails and entering nest site areas. **s**

d Kite flying will be prohibited within 650 feet of active nest site areas. **s**

3 Signing and symbolic fencing, such as two strands **G**

of twine tied between posts, will be allowed to keep human activity at least 134 feet away from predator exclosures. If needed, a larger protection area may be designated. Fencing and signing will be installed using current acceptable procedures.

4 Where necessary, nesting and feeding areas will be protected from predators through predator exclosures and other proven devices and methods. Exclosures will be as follows: 5 feet between the nest and the predator exclosure, and 134 feet between predator exclosure and the psychological/ symbolic fencing. Construction will occur at a time that does not subject the eggs to adverse weather during absence of adults. Fencing and signing will be installed using current acceptable procedures. **G**

C Pitcher's Thistle

1 See Chapter II, 2600 for Standards and Guidelines. **G**

IV Regional Forester Sensitive Species

A Standards and Guidelines for the management of Regional Forester Sensitive Species are:

1 Within core northern hardwood habitat areas:

a In 80 percent of the high-quality mesic northern hardwood (ginseng) habitat:

1 Permit non-ground disturbing activities that mimic natural disturbance regimes common to this habitat. **G**

2 Permit maintenance of existing improvements. **G**

b In the remaining 20 percent of the high-quality mesic northern hardwood habitat: **G**

1 Maintain 80 percent crown closure. **G**

2 Allow potential high-quality mesic northern hardwood forest habitat adjacent to core areas to convert to actual high-quality mesic northern hardwood forest habitat. **G**

3 New motorized trails will not be constructed in cedar swamps, hardwood conifer swamps and subirrigated forests unless there are no other reasonable routes. **G**

B Manage wetlands identified as good and excellent sandhill crane nesting habitat to improve habitat conditions for this species. **G**

C Develop and implement management direction for each osprey nesting area and great blue heron colony. **G**

D Cerulean Warbler

1 Timber management and road construction activities should not occur in occupied habitat within 400 feet of a cerulean warbler nest tree, approximately a 10-acre area, during the breeding season. **G**

III Wildlife Emphasis Areas

A Condon Lakes

1 In 25 to 35 percent of selected oak stands, extend the rotation age to 120 years. **G**

2 Identify 25 to 35 percent of the stands in the area to be retained as over-mature. This should be concentrated around the isolated lakes, but there should also be stands identified for this throughout the area. **G**

B Railroad Lake

1 Identify potential bald eagle nest and roost sites, and protect these from development and other activities. **G**

C Red Bridge (East and West)

1 Continue cooperative efforts with Consumers Energy to protect bald eagle that will: **G**

a Maintain the designated buffer zones around the bald eagle nest. **G**

b Identify areas of potential nest sites and protect from development or alteration. **G**

c Where necessary, establish seasonal closures of areas and roads. **G**

d Coordinate fish management activities for Tippy Dam Pond to protect and maintain an adequate food resource for eagles. **G**

e Maintain at least 60 percent of the territory in 60 plus age class. **G**

f Identify 25 percent of the stands in the area to be retained as over-mature or old growth. **G**

D White River

1 Continue or develop cooperative efforts with private landowners that will:

a Establish and maintain protective zones around bald eagle nests. **G**

b Avoid and discourage disturbances during critical periods. **G**

2 Identify areas of potential nest sites and protect these from alteration or development on National Forest System lands. **G**

3 Management for other wildlife habitats should not conflict with the management and protection of potential bald eagle habitat elements. **G**

E Alcona Pond

1	Maintain the bald eagle nest sites and any other potential sites that now exist in their present undisturbed condition.	G
a	Where feasible, all roads and trails on these parcels would be closed and obliterated.	G
b	The only developments or alterations on these tracts that would be permitted would be those that would enhance the nesting ability of the eagles. If recreational activities became a disruption, seasonal closures may be necessary to protect the nest site.	G
F	Sprinkler Lake	
1	Continue cooperative efforts to protect bald eagle that will:	G
a	Maintain the designated buffer zones around the bald eagle nest.	G
b	Identify areas of potential nest sites and protect from development or alteration.	G
c	Where necessary, establish seasonal closures of areas and roads.	G
d	Maintain at least 60 percent of the territory in 60 plus age class.	G
e	Identify 25 percent of the stands in the area to be retained as over-mature or old growth.	G
2	Maintain the aspen type and age class diversity through coordinated regeneration cuts.	G
3	Develop age class diversity in the oak types through regeneration cuts and extend the rotation age of 25 percent of the oak type to produce over-mature or old-growth stands.	G
4	Maintain the walk-in only boat access on the lake and ban motors, except for electric motors.	G
5	Do not increase road density in the area.	G
6	Maintain loon closures.	G
G	Deer Yards	
1	Manage recognized deer yards outside old-growth areas to provide a sustained supply of winter thermal cover and associated browse.	G

2700 SPECIAL USES MANAGEMENT

I	Decisions on applications for special uses involving National Forest System lands will be made on an individual basis.	G
II	Adhere to the Federal Power Act Section 4(e) Forest Service Conditions on the eight hydro-electric projects licensed by the Federal Energy Regulatory Commission.	S
III	Provide for utility transmission corridors. Emphasize the use of	G

corridors when granting appropriate rights of way. Except, discourage utility transmission corridors in Kirtland's Warbler Management Areas.

2800 MINERALS AND GEOLOGY

I Endangered, Threatened and Sensitive Wildlife

A Kirtland's warbler

1 The following stipulations will be incorporated into federal oil and gas leases and recommended to be incorporated into state oil and gas leases on National Forest System lands and shall apply to any operation for which this lease is a part. s

a Kirtland's warbler essential habitat will be available for limited oil and gas development as shown in table III-5:

Table B- 5. Oil and Gas Development Density.

Age of Essential Habitat	Maximum Development Density
0 to 25 years	1 surface location per 640 acres
26 to 40 years	1 surface location per 160 acres
Older than 40 years	1 surface location per 640 acres

b Surface operation location priorities are:

1 First priority for surface operation location will be stands (or inclusions of stands) that are not biologically appropriate for the development of breeding habitat for the Kirtland's warbler.

2 Second priority for surface operation location will be stands within essential habitat that are greater than 26 years old.

3 Third priority for surface operation location will be stands within essential habitat that are 0 to 25 years old.

c Exceptions may be granted through consultation with the Forest Service and the U.S. Fish and Wildlife Service.

2 Common variety mineral deposits will not be developed in areas of essential Kirtland’s warbler habitat. s

3 The following conditions of approval would be attached to any permit for exploration and development. s

a No drilling, exploration, construction or s

maintenance involving the use of heavy equipment shall take place within one-half mile of or create noise greater than 85 decibels in occupied habitat, between May 1 and September 30.

b In occupied habitat, proven wells can be operated between October 1 and April 30, but between May 1 and September 30 only if they are flowing or operated by a bottom-hole pump and: **s**

1 the product is transported by buried pipeline; **s**

2 collection and storage facilities are located off essential habitat where reasonable; **G**

3 noise from production operations will be less than 85 decibels at 100 feet; **s**

4 access is limited to routine monitoring of the well. **s**

4 In all essential habitat, oil and gas development shall be done in such a manner that the management of this habitat through the use of prescribed burning and planting is not precluded. **G**

5 All access roads will be gated and locked. **s**

6 Location of well sites, roads, facilities and pipelines will be approved by the Forest Line Officer in charge prior to construction. **s**

7 A reclamation plan for all wells, pipelines, production facilities and access routes must be submitted to the Forest Line Officer in charge for approval. These plans will detail the replanting and restoration of these areas. Disturbed areas will be restored after completion of drilling and/or production operations. **s**

a Those areas not scheduled for reforestation and all areas disturbed prior to reforestation will receive treatments to establish permanent vegetative cover. The permanent vegetative cover will consist of a mixture of native warm season grasses; such as Big Bluestem, Little Bluestem, Indian grass and a variety of annual forbs and legumes. These will be scheduled for establishment just prior to the next growing season, generally late April, May or early June. If an activity is completed before this timeframe, an annual cover crop with adequate soil nutrients **s**

is required.

b All soil disturbance actions associated with the oil and gas exploration and development activity will receive similar treatments. s

8 Upon the establishment of economically producible reserves, a general hydrocarbon development plan must be submitted. This plan will detail future oil and/or gas development of the newly established field. s

9 Access to oil and gas development is by low standard road with minimum clearing. The access road should be obliterated upon abandonment of the site. G

B Karner Blue Butterfly

1 Federal oil and gas leases will contain a lease notice that the lands are identified as Karner blue butterfly metapopulation areas and occupancy is subject to more restrictive controls than routine areas. s

2 Access to oil and gas development is by low standard road with minimum clearing. These roads are gated. The access road should be obliterated upon abandonment of the site. G

II Wildlife Emphasis Areas

A Federal oil and gas leases will contain a lease notice that the lands are being managed as wildlife emphasis areas and occupancy is subject to more restrictive controls than routine areas. s

B Access to oil and gas development is by low standard road with minimum clearing. These roads are gated. The access road should be obliterated upon abandonment of the site. G

III Common Variety Minerals

A Use of common variety mineral deposits will be considered with the following limitations: G

1 Permit use of common variety mineral deposits subject to the environmental limitations of the site. G

3400 FOREST PEST MANAGEMENT

I In the Kirtland's Warbler Management Areas, pesticides will be used only after consultation and coordination with the U.S. Fish and Wildlife Service. s

II Control of predators and parasites, such as cowbirds, will be completed within the scope of the Recovery Plan and coordinated through the U.S. Fish and Wildlife Service and the Kirtland's Warbler Recovery Team. G

5100 FIRE MANAGEMENT

I Suppression

A Use of tractor plows, retardant, constructed helispots and wheeled vehicles will be common. **G**

II Fire Use and Fuels Treatment

A Constructed fuel barriers will be no longer than eight miles in length, and temporary or permanent openings will be limited to no more than 500 acres. **G**

III Activity fuels (slash) will be treated to a level commensurate with the allowable fire intensity and rate of spread that meets resource objectives in established prescriptions. Treatment along highways and adjacent properties will meet applicable state laws. **G**

IV Management action to address high fuel hazards may occur in old growth when public safety and property are at risk. **G**

7700 TRANSPORTATION SYSTEM

I Kirtland's Warbler/Bald Eagle

A Close roads under National Forest jurisdiction in occupied Kirtland's warbler and bald eagle habitats to public entry during the breeding and nesting seasons, where necessary. **G**

II Oil and Gas

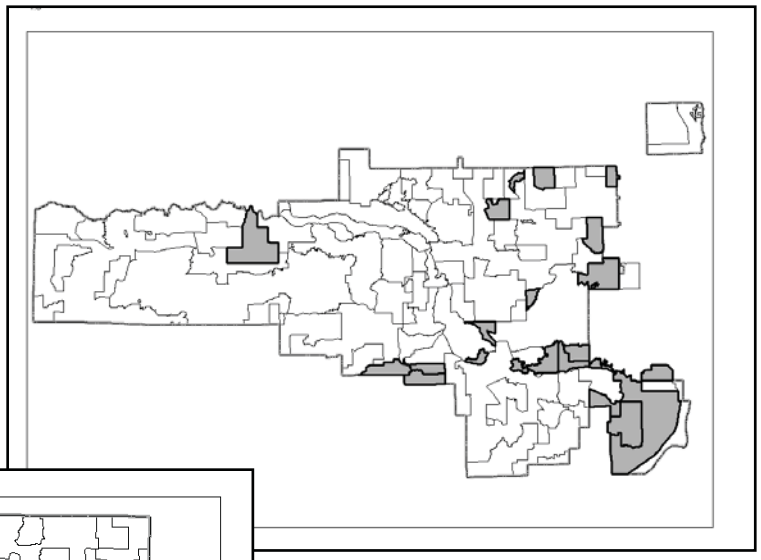
A All temporary roads will be planned and constructed to be revegetated within one year of termination of the contract, lease or permit. **G**

B Arterial roads will be, as a minimum, designed and constructed to transport forest products and accommodate planned motorized recreation use, remain open and be maintained at level 3 standards or higher. **G**

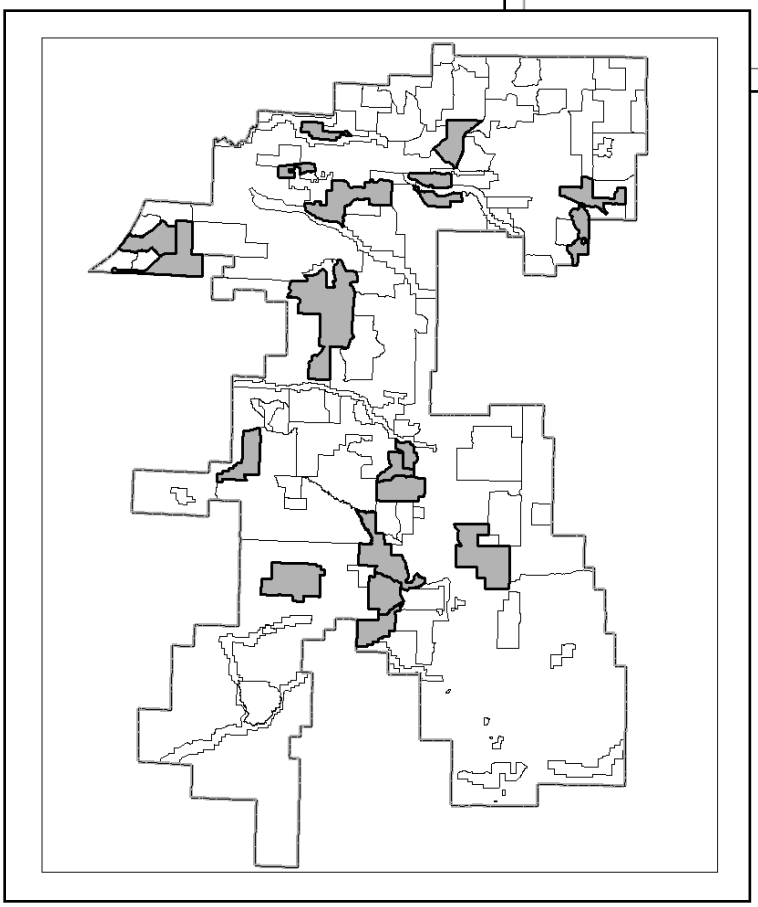
Management Area 4.3 - Roaded Natural Wetlands

Maps:

Shaded area depicts Management Area 4.3.



Map B- 3. Management Area 4.3 on the Huron National Forest



Map B- 4. Management Area 4.3 on the Manistee National Forest

Purpose:

Management activities in these areas provide a variety of forest views and scenes and recreational experiences in a primarily motorized recreational environment. Fish and wildlife are abundant, and efforts are made to increase and enhance various habitats. Emphasis is given to managing deer, grouse and wildlife emphasis areas.

Landscape Description:

These areas are predominately maturing lowland hardwoods and conifer types, aspen, and wetlands. Rivers, lakes and associated riparian zones are common.

This prescription area contains approximately twelve percent of all National Forest System lands on the Huron-Manistee National Forests.

Emphasis areas within Management Area 4.3 are displayed in Table B- 6.

Table B- 6. Emphasis Areas Within Management Area 4.3.

Emphasis Area	Approximate Acreage	Location	Objectives
Grouse	14,100	Huron-Manistee National Forests	• Manage intensively to provide quality grouse habitat.
Deer	14,900	Huron-Manistee National Forests	• Manage intensively to provide quality deer habitat with special emphasis on providing winter thermal cover.
Wildlife Emphasis Areas: Approximately 24,800 acres			
Blockhouse Swamp		Huron National Forest	• Identify the thermal cover and use only those treatments that improve and sustain thermal quality. • Identify and schedule cuts, commercial or non-commercial, that will develop and sustain age class diversity or winter browse conditions in the area. • Maintain existing permanent openings outside of designated old growth.

Emphasis Area	Approximate Acreage	Location	Objectives
Huron Shores		Huron National Forest	• Maintain the beach tracts in their current undeveloped condition. • Identify those portions of the area to be managed through regeneration cuts to provide desired age class diversity for food and cover conditions for various species. • Maintain existing openings outside of designated old growth. • Develop limited access to key habitat management areas. • Consolidate key tracts through acquisition.
Tuttle Marsh		Huron National Forest	• Provide opportunities for various habitat improvement projects within the complex of wetlands. • Provide winter deer range. • Provide habitats in open water and deep marshes for a variety of wildlife species.
Cooke Dam		Huron National Forest	• Obtain cooperation of private landowners to protect potential or existing nest sites and/or acquire conservation easement or fee title to any lands that become available within the territory. • Schedule regeneration cuts to improve winter deer range.
South Branch River		Huron National Forest	• Maintain up to 5 percent of the area as permanent openings outside of designated old growth to provide wildlife forage. • Maintain the integrity of the identified potential eagle nest sites and remoteness of the lakes. • Acquire water frontage lands that become available in this area.
Mio Pond		Huron National Forest	• Acquire private lands within the eagle territory, where possible. • Where possible, reduce road density or close roads.

Emphasis Area	Approximate Acreage	Location	Objectives
Jenks Lake		Manistee National Forest	• Provide habitat for potential eagle territories. • Acquire key tracts as they become available.
Otterman Lake		Manistee National Forest	• Provide thermal cover for deer in the winter deer range within the lowland conifer areas. • Manage to improve browse conditions in intermingled deciduous stands.
Oxford Swamp (North and South Portions)		Manistee National Forest	• Where feasible, maintain isolation of the wetlands. • Maintain or develop grassy openings outside designated old growth–5 acres or larger when possible. • Improve wetlands through brush removal to favor herbaceous plant communities. • Develop a long-range treatment schedule for the timber stands within the area that will maintain present species composition or favor the short lived types adjacent to lowland conifer and ultimately provide a “balance” of age classes throughout the area. This would include: • Making regeneration cuts in 15 percent or more of the upland and lowland hardwood stands each decade. • Maintaining and improving the lowland conifer stands for thermal cover. Stands of this type should be held as long as possible, but they will have to eventually be regenerated. • Identifying stands, 20 to 80 percent of the forested area, that will become over-mature, preferably within close proximity to open wetlands.

Emphasis Area	Approximate Acreage	Location	Objectives
Olga Lake		Manistee National Forest	• Develop and improve non-forested wetlands by increasing open water areas, providing more nesting structures and enhancing the quality of wetland vegetation. • Maintain and improve lowland conifer stands for thermal cover. • Identify stands for regeneration cuts to improve age class diversity and provide habitat for grazers, browsers and early succession species, and to provide horizontal diversity and low cover; including conversion of pine to other timber types or to grass/shrub openings. • Maintain or develop openings outside of designated old growth to enhance production of forage in the area and provide nesting or feeding areas for species such as bluebirds, vesper sparrows, voles, waterfowl, snapping turtles and sandhill cranes. • Manage the American marten in cooperation with the Michigan Department of Natural Resources, university researchers and volunteers in monitoring movements and reproduction success.
Walkinshaw Wetlands		Manistee National Forest	• Manage the wetlands to provide desired water and vegetation conditions. • Continue vegetation management through grazing and grass-land improvement that will maintain desired conditions for sandhill crane and other species associated with the wetland/ grassland communities. • Maintain or develop dispersed grassy openings, outside designated old growth, in the west area.

Goals and Objectives and Desired Future Condition:

Goals and Objectives:

- Provides high amounts of dispersed recreational activities such as hunting, fishing, viewing scenery, bird watching, canoeing, with limited Off-Highway Vehicle use.
- Provides low to moderate amounts of recreational facilities such as canoe landings, campgrounds and picnic areas.
- Provides low volumes of timber products.
- Management will strive to increase utilization of wood residues and other currently non-merchantable material, when not needed for resource concerns such as soil productivity and wildlife habitat, for fuelwood and other special forest products.
- Quality sites and opportunities for intensive timber management practices will be identified commensurate with the site's ecological capabilities.
- Manage permanent openings and/or grasslands to meet species viability needs. Distribution of openings will recognize the contribution of adjacent private lands.
- Manage for mesic grassland habitats.
- Provide opportunities for mineral exploration and development.

Desired Future Condition:

Each prescription area usually contains more than 1,000 acres, and ownership is primarily National Forest System lands. Human activities are evident and interaction among users is moderate. The area will provide roads and trails appropriate for motorized and non-motorized uses. A net reduction of road miles is noticeable.

Extensive stands of softwood and hardwood species occur throughout the area and create a natural forest appearance. The dominant tree species are aspen, cedar, hemlock, red maple, elm, black ash and paper birch. There are approximately 29,100 acres of designated old growth in this management area. Openings are interspersed throughout the area.

Standards and Guidelines:

2200 RANGELAND MANAGEMENT
- I Allow grazing only to maintain specific wildlife habitats. **G**

2300 RECREATION, WILDERNESS AND RELATED RESOURCE MANAGEMENT
- I Trails (Other than North Country National Scenic Trail)
  - A Off-Highway Vehicles, Including Snowmobiles
    - 1 Allow competitive use of Off-Highway Vehicles where appropriate. **G**
- II River Road National Scenic Byway
  - A Federal oil and gas leases will contain a no surface occupancy stipulation within 300 feet along the River Road **G**

National Scenic Byway.

2400 TIMBER MANAGEMENT

I The following Standards and Guidelines apply to both even- and uneven-aged silvicultural systems.

A Uneven- and even-aged systems will be used. They will be consistent with area management objectives and the following restrictions:

1 Even-aged management will be the primary silvicultural system used. **G**

2 The uneven-aged system will normally be used only in northern hardwoods. **G**

3 Stand size in wildlife emphasis areas may be less than 10 acres. **G**

4 Seasonal restrictions on time of entry for timber harvests may be applied to protect other resources, activities and facilities. **G**

5 Standard cutting methods such as single-tree and group selection, shelterwood, seed-tree and clearcutting may be used. **S**

6 Major considerations of sale layout are logging system feasibility, road system adequacy and feasibility, adjacent landowners, visual aesthetics and resource protection, use and facilities. **G**

7 Silvicultural standards will incorporate genetic improvement principles, practices and programs. **G**

8 Regeneration activities:

a Site preparation activities can include mechanical, prescribed fire, hand and chemical. **G**

b For revegetation, use native vegetative species for timber production purposes. Revegetation activities can include natural–preferred–artificial or seeding methods. **G**

c Fertilization may be used to establish vegetation on disturbed areas. Manage use of fertilizers or soil enrichments to prevent movement into lakes and streams. **G**

II The following Standards and Guidelines apply only to the even-aged silvicultural system:

A Temporary openings created by the application of the even-aged silvicultural system:

1 Will be separated by a stand of at least 10 acres, except in wildlife emphasis areas. **G**

2 In deer, grouse and wildlife emphasis areas, temporary **G**

openings created by even-aged management will generally not exceed 15 acres. They may be as large as 40 acres in major deer wintering or adjacent areas, or for golden-winged warbler they may be 25 acres.

B Firewood gathering will be allowed except in old growth areas. A permit is required. **G**

C Intermediate treatment guidelines include:

1 Using mechanical, chemical, or hand release methods in all vegetative types. **G**

2 Pruning for timber–crop trees–visual improvement, safety and wildlife–fruit trees. **G**

3 Thinning. **G**

4 Using precommercial thinnings to maintain winter thermal cover for deer in lowland hardwood and conifer types. **G**

D Harvest guidelines include the following: (See Appendix B for a discussion of each harvest method):

1 The clearcutting method may be used only for jack, red and white pines; oak; aspen; lowland conifers and northern hardwoods with adequate advanced regeneration. **G**

2 The seed-tree cutting method may be used only for jack, red and white pines and lowland conifers. **G**

3 The shelterwood cutting method may be used only for jack, red and white pines; all oak, northern hardwoods; lowland conifers and lowland hardwoods. **G**

E Allow commercial thinning in all vegetative types. Precommercial thinning in all types is allowed if necessary to meet objectives of timber, wildlife and/or visual quality objectives. **G**

2600 WILDLIFE, FISH AND SENSITIVE PLANT HABITAT MANAGEMENT

I General Management

A Mesic Grasslands

1 Manage mesic grassland habitats as areas 250 acres or larger. **G**

2 If 250-acre areas are not attainable, provide multiple patches 75 acres or larger, which total at least 250 acres within a 640-acre area. **G**

3 Manage multiple habitat areas within one mile of each other to increase suitability if possible. **G**

B Dry Grasslands **G**

1 Manage dry grassland habitat, 250 acres or larger in Landtype Associations 1 and 2. Manage multiple habitats as blocks when they are within one mile of each other to **G**

increase suitability.

II Endangered and Threatened Species and Their Habitat Management

A Piping Plover

1 Active nest sites and areas used for raising young will be protected from human disturbance and pets. Pets will be required to be on a leash between April 1 and August 31 and at anytime near an active nest. **s**

2 The following access restrictions will apply from April 1 to August 31 and any time around active nest sites: **s**

a Except for emergency, administrative use, vehicle traffic will be prohibited along the beach. Efforts will be made to coordinate emergency, administrative use with individuals knowledgeable of nest sites. **s**

b Trail management and construction will direct the public away from active nest sites. **s**

c Pedestrians will be prohibited from leaving trails and entering nest site areas. **s**

d Kite flying will be prohibited within 650 feet of active nest site areas. **s**

3 Signing and psychological/symbolic fencing, such as 2 strands of twine tied between posts, will be allowed to keep human activity at least 134 feet away from predator exclosures. If needed, a larger protection area may be designated. Fencing and signing will be installed using current acceptable procedures. **G**

4 Where necessary, nesting and feeding areas will be protected from predators through predator exclosures and other proven devices and methods. Exclosures will be as follows: 5 feet between the nest and the predator exclosure, and 134 feet between predator exclosure and the psychological/symbolic fencing. Construction will occur at a time that does not subject the eggs to adverse weather during absence of adults. Fencing and signing will be installed using current acceptable procedures. **G**

B Piping Plover Critical Habitat

1 Human disturbance, including pets, will be kept at a low level from April 1 through July 1 by prohibiting the following: **G**

a Pets, unless on a leash. **G**

b Loud noise. **G**

c Off-Highway Vehicles. G
d Beach fires within 400 feet of the shoreline. G
e Collecting of driftwood, dunewood, root masses and dead shrubs. G

2 Prohibit sand mining and oil and gas leasing and development in critical habitat, except for reserved and outstanding mineral rights. S

3 Beach stabilization and vegetation planting for artificial dune stabilization will not be allowed if they impair natural processes. S

4 Management activities related to treatment of Lombardy poplar are prohibited between April 1 and July 1, or whenever piping plover are present. S

5 Between April 1 and July 1, prescribed burning activities will be limited to conditions when smoke will not drift into critical habitat areas or whenever piping plover are present. G

6 The following apply for the protection, restoration and maintenance of piping plover critical habitat containing primary constituent elements: G

a No new trail construction will occur. G
b Existing trails will be relocated where necessary. G
c Non-native woody vegetation–non-native invasive species–will be controlled. G
d Surveying will be conducted for the presence of active nest sites. G

C Pitcher's Thistle

1 See Chapter II, 2600 for Standards and Guidelines. G

III Regional Forester Sensitive Species

A Standards and Guidelines for the management of Regional Forester Sensitive Species are:

1 Within core northern hardwood habitat areas:

a In 80 percent of the high-quality mesic northern hardwood (ginseng) habitat:

1 Permit non-ground disturbing activities that mimic natural disturbance regimes common to this habitat. G
2 Permit maintenance of existing improvements. G

b In the remaining 20 percent of the high-quality mesic northern hardwood habitat: G

1 Maintain 80 percent crown closure. G

2 Allow potential high-quality mesic northern hardwood forest habitat adjacent to core areas to G

convert to actual high-quality mesic northern hardwood forest habitat.

3 New motorized trails will not be constructed in cedar swamps, hardwood conifer swamps and sub-irrigated forests unless there are no other reasonable routes. **G**

B Manage wetlands identified as good and excellent sandhill crane nesting habitat to improve habitat conditions for this species. **G**

C Develop and implement management direction for each osprey nesting area and great blue heron colony. **G**

D Cerulean Warbler

1 Timber management and road construction activities should not occur in occupied habitat within 400 feet of a cerulean warbler nest tree–approximately a 10-acre area–during the breeding season. **G**

IV Wildlife Emphasis Areas

A Blockhouse Swamp

1 Maintain low road density within the area. Any roads constructed to facilitate management activities should be closed when the activity ceases. **G**

B Huron Shores

1 Identify and protect potential bald eagle nest sites. **G**

2 Identify thermal cover and apply only those management treatments that improve and sustain cover quality. **G**

C Cooke Dam

1 Establish the required buffer zones around bald eagle nest(s). **G**

2 Identify perch trees and potential nest areas and protect from development or alterations. **G**

3 Reduce the potential of disturbance by closing trails where necessary and feasible. **G**

D South Branch River

1 Identify and protect potential bald eagle nest sites. **G**

2 Maintain a low road and trail density and do not improve or develop access to the lakes within the area. **G**

3 Identify the thermal cover areas used by deer and use only treatments that are needed to improve or sustain thermal qualities. **G**

4 Identify those stands that are to be managed through regeneration cuts to increase and sustain winter browse conditions for deer. Such cuts should favor regeneration of short-lived types. **G**

E Mio Pond

1 Identify and maintain the protection zone around bald eagle nests. **G**

2 Identify and protect potential bald eagle nest sites. **G**

F Jenks Lake

1 Identify potential bald eagle nest and roost sites and protect these from development and other activities. **G**

G Otterman Lake

1 Treatment in lowland conifers will be made only to improve thermal cover conditions. **G**

2 Regeneration cuts will be scheduled to improve and sustain browse conditions in locations strategic to thermal cover. Short lived types will be favored. **G**

3 Openings outside of designated old growth will be maintained or developed to enhance forage production. **G**

4 Where feasible, new roads or roads improved to facilitate management should be closed when not being used. **G**

H Oxford Swamp (North Portion and South Portion)

1 Over-mature stands within close proximity to open wetlands should be greater than 50 years old and should not be thinned to less than 80 square feet of basal area to attempt to produce a "park like" structure. **G**

2 Stands to be maintained or developed as grassy openings should be 5 acres or larger. **G**

3 Regeneration cuts should be made in 15 percent or more of the upland and lowland stands each decade. **G**

I Olga Lake

1 Conduct periodic drawdowns of Olga Lake to improve aquatic and emergent vegetation within the flooding. **G**

2 Manipulate vegetation to improve habitat for important prey species without infringing upon essential habitat needs of the American marten. **G**

J Walkinshaw Wetlands

1 Provide habitat diversity within the forested types through periodic regeneration cuts. In areas adjacent to thermal cover, short-lived types will be favored. **G**

K Deer Yards

1 Manage recognized deer yards outside old growth areas to provide a sustained supply of winter thermal cover and associated browse. **G**

2700 SPECIAL USES MANAGEMENT

I Decisions on applications for special uses involving National Forest System lands would be made on an individual basis. **G**

II Adhere to the Federal Power Act Section 4(e) Forest Service Conditions on the eight hydro-electric projects licensed by the Federal Energy Regulatory Commission. **S**

III Provide for utility transmission corridors. Emphasize the use of corridors when granting appropriate rights of way. **G**

2800 MINERALS AND GEOLOGY

I Wildlife Emphasis Areas

A Federal oil and gas leases will contain a lease notice that the lands are being managed as Wildlife Emphasis Areas and occupancy is subject to more restrictive controls than routine areas. **S**

B Access to oil and gas development is by low standard road with minimum clearing. These roads are gated. The access road should be obliterated upon abandonment of the site. **G**

II Common Variety Minerals

A Use of common variety mineral deposits will be considered with the following limitations: **G**

1 Permit use of common variety mineral deposits subject to the environmental limitations of the site. **G**

5100 FIRE MANAGEMENT

I Suppression

A Use of tractor plows, retardant, constructed helispots and wheeled vehicles will be common. **G**

II Fire Use and Fuels Treatment

A Constructed fuel barriers will be no longer than eight miles in length, and temporary or permanent openings will be limited to no more than 500 acres. **G**

III Activity fuels–slash–will be treated to a level commensurate with the allowable fire intensity and rate of spread that meets resource objectives in established prescriptions. Treatment along highways and adjacent properties will meet applicable state laws. **G**

IV Management action to address high fuel hazards may occur in old growth when public safety and property are at risk. **G**

7700 TRANSPORTATION SYSTEM

I Oil and Gas

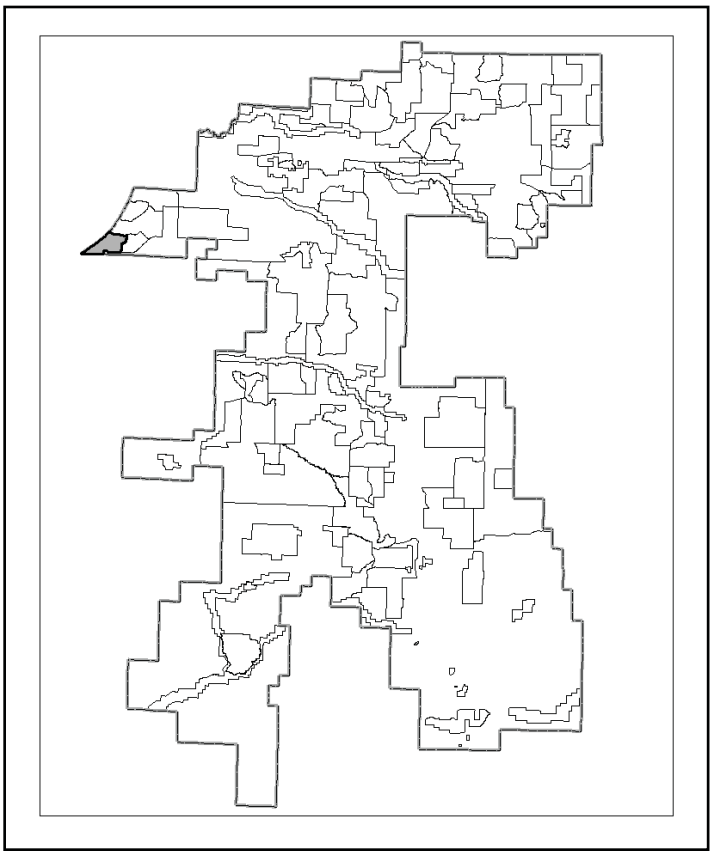
A All temporary roads will be planned and constructed to be revegetated within one year of termination of contract, lease or permit. **G**

B Arterial roads will be, as a minimum, designed and constructed to transport forest products and accommodate planned motorized recreation use, remain open, and, be maintained at level 3 standards or higher. **G**

Management Area 5.1 - Wilderness

Map:

Shaded area depicts Management Area 5.1. There are no Management Area 5.1 areas on the Huron National Forest.



Map B- 5. Management Area 5.1 on the Manistee National Forest

Purpose:

Management activities of Congressionally designated Wilderness provide for the protection and enhancement of wilderness characteristics and values. Primitive or semiprimitive, non-mechanized recreational opportunities occur in a natural environment emphasizing solitude. Recreational opportunities include backpacking, hiking, camping, canoeing, hunting, fishing, cross-country skiing, snowshoeing and other nonmotorized activities.

Landscape Description:

Designated Wilderness areas could occur anywhere from morainal hills to low, wet areas. Wilderness areas probably will include a variety of habitats and landforms.

The Congressionally designated areas generally will be 5,000 contiguous acres or larger in size. The Nordhouse Dunes Wilderness is the only Congressionally designated Wilderness on the Forests.

This prescription area contains less than 1 percent of all National Forest System lands on the Huron-Manistee National Forests.

Goals and Objectives and Desired Future Condition:

Goals and Objectives:

- Provides habitat for wildlife species that avoid human activities.
- Allow natural ecological succession to operate to the extent feasible to promote, perpetuate and restore the wilderness character of the land - 36 CFR 293.2(a).
- Provide a mixture of primitive and semiprimitive non-mechanized recreational opportunities to meet identified needs and demands.
- Trails will be designed for the wilderness experience.
- Provide for the special needs of wildlife species requiring isolation consistent with the Act establishing the Wilderness.
- Use Minimum Impact Suppression Tactic Guidelines.
- Surface and subsurface ownership, National Forest System or other government entity, is desirable.
- Emphasize "no trace" camping.

Desired Future Condition:

These areas have a natural appearance with old growth and large trees dominating the forested stands. Timber management activities will not occur in these areas and no developed facilities or services will be provided. Little evidence of human presence will be apparent, and interaction between users will be infrequent.

Nonmotorized trails access Wilderness areas. There will be no open roads within the Wilderness area. Hunting, fishing, primitive camping and other activities may occur throughout the area. Recreation experiences here are quiet, secluded, and occur in a natural forest environment. Surface and subsurface mineral rights generally will be in public ownership to adequately coordinate management.

Standards and Guidelines:

1900 PLANNING

I Vegetation Management

A Manage vegetation only to protect Wilderness values or to s

protect adjacent property from fire or pests.

B Do not allow gathering of fuelwood or other special forest products. G

2100 ENVIRONMENTAL MANAGEMENT

I The Regional Forester will be advised when redesignation to Class I airshed is necessary to protect Wilderness or other unique National Forest System lands. s

2200 RANGELAND MANAGEMENT

I Grazing was not authorized by the Act establishing the Wilderness. s

2300 RECREATION, WILDERNESS AND RELATED RESOURCE MANAGEMENT

I Special Areas

A Wilderness

1 The following are prohibited: s

a Camping in the Wilderness within 400 feet from the Wilderness boundary (the Lake Michigan waterline, Nurenberg Road, Green Road, and Forest trails, to include the entire boundary). s

b Camping within 100 feet from established trails. s

c Groups in excess of 10 people. s

d Building, maintaining, attending, or using a campfire within 400 feet from the Lake Michigan waterline, beach area. s

e Possession or use of mechanical equipment including motorized vehicles, wagons or carts. s

f Building, maintaining, attending or using a campfire within 200 feet from the Nordhouse Lake waterline. s

g Storing equipment, personal property or supplies, includes geocaching. s

h Possessing or transporting any motor or mechanical device capable of propelling a watercraft through the water by any means. s

i Possession or use of saddle, pack or draft animals. s

j Gathering of dead wood in the open dunes. s

II Recreation Construction

A Provide access parking outside the periphery of the area at a rate of up to five vehicles per 1,000 acres in the area. G

2500 WATERSHED MANAGEMENT

I Water

A Guidelines for Management Activities

1 Limit watershed improvement projects to correcting human-caused problems and natural disasters threatening public health and safety downstream, and to maintain environmental values to protect public health and safety. **G**

2600 WILDLIFE, FISH AND SENSITIVE PLANT HABITAT MANAGEMENT

I Endangered and Threatened Species

A Piping Plover

1 Active nest sites and areas used for raising young will be protected from human disturbance and pets. Pets will be required to be on a leash between April 1 and August 31 and at anytime near an active nest. **s**

2 The following access restrictions will apply from April 1 to August 31 and any time around active nest sites: **s**

a Except for emergency, administrative use, vehicle traffic will be prohibited along the beach. Efforts will be made to coordinate emergency, administrative use with individuals knowledgeable of nest sites. **s**

b Trail management and construction will direct the public away from active nest sites. **s**

c Pedestrians will be prohibited from leaving trails and entering nest site areas. **s**

d Kite flying will be prohibited within 650 feet of active nest site areas. **s**

3 Signing and psychological/symbolic fencing, such as two strands of twine tied between posts, will be allowed to keep human activity at least 134 feet away from predator exclosures. If needed, a larger protection area may be designated. Fencing and signing will be installed using current acceptable procedures. **G**

4 Where necessary, nesting and feeding areas will be protected from predators through predator exclosures and other proven devices and methods. Exclosures will be as follows: 5 feet between the nest and the predator exclosure, and 134 feet between predator exclosure and the psychological/symbolic fencing. Construction will occur at a time that does not subject the eggs to adverse weather during absence of adults. Fencing and signing will be installed using current acceptable **G**

procedures.

B Piping Plover Critical Habitat

1 Human disturbance, including pets, will be kept at a low level from April 1 through July 1 by prohibiting the following: **G**

a Pets, unless on a leash. **G**

b Loud noise. **G**

2 Beach stabilization and vegetation planting for artificial dune stabilization will not be allowed if they impair natural processes. **s**

3 Management activities related to treatment of Lombardy poplar are prohibited between April 1 and July 1 or whenever piping plover are present. **s**

4 Between April 1 and July 1, prescribed burning activities will be limited to conditions when smoke will not drift into critical habitat areas or whenever piping plover are present. **G**

5 The following apply for the protection, restoration, and maintenance of piping plover critical habitat containing primary constituent elements: **G**

a No new trail construction will occur. **G**

b Existing trails will be relocated where necessary. **G**

c Non-native woody vegetation–non-native invasive species–will be controlled. **G**

d Surveying will be conducted for the presence of active nest sites. **G**

C Pitcher's Thistle

1 Herbicide use will occur only when other methods of control for specific non-native invasive plant species are ineffective. **G**

II Fish

A Provide for fish management and research in Wilderness areas consistent with the Act establishing the Wilderness. **s**

2700 SPECIAL USES MANAGEMENT

I No utility transmission corridors for reservoirs, water conservation works, power projects, transmission lines and other facilities will be authorized except as authorized by the Act establishing the Wilderness. **G**

II Do not permit organizational camps. **G**

2800 MINERALS AND GEOLOGY

I Minerals-General

A Under the Michigan Wilderness Act of 1987, federal mineral rights are withdrawn from future application of the **s**

Mineral Leasing Acts of 1920 and 1947.

II Mineral Exploration and Development

A Provide for the consideration of the extraction of those minerals for which rights were established prior to December 31, 1983. s

B Provide for mineral exploration and development subject to valid existing rights, public law, and to the extent that the area will continue to meet wilderness classification standards. s

C Acquisition of mineral interest on a willing-seller basis will be an alternative considered for development proposals with surface occupancy. s

III Common Variety Minerals

A These will not be developed or extracted except as authorized by the Act establishing the Wilderness area. s

3400 FOREST PEST MANAGEMENT

I Obtain the Regional Forester's approval for all pesticide applications in Wilderness areas and other pesticides if specific approval authority is required. s

5100 FIRE MANAGEMENT

I Suppression

A Use minimum impact suppression tactics. s

II Rehabilitation

A Burned areas will be rehabilitated using Wilderness guidelines. G

7300 BUILDINGS AND STRUCTURES

I Construct no buildings or structures except as authorized by the Act establishing the Wilderness area. Existing buildings or structures not authorized by the Act will be obliterated and the site returned to a near-natural condition. s

7400 PUBLIC HEALTH AND POLLUTION CONTROL ACTIVITIES

I Water Supply

A Do not provide drinking water or develop drinking water sources. s

7700 TRANSPORTATION SYSTEM

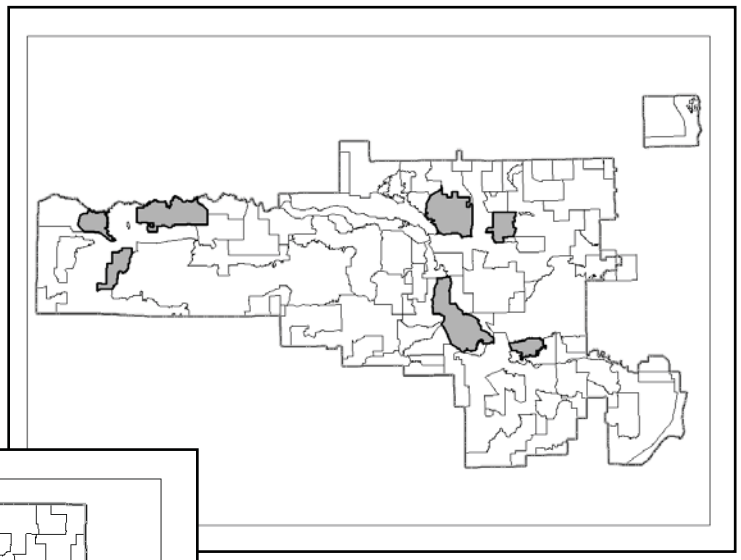
I General

A Allow no Forest Service roads except those authorized by the Act establishing the Wilderness. s

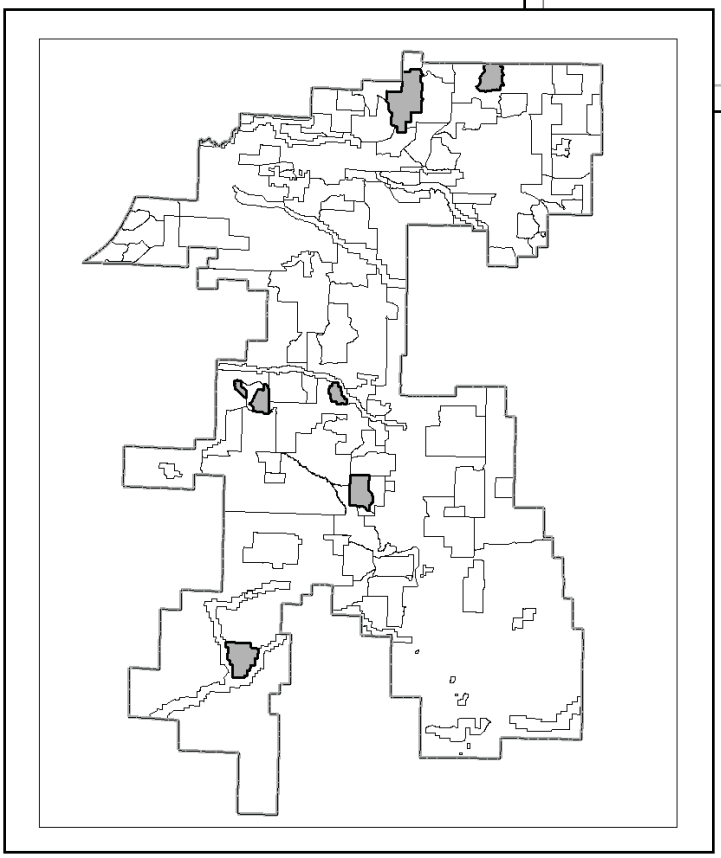
Management Area 6.1 - Semiprimitive Nonmotorized Areas

Maps:

Shaded area depicts Management Area 6.1.



Map B- 6. Management Area 6.1 on the Huron National Forest



Map B- 7. Management Area 6.1 on the Manistee National Forest

Purpose:

Management activities in these areas provide for semiprimitive, nonmotorized recreational experiences and will reduce life-threatening and property-damaging wildfire potential. Areas support a wide variety of fish and wildlife species. Management enhances and improves habitats for species which avoid human activity.

Landscape Description:
This prescription area occurs throughout the Forests on well-drained, sandy plains, low, sandy hills, morainal hills and plains, and low, wet areas. Rivers, lakes and their associated riparian zones also are found within this management area.

This prescription area contains approximately 6 percent of all National Forest System lands on the Huron-Manistee National Forests.

Semiprimitive nonmotorized areas are identified in Table B- 7.

Table B- 7. Semiprimitive Nonmotorized Areas on the Huron-Manistee National Forests

Semiprimitive Nonmotorized Area	Approximate Acreage	Location	Objectives
Au Sable	10,400	Huron National Forest	• Provide canoeing, fishing, hunting, horseback riding and camping. • Manage the Shore-to-Shore Riding and Hiking Trail. • Continue management of South Branch Trail Camp and Thompson's Landing Canoe access.
Cooke (North of River)	2,400	Huron National Forest	• Provide opportunities for semiprimitive nonmotorized experiences.
Hoist Lakes	9,700	Huron National Forest	• Provide hiking, cross-country skiing, primitive camping, fishing and hunting opportunities.
Reid Lake	3,200	Huron National Forest	• Provide hiking, cross-country skiing, primitive camping, fishing and hunting opportunities.
South Branch Au Sable	4,000	Huron National Forest	• Provide hunting and limited brook trout fishing.
Wakeley Lake	2,100	Huron National Forest	• Provide fish and sensitive wildlife habitats.
Whitewater Creek	7,200	Huron National Forest	• Provide opportunities for semiprimitive nonmotorized experiences.

Semiprimitive Nonmotorized Area	Approximate Acreage	Location	Objectives
Briar Hills (Northern Block)	3,400	Manistee National Forest	• Provide opportunities for mushroom picking, hunting, cross-country skiing and dispersed camping. • Consider development of a nonmotorized trails system.
Bowman Lake	1,100	Manistee National Forest	• Provide hiking and cross-country ski trails. • Develop 3 to 5 miles of nonmotorized trails in addition to the North Country National Scenic Trail and other existing trails. • Use trail corridors to improve potential or connect occupied Karner blue butterfly habitat.
Condon Lakes West	3,300	Manistee National Forest	• Provide opportunities for mushroom and berry picking, hunting, fishing and dispersed camping.
Manistee River	7,900	Manistee National Forest	• Provide hunting, fishing and wildlife habitats. • Manage up to 25 percent or 200 acres per decade of the aspen type to provide visual and vegetative diversity. • Manage the North Country National Scenic Trail.
Whalen Lake	2,800	Manistee National Forest	• Provide primitive canoeing, fishing and camping areas. • Develop a nonmotorized trail system. • Use trail corridors to improve potential or connect occupied Karner blue butterfly habitat.
White River	6,900	Manistee National Forest	• Provide primitive canoeing, fishing and camping areas. • Develop a nonmotorized trail system. • Use trail corridors to improve potential or connect occupied Karner blue butterfly habitat.

Goals and Objectives and Desired Future Condition:

Goals and Objectives:

- Provides visual variety by providing vegetative diversity.
- Provide for semiprimitive, nonmotorized recreational experiences.
- Provides a variety of fish and wildlife habitats for species which avoid human activity.
- Produces low to moderate volumes of forest products.
- Provides habitat suitable for species requiring an old-growth environment.
- Allows facility development to separate competing uses.
- Provides for recreational activities such as hunting, fishing, viewing scenery, and water-based recreational opportunities.
- Management will strive to increase utilization of wood residues and other currently non-merchantable material, when not needed for resource concerns such as soil productivity and wildlife habitat.
- Quality sites and opportunities for intensive timber management practices will be identified commensurate with the site's ecological capabilities.
- Manage permanent openings and/or grasslands to meet species viability needs.
- Distribution of openings will recognize the contribution of adjacent private lands.
- The first land acquisition priority is to acquire private inholdings.
- Subsurface Ownership: Acquiring ownership of severed mineral rights is a high priority.
- Provide mineral development opportunities at a limited density.

Desired Future Condition:

The desired future condition of this management area will be characterized by a predominantly natural or natural-appearing environment. Concentration and interaction between users is low, but there is often evidence of other users. The areas are managed in such a way that on-site controls and restrictions may be present, but are subtle. Nonmotorized use is emphasized. Closed roads may be evident and some may be utilized as trails. Users are aware of the services provided, such as visitor information, and restrictions and controls are evident.

Dominant forest types are variable depending on the area and will range from northern hardwoods on morainal hills and plains to aspen, oaks and red and white pines on dry sandy plains. Low, wet areas will be characterized by aspen, black ash, cedar, fir and hemlock. Stand distribution by age and size, across the landscape, is natural in appearance and dominated by old-growth characteristics.

Federal or state ownership of surface and subsurface is desired.

There are approximately 46,800 acres of designated old growth in this management area.

Some roads are present but gated to provide access only for administrative or other permitted purposes. Improvements on these roads are infrequent and maintained to minimal standards necessary for health and safety needs. Other public agency roads may be present.

Standards and Guidelines:

1900 PLANNING
- I Vegetation Management
  - A Limit vegetation management to improving visual quality; reducing hazard fuels, pest management and fuelbreaks, or maintaining diversity of wildlife habitats. **G**

2200 RANGELAND MANAGEMENT
- I Grazing will not be permitted. **S**

2300 RECRECREATION, WILDERNESS AND RELATED RESOURCE MANAGEMENT
- I Do not allow motorized use on lakes. **G**
- II Special Areas
  - A Semiprimitive Nonmotorized
    - 1 Au Sable River
      - a Allow watercraft with motors on the river. **G**
    - 2 Cooke Pond
      - a Camping is allowed at designated sites only. **G**
    - 3 Hoist Lakes Foot Travel Area
      - a Prohibit saddle, pack and draft animals and bicycles. **S**
    - 4 Reid Lake Foot Travel Area
      - a Prohibit saddle, pack and draft animals and bicycles. **S**
    - 5 South Branch Au Sable
      - a The existing road that provides access to the Mason Chapel will remain open to motorized use. **G**
    - 6 Wakeley Lake
      - a The existing dikes and dam will be maintained at Wakeley Lake. **G**
      - b The existing perimeter fence will be allowed to deteriorate before removal. **G**
    - 7 Whitewater Creek
      - a Allow dispersed camping at existing sites along open roads. Evaluate opportunities to phase out of these existing sites and develop sites adjacent to the area. **G**
    - 8 Bowman Lake
      - a Allow camping around Bowman Lake only at designated sites. **G**
      - b Prohibit saddle, pack and draft animals. **S**
    - 9 Manistee River
      - a Allow camping within 200 feet of the Manistee River at designated sites. **G**
      - b Maintain the North Country National Scenic **G**

Trail within the boundary of this area.

c Allow watercraft with motors on the river. G

d Snowmobiles will be allowed in the Manistee River semiprimitive nonmotorized area on the portion of the designated trail system on county road. G

e All Forest system roads will be closed to public motorized vehicle use except for authorized easements or permits. G

10 Whalen Lake

a Camping around Whalen Lake and the Big South Branch of the Pere Marquette River will be allowed at designated sites or areas only. G

b A nonmotorized trail system will be developed. G

11 White River

a Camping areas and sites will be designated. Sites and areas will avoid Karner blue butterfly habitat. s

b Allow dispersed camping at existing sites along open roads. Evaluate opportunities to phase out of these existing sites and develop sites adjacent to the area. G

c Within a one-quarter mile corridor on each side of the White River, manage using the Wild and Scenic Study River Standards and Guidelines in management area 9.2. s

d Trail locations will avoid concentrated areas of wild lupine and other nectar plants utilized by the Karner blue butterfly and other associated sensitive species. s

e Allow watercraft with motors on the river. G

2400 TIMBER MANAGEMENT

I The following Standards and Guidelines apply to both even- and uneven-aged silvicultural systems.

A Uneven- and even-aged systems will be used. They will be consistent with area management objectives and the following restrictions:

1 Even-aged management will be the primary silvicultural system used. G

2 Allow thinnings of red pine plantations. G

3 The uneven-aged system will normally be used only in northern hardwoods. G

4 Seasonal restrictions on time of entry for timber harvests may be applied to protect other resources, activities and facilities. G

5 Standard cutting methods such as single-tree and group selection, shelterwood, seed-tree and clearcutting may be used. **S**

6 Silvicultural standards will incorporate genetic improvement principles, practices and programs. **G**

7 Regeneration activities:

a Site preparation activities can include mechanical, prescribed fire, hand and chemical. **G**

b For revegetation, use native vegetative species for timber production purposes. Revegetation activities can include natural–preferred–artificial or seeding methods. **G**

c Fertilization may be used to establish vegetation on disturbed areas. Manage use of fertilizers or soil enrichments to prevent movement into lakes and streams. **G**

II The following Standards and Guidelines apply only to the even-aged silvicultural system:

A Temporary openings created by the application of the even-aged silvicultural system:

1 Will be separated by a stand of at least 10 acres, except in wildlife emphasis areas. **G**

2 Generally should be 20 acres or less. **G**

B Firewood gathering may be allowed except in old-growth areas. A permit is required. **G**

C Intermediate treatment guidelines include:

1 Pruning for timber–crop trees–visual improvement, safety and wildlife–fruit trees. **G**

2 Thinning. **G**

3 Using precommercial thinnings to maintain winter thermal cover for deer in lowland hardwood and conifer types. **G**

4 Using hand release methods in all vegetative types. **G**

D Harvest guidelines include the following: (See Appendix B for a discussion of each harvest method):

1 The clearcutting method may be used only for jack, red and white pines; oak; aspen; lowland conifers and northern hardwoods with adequate advanced regeneration. **G**

2 The seed-tree cutting method may be used only for jack, red and white pines and lowland conifers. **G**

3 The shelterwood cutting method may be used only for jack, red and white pines; all oak; northern hardwoods; lowland conifers and lowland hardwoods. **G**

E Allow commercial thinning in all vegetative types. Precommercial thinning in all types is allowed if necessary to meet objectives of timber, wildlife and/or visual quality objectives. **G**

2600 WILDLIFE, FISH AND SENSITIVE PLANT HABITAT MANAGEMENT

I General Management

A Dry Grasslands **G**

1 Manage dry grassland habitat, 250 acres or larger in Landtype Associations 1 and 2. Manage multiple habitats as blocks when they are within one mile of each other to increase suitability. **G**

II Regional Forester Sensitive Species

A Standards and Guidelines for the management of Regional Forester Sensitive Species are:

1 Within core northern hardwood habitat areas:

a In 80 percent of the high-quality mesic northern hardwood (ginseng) habitat:

1 Permit non-ground disturbing activities that mimic natural disturbance regimes common to this habitat. **G**

2 Permit maintenance of existing improvements. **G**

b In the remaining 20 percent of the high-quality mesic northern hardwood habitat: **G**

1 Maintain 80 percent crown closure. **G**

2 Allow potential high-quality mesic northern hardwood forest habitat adjacent to core areas to convert to actual high-quality mesic northern hardwood forest habitat. **G**

3 Cerulean Warbler

a Timber management and road construction activities should not occur in occupied habitat within 400 feet of a cerulean warbler nest tree–approximately a 10-acre area–during the breeding season. **G**

B Manage wetlands identified as good and excellent sandhill crane nesting habitat to improve habitat conditions for this species. **G**

C Develop and implement management direction for each osprey nesting area and great blue heron colony. **G**

III Semiprimitive Nonmotorized Areas

A Wakeley Lake

1 Protect loon nests from disturbance through a seasonal area closure. **G**

2 Outside of old growth create and maintain large **G**

openlands, jack pine-oak barrens and young jack pine thickets where opportunities exist.

3 Outside of old growth provide habitat through regeneration harvest for wildlife species dependent upon early successional forests. **G**

4 Coordinate fisheries management of Wakeley Lake with the Michigan Department of Natural Resources fisheries division. **G**

5 Periodically draw down northwestern marsh and lake to improve wildlife habitat. **G**

B Whitewater Creek

1 Outside of old growth, provide habitat through regeneration harvest for wildlife species dependent upon early successional forests. **G**

2 Create and maintain openings outside of old growth to provide habitat for rare plants and wildlife and to increase diversity of ecological conditions within the area. **G**

C White River

1 Vegetative management will follow the Karner blue butterfly habitat management strategy. **G**

2 All Forest Service roads will be closed to public motorized vehicle use except those users authorized under easement or permit. **G**

3 The Forest roads paralleling the White River and the North Branch of the White River known as the River Road may be opened seasonally for the firearm deer season, November 15 to 30. **G**

D Manistee River

1 Concentrate aspen management adjacent to deer wintering areas. **G**

IV Wildlife Emphasis Areas

A Condon Lakes

1 In selected oak stands, extend the rotation age to 120 years. **G**

2 Identify 25 to 35 percent of the stands in the area to be retained as over-mature. This should be concentrated around the isolated lakes, but there should also be stands identified as over-mature throughout the area. **G**

B White River

1 Continue or develop cooperative efforts with private landowners that will:

a Establish and maintain protective zones around bald eagle nests. **G**

b Avoid and discourage disturbances during critical periods. **G**

2 Identify areas of potential nest sites and protect these from alteration or development on National Forest System lands and private lands where possible. **G**

3 Management for other wildlife habitats should not conflict with the management and protection of potential bald eagle habitat elements. **G**

C Deer yards

1 Manage recognized deer yards outside old growth areas to provide a sustained supply of winter thermal cover and associated browse. **G**

2700 SPECIAL USES MANAGEMENT

I Determine approval of applications on an individual basis for special uses involving National Forest System lands. **G**

II Do not permit special-use motorized recreation events. **G**

III Adhere to the Federal Power Act Section 4(e) Forest Service Conditions on the eight hydro-electric projects licensed by the Federal Energy Regulatory Commission. **S**

IV Do not allow developed organizational camps. **G**

V Discourage utility transmission corridors. Exceptions will be considered on an individual basis supported by a documented environmental analysis. **G**

2800 MINERALS AND GEOLOGY

I Endangered, Threatened and Sensitive Wildlife

A Karner Blue Butterfly

1 Federal oil and gas leases will contain a lease notice that the lands are identified as Karner blue butterfly metapopulation areas and occupancy is subject to more restrictive controls than routine areas. No surface occupancy or road construction will be permitted in occupied habitat. **S**

2 Access to oil and gas development is by low standard road with minimum clearing. These roads are gated. The access road should be obliterated upon abandonment of the site. **G**

II Mineral Exploration and Development

A General oil and gas development conditions:

1 Production facilities are outside the area when practical. **G**

2 Needed pumps are run by electric motors or equipped to minimize noise. **G**

III Common Variety Minerals

A Use of common variety mineral deposits will be considered with the following limitations: **G**

1 Permitted only for use within the management prescription area. **G**

IV Federal oil and gas leases will contain a controlled surface use stipulation with a maximum surface development density of 1 surface location per 640 acres. **G**

5100 FIRE MANAGEMENT

I Suppression

A Minimize use of tractor plows, retardant, constructed helispots and wheeled vehicles. **G**

II Fire Use and Fuels Treatment

A Constructed fuel barriers will be no longer than eight miles in length, and temporary or permanent openings will be limited to no more than 500 acres. **G**

III Activity fuels–slash–will be treated to a level commensurate with the allowable fire intensity and rate of spread that meets resource objectives in established prescriptions. Treatment along highways and adjacent properties will meet applicable state laws. **G**

IV Management action to address high fuel hazards may occur in old growth when public safety and property are at risk. **G**

7700 TRANSPORTATION SYSTEM

I Semiprimitive Areas

A Close all Forest Service roads to public motorized vehicles except for emergency and administrative use. See 2300 II A 5 for an exception. **G**

II Oil and Gas

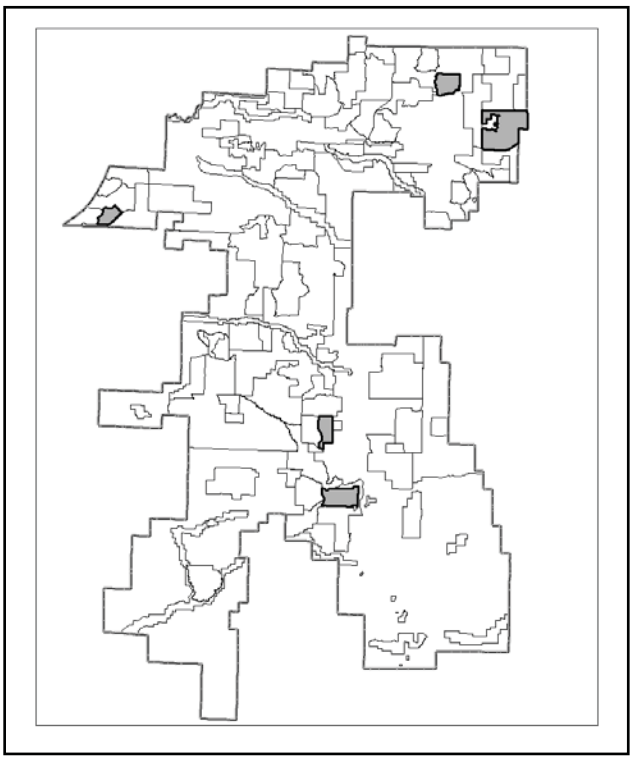
A All temporary roads will be planned and constructed to be revegetated within one year of termination of contract, lease or permit. **G**

B Roads must use existing transportation corridors when compatible, feasible and practical. **G**

Management Area 6.2 - Semiprimitive Motorized Areas

Map:

Shaded area depicts Management Area 6.2. There are no Management Area 6.2 areas on the Huron National Forest.



Map B- 8. Management Area 6.2 on the Manistee National Forest

Purpose:

Management activities provide for semiprimitive, motorized recreational experiences. These areas provide high visual diversity, enhance and increase wildlife habitats, will reduce damaging wildfire potential, and provide moderate amounts of quality timber products from appropriate areas.

Landscape Description:

This prescription area occurs throughout the Manistee National Forest on well-drained, sandy plains; low, sandy hills; morainal hills and plains and low, wet areas. Rivers, lakes and their associated riparian zones also are found within this management area.

This prescription area contains approximately 2 percent of all National Forest System lands on the Huron-Manistee National Forests.

Table B- 8 displays emphasis areas within Management Area 6.2.

Table B- 8. Emphasis Areas Within Management Area 6.2

Emphasis Area	Approximate Acreage	Location	Objectives
Deer	5,200	Huron-Manistee National Forests.	Manage intensively to provide quality deer habitat with special emphasis on providing winter thermal cover.

Table B- 9 displays semiprimitive motorized areas within Management Area 6.2.

Table B- 9. Semiprimitive Motorized Areas on the Huron-Manistee National Forests

Semiprimitive Motorized Area	Approximate Acreage	Location	Objectives
Briar Hills (southern block)	2,900	Manistee National Forest.	Provide opportunities for hunting, camping, driving for pleasure, gathering forest products and hiking.
Loda Lake	4,000	Manistee National Forest.	Provide for Karner blue butterfly habitat. Provide opportunities for hunting, camping, driving for pleasure, gathering forest products, hiking, mountain biking and Off-Highway Vehicle use.
Nordhouse	2,200	Manistee National Forest.	Provide opportunities for hunting, camping, fishing, driving for pleasure, gathering forest products and hiking.
Condon Lakes East	2,900	Manistee National Forest.	Provide opportunities for hunting, camping, fishing, driving for pleasure, gathering forest products and hiking.
Brandybrook	5,200	Manistee National Forest.	Provide for deer emphasis and wetland management. Provide black bear habitat.

Goals and Objectives and Desired Future Condition:

Goals and Objectives:

- Provide high visual variety by providing vegetative diversity.
- Provide low to moderate volumes of forest products.
- Develop recreation facilities to separate competing users.
- Provide roads and trails for a semiprimitive, motorized experience.
- Provide habitat suitable for species requiring an old-growth environment.

- Provide high amounts of dispersed recreational activities such as hunting, fishing, viewing scenery, bird watching and canoeing.
- Provide low to moderate amounts of developed recreational facilities, such as campgrounds and picnic areas.
- Designated areas, roads and trails may be limited to specific kinds of uses.
- Management will strive to increase utilization of wood residues and other currently non-merchantable material, when not needed for resource concerns such as soil productivity and wildlife habitat, for fuelwood and other special forest products.
- Manage permanent openings and/or grasslands to meet species viability needs. Distribution of openings will recognize the contribution of adjacent private lands.
- Federal or state ownership of surface and subsurface is desirable.
- Provide opportunities for mineral exploration and development on a limited density.

Desired Future Condition:

The desired future condition of these management areas will be characterized by a predominantly natural or natural-appearing environment. Each area usually contains more than 2,500 acres and ownership is almost entirely National Forest.

Human activities are evident but user interaction is infrequent. Users may be aware of controls, restrictions and services provided. Visitor services such as informational signs and orientation are provided. Facilities, utility corridors and mineral exploration usually are not evident unless viewed on-site. Low use roads are closed but evident. Some roads are converted to Off-Highway Vehicle trails. Roads needed for administrative purposes are gated. Other public agency roads may be present. Improvements on these roads are infrequent, and roads are maintained to minimal standards necessary for health and safety needs.

Dominant forest types are variable depending on the area and will range from northern hardwoods on morainal hills and plains to aspen, oaks, and red and white pines on dry sandy plains. Low, wet areas will be characterized by aspen, black ash, cedar, fir and hemlock. Stand distribution by age and size, across the landscape, is natural in appearance and dominated by old-growth characteristics.

Low, wet areas are key habitats for wildlife species. They provide thermal cover for deer and habitat for fish and water-related wildlife species.

Federal or state ownership of all surface and subsurface is desirable.

There are approximately 11,000 acres of designated old growth in this management area.

Standards and Guidelines:

1900 PLANNING

I Vegetation Management

A Limit vegetation management to improving visual quality; reducing hazard fuels, pest management and fuelbreaks, or **G**

maintaining diversity of wildlife habitats.

2300 RECREATION, WILDERNESS AND RELATED RESOURCE MANAGEMENT

I Recreation Construction Sites

A Hike-in camping units will be at least 100 feet from any adjacent camping units. **G**

2400 TIMBER MANAGEMENT

I The following Standards and Guidelines apply to both even-aged and uneven-aged silvicultural systems.

A Uneven-aged- and even-aged systems will be used. They will be consistent with area management objectives and the following restrictions:

1 Even-aged management will be the primary silvicultural system used. **G**

2 Allow thinning red pine plantations. **G**

3 The uneven-aged system will normally be used only in northern hardwoods. **G**

4 Seasonal restrictions on time of entry for timber harvests may be applied to protect other resources, activities and facilities. **G**

5 Standard cutting methods such as single-tree and group selection, shelterwood, seed-tree and clearcutting may be used. **S**

6 Silvicultural standards will incorporate genetic improvement principles, practices and programs. **G**

7 Regeneration activities:

a Site preparation activities can include mechanical, prescribed fire, hand and chemical. **G**

b For revegetation, use native vegetative species for timber production purposes. Revegetation activities can include natural–preferred–artificial or seeding methods. **G**

c Fertilization may be used to establish vegetation on disturbed areas. Manage use of fertilizers or soil enrichments to prevent movement into lakes and streams. **G**

II The following Standards and Guidelines apply only to the even-aged silvicultural system:

A Temporary openings created by the application of the even-aged silvicultural system:

1 Will be separated by a stand of at least 10 acres, except in wildlife emphasis areas. **G**

2 Generally should be 20 acres or less. **G**

3 In deer emphasis areas, temporary openings created **G**

by even-aged management will generally not exceed 15 acres, except they may be as large as 40 acres in major deer wintering or adjacent areas, or for golden-winged warbler they may be 25 acres.

B Firewood gathering may be allowed except in old growth areas. A permit is required. **G**

C Intermediate treatment guidelines include:

1 Using mechanical, chemical or hand release methods in all vegetative types. **G**

2 Pruning for timber, visual improvement, safety and wildlife. **G**

3 Thinning. **G**

4 Using precommercial thinning to maintain winter thermal cover for deer in lowland hardwood and conifer types. **G**

D Harvest guidelines include the following: (See Appendix B for a discussion of each harvest method):

1 The clearcutting method may be used only for jack, red and white pines; oak; aspen; lowland conifers and northern hardwoods with adequate advanced regeneration. **G**

2 The seed-tree cutting method may be used only for jack, red and white pines and lowland conifers; and **G**

3 The shelterwood cutting method may be used only for jack, red and white pines; all oak; northern hardwoods; lowland conifers and lowland hardwoods. **G**

E Allow commercial thinning in all vegetative types. Precommercial thinning in all types is allowed if necessary to meet objectives of timber, wildlife and/or visual quality objectives. **G**

2600 WILDLIFE, FISH AND SENSITIVE PLANT HABITAT MANAGEMENT

I General Management

A Dry Grasslands **G**

1 Manage dry grassland habitat, 250 acres or larger in landtype associations 1 and 2. Manage multiple habitats as blocks when they are within one mile of each other to increase suitability. **G**

B Provide for waterhole development or restoration when surface runoff and soil conditions permit. **G**

II Endangered and Threatened Species

A See Chapter II, 2600 for Standards and Guidelines.

III Regional Forester Sensitive Species

A Standards and Guidelines for the management of Regional Forester Sensitive Species are:

1 Within core northern hardwood habitat areas:

a In 80 percent of the high-quality mesic northern hardwood (ginseng) habitat:

1 Permit non-ground disturbing activities that mimic natural disturbance regimes common to this habitat. **G**

2 Permit maintenance of existing improvements. **G**

b In the remaining 20 percent of the high-quality mesic northern hardwood habitat: **G**

1 Maintain 80 percent crown closure. **G**

2 Allow potential high-quality mesic northern hardwood forest habitat adjacent to core areas to convert to actual high-quality mesic northern hardwood forest habitat. **G**

3 New motorized trails will not be constructed in cedar swamps, hardwood conifer swamps and subirrigated forests unless there are no other reasonable routes. **G**

B Manage wetlands identified as good and excellent sandhill crane nesting habitat to improve habitat conditions for this species. **G**

C Develop and implement management direction for each osprey nesting area and great blue heron colony. **G**

D Cerulean Warbler

1 Timber management and road construction activities should not occur in occupied habitat within 400 feet of a cerulean warbler nest tree, approximately a 10-acre area, during the breeding season. **G**

IV Wildlife Emphasis Areas

A Manage recognized deer yards outside old growth areas to provide a sustained supply of winter thermal cover and associated browse. **G**

2700 SPECIAL USES MANAGEMENT

I Decisions for special uses involving National Forest System lands will be made on an individual basis. **G**

II Adhere to the Federal Power Act Section 4(e) Forest Service Conditions on the eight hydro-electric projects licensed by the Federal Energy Regulatory Commission. **S**

III Do not allow developed organizational camps. **G**

IV Discourage utility transmission corridors. Exceptions will be considered on an individual basis. **G**

2800 MINERALS AND GEOLOGY

I Endangered, Threatened and Sensitive Wildlife

B Karner Blue Butterfly

1 Federal oil and gas leases will contain a lease notice that the lands are identified as Karner blue butterfly metapopulation areas and occupancy is subject to more restrictive controls than routine areas. **S**

2 Access to oil and gas development is by low standard road with minimum clearing. These roads are gated. The access road should be obliterated upon abandonment of the site. **G**

II Mineral Exploration and Development

A General oil and gas development conditions:

1 Production facilities are outside the area when reasonable. **G**

2 Needed pumps are run by electric motors or equipped to minimize noise. **G**

III Common Variety Minerals

A Use of common variety mineral deposits will be considered with the following limitations: **G**

1 Restricted to isolated, well-screened areas, subject to the environmental limitations of the site. **G**

IV Federal oil and gas leases will contain a controlled surface use stipulation with a maximum surface development density of 1 surface location per 160 acres. **G**

5100 FIRE MANAGEMENT

I Suppression

A Minimize use of tractor plows, retardant, constructed helispots and wheeled vehicles. **G**

II Fire Use and Fuels Treatment

A Constructed fuel barriers will be no longer than eight miles in length and temporary or permanent openings will be limited to no more than 500 acres. **G**

III Activity fuels–slash–will be treated to a level commensurate with the allowable fire intensity and rate of spread that meets resource objectives in established prescriptions. Treatment along highways and adjacent properties will meet applicable state laws. **G**

IV Management action to address high fuel hazards may occur in old growth when public safety and property are at risk. **G**

7700 TRANSPORTATION SYSTEM

I Forest Service roads may be closed to motorized vehicles to retain the semiprimitive character of the area or for emergency conditions, seasonal closures, resource protection or public safety. **G**

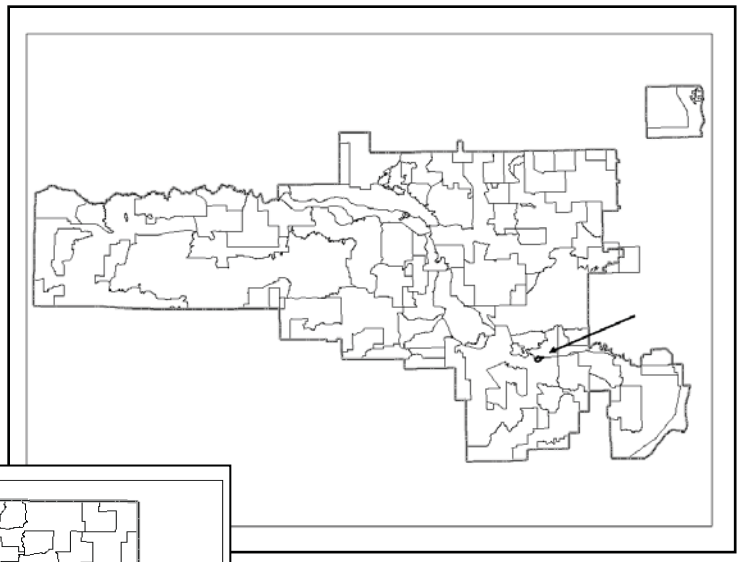
II Oil and Gas

A	All temporary roads will be planned and constructed to be revegetated within one year of termination of contract, lease or permit.	G
B	Roads will be designed and constructed to transport forest products and accommodate planned motorized recreation use.	G

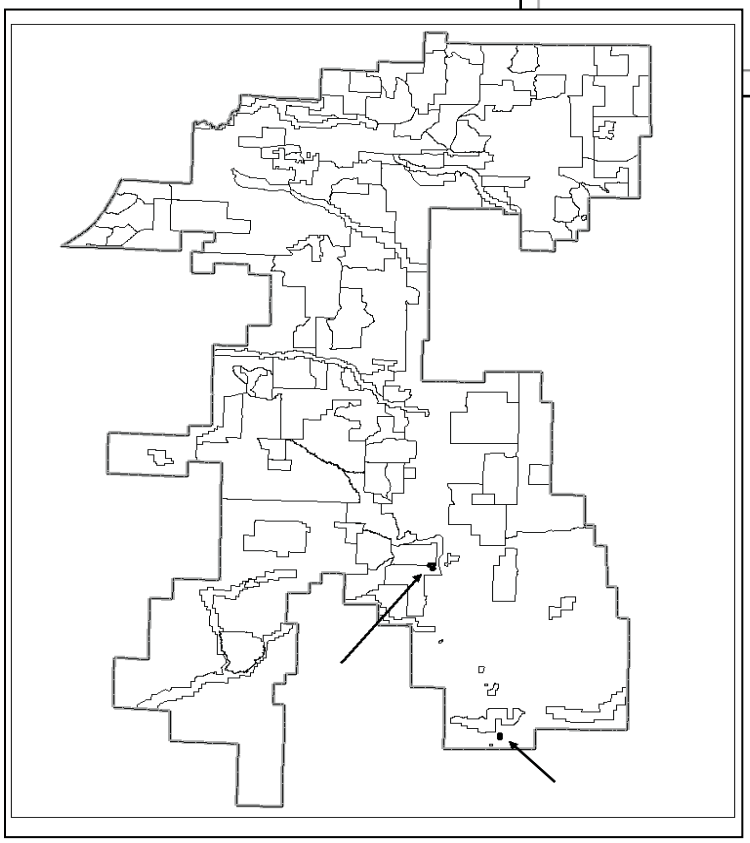
Management Area 8.4 - Special Areas

Maps:

Shaded area depicts Management Area 8.4.



Map B- 9. Management Area 8.4 on the Huron National Forest



Map B- 10. Management Area 8.4 on the Manistee National Forest

Purpose:

Management of special areas will protect areas that have scientific, biological, geological, historical, social or recreational characteristics of local, regional or national significance.

Landscape Description:

This prescription area contains less than one percent of all National Forest System lands on the Huron-Manistee National Forests. Special areas are listed in Table B- 10.

Table B- 10. Special Areas on the Huron-Manistee National Forests.

Area	Description	Location
Newaygo Prairie Ecological Study Area	An 80-acre unit was designated by the Forest Supervisor in 1968. This area will be managed to retain its prairie-like condition to facilitate studies of prairie ecosystems. This is a small remnant of dry grass prairie that is in an early successional stage of recovery to a natural prairie condition. This type of habitat typically benefits some grassland wildlife species with small home ranges such as vesper sparrow, prairie deer mouse, and plant species associated with prairie ecosystems, such as big and little bluestem and Indian grass. The prairie type is not of sufficient size to benefit grassland species having large home ranges or that occur in large colonies. The study area will be managed as a roaded natural Recreation Opportunity Spectrum area.	Manistee National Forest.
Lumbermen's Monument	Of 135 acres, a 7.2-acre site was designated by the Secretary of Agriculture in 1932 for historical, educational and recreational uses. Management direction for the site is established in "Lumbermen's Monument Visitor Information Center Plan," Huron National Forest, April 1979, as amended in 1993.	Huron National Forest.

Area	Description	Location
Loda Lake Wildflower Sanctuary	Of 130 acres, a 72-acre site was designated by the Regional Forester in 1949 to provide examples of native plants and native plant communities that once covered much of Michigan. Management direction for the site is established in "Management Plan for the Loda Lake Wildflower Sanctuary," USDA-Forest Service, Manistee National Forest, 1949. This is a small area that will have over-mature or old growth conditions and provides benefits to those associated species. The sanctuary will be managed as a roaded natural Recreation Opportunity Spectrum area.	Manistee National Forest.

Goals and Objectives and Desired Future Condition:

Goals and Objectives:

- Maintain the characteristics of each area for which it was identified.

Desired Future Condition:

These areas are unique or unusual biologically, geologically or culturally. Federal or state ownership of all surface and subsurface mineral rights is desirable.

There are approximately 50 acres of designated old growth in this management area.

Standards and Guidelines:

2600 WILDLIFE, FISH AND SENSITIVE PLANT HABITAT MANAGEMENT

I New motorized trails will not be constructed in cedar swamps, hardwood conifer swamps and subirrigated forests unless there are no other reasonable routes. **G**

II Manage wetlands identified as good and excellent sandhill crane nesting habitat to improve habitat conditions for this species. **G**

III Develop and implement management direction for each osprey nesting area and great blue heron colony. **G**

2700 SPECIAL USES MANAGEMENT

I Adhere to the Federal Power Act Section 4(e) Forest Service **s**

Conditions on the eight hydro-electric projects licensed by the Federal Energy Regulatory Commission.

II Do not allow developed organizational camps. **G**

2800 MINERALS AND GEOLOGY

I Special Areas

A Federal oil and gas leases will contain a no-surface-occupancy stipulation. **S**

5100 FIRE MANAGEMENT

I Suppression

A Minimize use of tractor plows, retardant, constructed helispots and wheeled vehicles. **G**

Alternative 2 − Proposed Action, as Published in the Notice of Intent

This alternative is essentially the proposal submitted by the appellant/litigant during the 2006 plan revision process that requested that SPNM and Primitive areas be closed to firearm hunting and snowmobiling, which the U.S. Court of Appeals for the Sixth Circuit decided was not adequately evaluated (Alternative listed in the Notice of Intent dated December 28, 2010). Under Alternative 2, firearm hunting would be prohibited in the SPNM and Primitive areas (subject to existing rights) and the Semiprimitive areas would be closed to snowmobile use (subject to existing rights). Forest Service designated snowmobile trails within the Manistee River and the Whitewater Creek M.A. 6.1 SPNM areas would be closed. Snowmobile trails on the boundary of Au Sable, Bowman Lake, Briar Hills, Condon Lakes West, and White River SPNM areas would be removed from the Forest Service system.

The following lists the location of the changes to Alternative 2 Management Area Direction as it would appear, if this Alternative were selected.

Under Alternative 2, Management Areas 5.1 and 6.1 would change, as displayed in the following text.

Management Area	Location of a Change, Addition, or Subtraction
5.1	Purpose: adds non-firearm hunting
	Standard & Guideline, section 2300: adds firearm hunting ban Standard
6.1	Table III-8, Semiprimitive Areas on the HMNF: adds non-firearm hunting objective to each SPNM
	Goals and Objectives: adds non-firearm hunting to an objective
	Standard & Guideline, section 2300: adds firearm hunting ban Standard and snowmobile trail closure Standard

Table B- 11. Huron-Manistee National Forests' Management Areas, Alternative 2

Management Area	Title
2.1	Roaded Natural Rolling Plains and Morainal Hills
4.2	Roaded Natural Sandy Plains and Hills
4.3	Roaded Natural Wetlands
4.4	Rural
5.1	Wilderness
6.1	Semiprimitive Nonmotorized Areas
6.2	Semiprimitive Motorized Areas
7.1	Concentrated Recreation Areas

Management Area	Title
8.1	Wild and Scenic Rivers
8.2	Research Natural Areas
8.3	Experimental Forests
8.4	Special Areas
9.1	Candidate Research Natural Areas
9.2	Wild and Scenic Study Rivers

Alternative 3 – Change Management Area (M.A.) Designation to Align with 2011 ROS Class Inventory

Alternative 3 proposes to align the Management Area designations of the 14 analysis areas with the 2011 Inventoried ROS classification. Under Alternative 3, the management area designations and ROS classification of the 14 analysis areas would change. When developing this alternative, the interdisciplinary team considered the court's findings that these 14 areas should meet the ROS classification descriptions for SPNM "and present little chance of encountering noise by humans."

The following lists the location of the changes to Alternative 3 Management Area Direction as it would appear, if this Alternative were selected.

Under Alternative 3, Management Areas 4.2, 4.3, 5.1, 6.1, and 6.2 contain the following changes:

Management Area	Location of a Change, Addition, or Subtraction
4.2	Landscape Description: increases percentage of NFS lands in M.A. 4.2 with the addition of Bowman Lake, Manistee River, Whalen Lake, and Whitewater Creek
	Desired Future Condition: increases percentage of old growth in M.A. 4.2 with the addition of Bowman Lake, Manistee River, Whalen Lake, and Whitewater Creek
4.3	Landscape Description: increases percentage of NFS land in this Management Area with the addition of Au Sable River
	Desired Future Condition: increases acres of old growth in M.A. 4.3 with the addition of Au Sable River
5.1	Purpose: changes ROS classification from Primitive to Semiprimitive Nonmotorized
6.1	Management Area 6.1 would not exist under Alternative 3

Management Area	Location of a Change, Addition, or Subtraction
6.2	In the 2006 Forest Plan, M.A. 6.2 did not exist on the Huron National Forest (HNF). Under Alternative 3, 6.2 M.A. would occur on the HNF.
	Landscape Description: increases percentage of NFS land in this Management Area with the addition of Briar Hills, Condon Lakes West, Cooke Pond, Hoist Lakes, Reid Lake, South Branch Au Sable, Wakeley Lake, and White River from 6.1 M.A. to 6.2 M.A.

The following table provides a listing of the Management Areas located on the Huron-Manistee National Forests:

Table B- 12. Huron-Manistee National Forests' Management Areas, Alternative 3

Management Area	Title
2.1	Roaded Natural Rolling Plains and Morainal Hills
4.2	Roaded Natural Sandy Plains and Hills
4.3	Roaded Natural Wetlands
4.4	Rural
5.1	Wilderness
6.2	Semiprimitive Motorized Areas
7.1	Concentrated Recreation Areas
8.1	Wild and Scenic Rivers
8.2	Research Natural Areas
8.3	Experimental Forests
8.4	Special Areas
9.1	Candidate Research Natural Areas
9.2	Wild and Scenic Study Rivers

Alternative 4 – Change Management Area Designation to Special Area and Manage For A Less Roaded Recreation Experience

Alternative 4 proposes to addresses inconsistencies with the SPNM ROS class characteristics identified by the court, while preserving areas where the Forests can manage for a less roaded recreation experience.

The following lists the location of the changes to Alternative 4 Management Area Direction as it would appear, if this Alternative were selected.

Under Alternative 3, Management Areas 4.2, 5.1, 6.1, and 8.4 contain the following changes:

Management Area	Location of a Change, Addition, or Subtraction
4.2	Landscape Description: acreage percentage increase as a result of Manistee River and Whitewater Creek designation from M.A. 6.1 to M.A. 4.2
	Desired Future Condition: old growth acreage would increase in this M.A. as a result of Manistee River and Whitewater Creek designation from M.A. 6.1 to M.A. 4.2
5.1	Purpose: ROS classification changes from Primitive to Semiprimitive Nonmotorized
6.1	Management Area 6.1 would not exist under Alternative 4
8.4	M.A. 8.4 absorbs the previous M.A. 6.1 Management Direction and now includes Au Sable, Bowman Lake, Briar Hills, Condon Lakes West, Cooke Pond, Hoist Lakes, Reid Lake, South Branch Au Sable, Wakeley Lake, Whalen Lake, and White River
	Purpose: adds two Purposes to differentiate previous Special Areas from Alternative 4 additions
	Landscape Description: adds two Landscape Descriptions to differentiate previous Special Areas from Alternative 4 additions.
	Goals and Objectives: adds two Goals and Objectives to differentiate previous Special Areas from Alternative 4 additions
	Standards and Guidelines: adds two Standards and Guideline categories to differentiate previous Special Areas from Alternative 4 additions

The following table provides a listing of the management areas located on the Huron-Manistee National Forests:

Table B- 13. Huron-Manistee National Forests' Management Areas, Alternative 4

Management Area	Title
2.1	Roaded Natural Rolling Plains and Morainal Hills
4.2	Roaded Natural Sandy Plains and Hills
4.3	Roaded Natural Wetlands
4.4	Rural
5.1	Wilderness
6.2	Semiprimitive Motorized Areas
7.1	Concentrated Recreation Areas
8.1	Wild and Scenic Rivers
8.2	Research Natural Areas
8.3	Experimental Forests
8.4	Special Areas
9.1	Candidate Research Natural Areas
9.2	Wild and Scenic Study Rivers

The management area direction for the 8.4, Special Areas is included below since most of the old M.A. 6.1 areas are now managed as Special Areas.

Management Area 8.4 - Special Areas

Purpose: Newwaygo Prairie Ecological Study Area, Lumberman's Monument, Loda Lake Wildflower Sanctuary

Management of special areas will protect areas that have scientific, biological, geological, historical, social or recreational characteristics of local, regional or national significance.

Landscape Description: Newwaygo Prairie Ecological Study Area, Lumberman's Monument, Loda Lake Wildflower Sanctuary

This prescription area contains less than one percent of all National Forest System lands on the Huron-Manistee National Forests. Special areas are listed in Table B- 14.

Table B- 14. Special Areas on the Huron-Manistee National Forests

Area	Description	Location
Newaygo Prairie Ecological Study Area	An 80-acre unit was designated by the Forest Supervisor in 1968. This area will be managed to retain its prairie-like condition to facilitate studies of prairie ecosystems. This is a small remnant of dry grass prairie that is in an early successional stage of recovery to a natural prairie condition. This type of habitat typically benefits some grassland wildlife species with small home ranges such as vesper sparrow, prairie deer mouse, and plant species associated with prairie ecosystems, such as big and little bluestem and Indian grass. The prairie type is not of sufficient size to benefit grassland species having large home ranges or that occur in large colonies. The study area will be managed as a roaded natural Recreation Opportunity Spectrum area.	Manistee National Forest.
Lumbermen's Monument	Of 135 acres, a 7.2-acre site was designated by the Secretary of Agriculture in 1932 for historical, educational and recreational uses. Management direction for the site is established in "Lumbermen's Monument Visitor Information Center Plan," Huron National Forest, April 1979, as amended in 1993.	Huron National Forest.

Area	Description	Location
Loda Lake Wildflower Sanctuary	Of 130 acres, a 72-acre site was designated by the Regional Forester in 1949 to provide examples of native plants and native plant communities that once covered much of Michigan. Management direction for the site is established in "Management Plan for the Loda Lake Wildflower Sanctuary," USDA-Forest Service, Manistee National Forest, 1949. This is a small area that will have over-mature or old growth conditions and provides benefits to those associated species. The sanctuary will be managed as a roaded natural Recreation Opportunity Spectrum area.	Manistee National Forest.

Goals and Objectives and Desired Future Condition: Newwaygo Prairie Ecological Study Area, Lumberman's Monument, Loda Lake Wildflower Sanctuary

Goals and Objectives:

- Maintain the characteristics of each area for which it was identified.

Desired Future Condition:

These areas are unique or unusual biologically, geologically or culturally. Federal or state ownership of all surface and subsurface mineral rights is desirable.

There are approximately 50 acres of designated old growth in this management area.

Standards and Guidelines: Newwaygo Prairie Ecological Study Area, Lumberman's Monument, Loda Lake Wildflower Sanctuary

2600 WILDLIFE, FISH AND SENSITIVE PLANT HABITAT MANAGEMENT

I	New motorized trails will not be constructed in cedar swamps, hardwood conifer swamps and subirrigated forests unless there are no other reasonable routes.	G
II	Manage wetlands identified as good and excellent sandhill crane nesting habitat to improve habitat conditions for this species.	G
III	Develop and implement management direction for each	G

osprey nesting area and great blue heron colony.

2700 SPECIAL USES MANAGEMENT

I Adhere to the Federal Power Act Section 4(e) Forest Service Conditions on the eight hydro-electric projects licensed by the Federal Energy Regulatory Commission. **S**

II Do not allow developed organizational camps. **G**

2800 MINERALS AND GEOLOGY

I Special Areas

A Federal oil and gas leases will contain a no-surface-occupancy stipulation. **S**

5100 FIRE MANAGEMENT

I Suppression

A Minimize use of tractor plows, retardant, constructed helispots and wheeled vehicles. **G**

Purpose: AuSable, Cooke, Hoist Lakes, Reid Lake, South Branch AuSable, Wakeley Lake, Briar Hills, Bowman Lake, Condon Lakes West, Whalen Lake, and White River

Management activities in these areas provide for less roaded recreational experiences and will reduce life-threatening and property-damaging wildfire potential. Areas support a wide variety of fish and wildlife species. Management enhances and improves habitats for species which avoid human activity.

Landscape Description: AuSable, Cooke, Hoist Lakes, Reid Lake, South Branch AuSable, Wakeley Lake, Briar Hills, Bowman Lake, Condon Lakes West, Whalen Lake, and White River

This prescription area occurs throughout the Forests on well-drained, sandy plains, low, sandy hills, morainal hills and plains, and low, wet areas. Rivers, lakes and their associated riparian zones also are found within this management area.

This prescription area contains approximately 5 percent of all National Forest System lands on the Huron-Manistee National Forests.

Less roaded, natural appearing areas are identified in Table B- 15.

Table B- 15. Less Roaded, natural appearing areas on the Huron-Manistee National Forests

Less roaded, natural appearing Areas	Approximate Acreage	Location	Objectives
Au Sable	10,400	Huron National Forest	Provide canoeing, fishing, hunting, horseback riding and camping. Manage the Shore-to-Shore Riding and Hiking Trail. Continue management of South Branch Trail Camp and Thompson's Landing Canoe access.
Cooke (North of River)	2,400	Huron National Forest	Provide opportunities for semiprimitive nonmotorized experiences.
Hoist Lakes	9,700	Huron National Forest	Provide hiking, cross-country skiing, primitive camping, fishing and hunting opportunities.
Reid Lake	3,200	Huron National Forest	Provide hiking, cross-country skiing, primitive camping, fishing and hunting opportunities.
South Branch Au Sable	4,000	Huron National Forest	Provide hunting and limited brook trout fishing.
Wakeley Lake	2,100	Huron National Forest	Provide fish and sensitive wildlife habitats.
Briar Hills (Northern Block)	3,400	Manistee National Forest	Provide opportunities for mushroom picking, hunting, cross-country skiing and dispersed camping. Consider development of a nonmotorized trails system.
Bowman Lake	1,100	Manistee National Forest	Provide hiking and cross-country ski trails. Develop 3 to 5 miles of nonmotorized trails in addition to the North Country National Scenic Trail and other existing trails. Use trail corridors to improve potential or connect occupied Karner blue butterfly habitat.
Condon Lakes West	3,300	Manistee National Forest	Provide opportunities for mushroom and berry picking, hunting, fishing and dispersed camping.
Whalen Lake	2,800	Manistee National Forest	Provide primitive canoeing, fishing and camping areas. Develop a nonmotorized trail system. Use trail corridors to improve potential or connect occupied Karner blue butterfly habitat.
White River	6,900	Manistee National Forest	Provide primitive canoeing, fishing and camping areas. Develop a nonmotorized trail system.

Less roaded, natural appearing Areas	Approximate Acreage	Location	Objectives
			Use trail corridors to improve potential or connect occupied Karner blue butterfly habitat.

Goals and Objectives and Desired Future Condition: : AuSable, Cooke, Hoist Lakes, Reid Lake, South Branch AuSable, Wakeley Lake, Briar Hills, Bowman Lake, Condon Lakes West, Whalen Lake, and White River

Goals and Objectives:

- Provides visual variety by providing vegetative diversity.
- Provide for less roaded, natural appearing recreational experiences.
- Provides a variety of fish and wildlife habitats for species which avoid human activity.
- Produces low to moderate volumes of forest products.
- Provides habitat suitable for species requiring an old-growth environment.
- Allows facility development to separate competing uses.
- Provides for recreational activities such as hunting, fishing, viewing scenery, and water-based recreational opportunities.
- Management will strive to increase utilization of wood residues and other currently non-merchantable material, when not needed for resource concerns such as soil productivity and wildlife habitat.
- Quality sites and opportunities for intensive timber management practices will be identified commensurate with the site's ecological capabilities.
- Manage permanent openings and/or grasslands to meet species viability needs.
- Distribution of openings will recognize the contribution of adjacent private lands.
- The first land acquisition priority is to acquire private inholdings.
- Subsurface Ownership: Acquiring ownership of severed mineral rights is a high priority.
- Provide mineral development opportunities at a limited density.

Desired Future Condition:

The desired future condition of this management area will be characterized by a predominantly natural or natural-appearing environment. Concentration and interaction between users is low, but there is often evidence of other users. The areas are managed in such a way that on-site controls and restrictions may be present, but are subtle. Nonmotorized use is emphasized. Closed roads may be evident and some may be utilized as trails. Users are aware of the services provided, such as visitor information, and restrictions and controls are evident.

Dominant forest types are variable depending on the area and will range from northern hardwoods on morainal hills and plains to aspen, oaks and red and white pines on dry sandy plains. Low, wet areas will be characterized by aspen, black ash, cedar, fir and hemlock. Stand distribution by age and size, across the landscape, is natural in appearance and dominated by old-growth characteristics.

Federal or state ownership of surface and subsurface is desired.

There are approximately 39,400 acres of designated old growth in this management area.

Some roads are present but gated to provide access only for administrative or other permitted purposes. Improvements on these roads are infrequent and maintained to minimal standards necessary for health and safety needs. Other public agency roads may be present.

Standards and Guidelines: : AuSable, Cooke, Hoist Lakes, Reid Lake, South Branch AuSable, Wakeley Lake, Briar Hills, Bowman Lake, Condon Lakes West, Whalen Lake, and White River

1900 PLANNING
- I Vegetation Management
  - A Limit vegetation management to improving visual quality; reducing hazard fuels, pest management and fuelbreaks, or maintaining diversity of wildlife habitats. **G**

2200 RANGELAND MANAGEMENT
- I Grazing will not be permitted. **S**

2300 RECREATION, WILDERNESS AND RELATED RESOURCE MANAGEMENT
- I Do not allow motorized use on lakes. **G**
- II Special Areas
  - A Less roaded areas
    - 1 Au Sable River
      - a Allow watercraft with motors on the river. **G**
    - 2 Cooke Pond
      - a Camping is allowed at designated sites only. **G**
    - 3 Hoist Lakes Foot Travel Area
      - a Prohibit saddle, pack and draft animals and bicycles. **S**
    - 4 Reid Lake Foot Travel Area
      - a Prohibit saddle, pack and draft animals and bicycles. **S**
    - 5 South Branch Au Sable
      - a The existing road that provides access to the Mason Chapel will remain open to motorized use. **G**
    - 6 Wakeley Lake
      - a The existing dikes and dam will be maintained at Wakeley Lake. **G**
      - b The existing perimeter fence will be allowed to deteriorate before removal. **G**
    - 7 Bowman Lake
      - a Allow camping around Bowman Lake only at **G**

designated sites.

b Prohibit saddle, pack and draft animals. **S**

9 Whalen Lake

a Camping around Whalen Lake and the Big South Branch of the Pere Marquette River will be allowed at designated sites or areas only. **G**

b A nonmotorized trail system will be developed. **G**

10 White River

a Camping areas and sites will be designated. Sites and areas will avoid Karner blue butterfly habitat. **S**

b Allow dispersed camping at existing sites along open roads. Evaluate opportunities to phase out of these existing sites and develop sites adjacent to the area. **G**

c Within a one-quarter mile corridor on each side of the White River, manage using the Wild and Scenic Study River Standards and Guidelines in management area 9.2. **S**

d Trail locations will avoid concentrated areas of wild lupine and other nectar plants utilized by the Karner blue butterfly and other associated sensitive species. **S**

e Allow watercraft with motors on the river. **G**

2400 TIMBER MANAGEMENT

I The following Standards and Guidelines apply to both even- and uneven-aged silvicultural systems.

A Uneven- and even-aged systems will be used. They will be consistent with area management objectives and the following restrictions:

1 Even-aged management will be the primary silvicultural system used. **G**

2 Allow thinnings of red pine plantations. **G**

3 The uneven-aged system will normally be used only in northern hardwoods. **G**

4 Seasonal restrictions on time of entry for timber harvests may be applied to protect other resources, activities and facilities. **G**

5 Standard cutting methods such as single-tree and group selection, shelterwood, seed-tree and clearcutting may be used. **S**

6 Silvicultural standards will incorporate genetic improvement principles, practices and programs. **G**

7 Regeneration activities:

a Site preparation activities can include mechanical, prescribed fire, hand and chemical. **G**

b For revegetation, use native vegetative **G**

species for timber production purposes. Revegetation activities can include natural–preferred–artificial or seeding methods.

c Fertilization may be used to establish vegetation on disturbed areas. Manage use of fertilizers or soil enrichments to prevent movement into lakes and streams. **G**

II The following Standards and Guidelines apply only to the even-aged silvicultural system:

A Temporary openings created by the application of the even-aged silvicultural system:

1 Will be separated by a stand of at least 10 acres, except in wildlife emphasis areas. **G**

2 Generally should be 20 acres or less. **G**

B Firewood gathering may be allowed except in old-growth areas. A permit is required. **G**

C Intermediate treatment guidelines include:

1 Pruning for timber–crop trees–visual improvement, safety and wildlife–fruit trees. **G**

2 Thinning. **G**

3 Using precommercial thinnings to maintain winter thermal cover for deer in lowland hardwood and conifer types. **G**

4 Using hand release methods in all vegetative types. **G**

D Harvest guidelines include the following: (See Appendix B for a discussion of each harvest method):

1 The clearcutting method may be used only for jack, red and white pines; oak; aspen; lowland conifers and northern hardwoods with adequate advanced regeneration. **G**

2 The seed-tree cutting method may be used only for jack, red and white pines and lowland conifers. **G**

3 The shelterwood cutting method may be used only for jack, red and white pines; all oak; northern hardwoods; lowland conifers and lowland hardwoods. **G**

E Allow commercial thinning in all vegetative types. Precommercial thinning in all types is allowed if necessary to meet objectives of timber, wildlife and/or visual quality objectives. **G**

2600 WILDLIFE, FISH AND SENSITIVE PLANT HABITAT MANAGEMENT

I General Management

A Dry Grasslands **G**

1 Manage dry grassland habitat, 250 acres or larger in Landtype Associations 1 and 2. Manage multiple habitats as blocks when they are within one mile of each other to increase suitability. **G**

II Regional Forester Sensitive Species

A Standards and Guidelines for the management of Regional

Forester Sensitive Species are:

1 Within core northern hardwood habitat areas:

a In 80 percent of the high-quality mesic northern hardwood (ginseng) habitat:

1 Permit non-ground disturbing activities that mimic natural disturbance regimes common to this habitat. **G**

2 Permit maintenance of existing improvements. **G**

b In the remaining 20 percent of the high-quality mesic northern hardwood habitat: **G**

1 Maintain 80 percent crown closure. **G**

2 Allow potential high-quality mesic northern hardwood forest habitat adjacent to core areas to convert to actual high-quality mesic northern hardwood forest habitat. **G**

3 Cerulean Warbler

a Timber management and road construction activities should not occur in occupied habitat within 400 feet of a cerulean warbler nest tree–approximately a 10-acre area–during the breeding season. **G**

B Manage wetlands identified as good and excellent sandhill crane nesting habitat to improve habitat conditions for this species. **G**

C Develop and implement management direction for each osprey nesting area and great blue heron colony. **G**

III Less roaded areas

A Wakeley Lake

1 Protect loon nests from disturbance through a seasonal area closure. **G**

2 Outside of old growth create and maintain large openlands, jack pine-oak barrens and young jack pine thickets where opportunities exist. **G**

3 Outside of old growth provide habitat through regeneration harvest for wildlife species dependent upon early successional forests. **G**

4 Coordinate fisheries management of Wakeley Lake with the Michigan Department of Natural Resources fisheries division. **G**

5 Periodically draw down northwestern marsh and lake to improve wildlife habitat. **G**

C White River

1 Vegetative management will follow the Karner blue butterfly habitat management strategy. **G**

2 All Forest Service roads will be closed to public motorized vehicle use except those users authorized under easement or permit. **G**

3 The Forest roads paralleling the White River and the North Branch of the White River known as the **G**

River Road may be opened seasonally for the firearm deer season, November 15 to 30.

IV Wildlife Emphasis Areas

A Condon Lakes

1 In selected oak stands, extend the rotation age to 120 years. **G**

2 Identify 25 to 35 percent of the stands in the area to be retained as over-mature. This should be concentrated around the isolated lakes, but there should also be stands identified as over-mature throughout the area. **G**

B White River

1 Continue or develop cooperative efforts with private landowners that will:

a Establish and maintain protective zones around bald eagle nests. **G**

b Avoid and discourage disturbances during critical periods. **G**

2 Identify areas of potential nest sites and protect these from alteration or development on National Forest System lands and private lands where possible. **G**

3 Management for other wildlife habitats should not conflict with the management and protection of potential bald eagle habitat elements. **G**

C Deer yards

1 Manage recognized deer yards outside old growth areas to provide a sustained supply of winter thermal cover and associated browse. **G**

2700 SPECIAL USES MANAGEMENT

I Determine approval of applications on an individual basis for special uses involving National Forest System lands. **G**

II Do not permit special-use motorized recreation events. **G**

III Adhere to the Federal Power Act Section 4(e) Forest Service Conditions on the eight hydro-electric projects licensed by the Federal Energy Regulatory Commission. **S**

IV Do not allow developed organizational camps. **G**

V Discourage utility transmission corridors. Exceptions will be considered on an individual basis supported by a documented environmental analysis. **G**

2800 MINERALS AND GEOLOGY

I Endangered, Threatened and Sensitive Wildlife

A Karner Blue Butterfly

1 Federal oil and gas leases will contain a lease notice that the lands are identified as Karner blue butterfly metapopulation areas and occupancy is subject to more restrictive controls than routine areas. No surface occupancy or road construction will be permitted in occupied habitat. **S**

2 Access to oil and gas development is by low standard road with minimum clearing. These roads are gated. The access road should be obliterated upon abandonment of the site. **G**

II Mineral Exploration and Development

A General oil and gas development conditions:

1 Production facilities are outside the area when practical. **G**

2 Needed pumps are run by electric motors or equipped to minimize noise. **G**

III Common Variety Minerals

A Use of common variety mineral deposits will be considered with the following limitations: **G**

1 Permitted only for use within the management prescription area. **G**

IV Federal oil and gas leases will contain a controlled surface use stipulation with a maximum surface development density of 1 surface location per 640 acres. **G**

5100 FIRE MANAGEMENT

I Suppression

A Minimize use of tractor plows, retardant, constructed helispots and wheeled vehicles. **G**

II Fire Use and Fuels Treatment

A Constructed fuel barriers will be no longer than eight miles in length, and temporary or permanent openings will be limited to no more than 500 acres. **G**

III Activity fuels–slash–will be treated to a level commensurate with the allowable fire intensity and rate of spread that meets resource objectives in established prescriptions. Treatment along highways and adjacent properties will meet applicable state laws. **G**

IV Management action to address high fuel hazards may occur in old growth when public safety and property are at risk. **G**

7700 TRANSPORTATION SYSTEM

I Less roaded Areas

A Strive to meet road densities per analysis area as shown in the following tables. **G**

Table B- 16 displays the total miles of roads and miles per square mile of roads (road density) for the 14 analysis areas. Currently, 6 of the 14 areas exceed the maximum average of miles of road per square miles of road for Management Area 6.1 SPNM. They are: Briar Hills, Manistee River, Wakeley Lake, Whalen Lake, White River, and Whitewater Creek.

Table B- 16. Open Public Roads Mileage Density by Area

Project Areas	Total Miles of Road in Area	Square Miles of Area	2011 Road Density	Proposed Road Density (Alt 4)
Au Sable	6.01	16.1	0.37	0-1
Bowman Lake	1.69	1.73	0.98	0-1
Briar Hills	6.73	5.29	1.27	0-2
Condon Lakes West	0.46	5.00	0.09	0-1
Cooke	0.23	3.67	0.06	0-1
Hoist Lakes	0.17	14.94	0.01	0-1
Reid Lake	0.07	4.86	0.01	0-1
South Branch Au Sable	5.84	6.07	0.96	0-1
Wakeley Lake	7.76	3.66	2.12	0-3
Whalen Lake	8.08	4.17	1.94	0-2
White River	12.17	7.31	1.66	0-2
Total	49.21	72.8	9.47	
Wilderness				
Nordhouse Dunes	0	5.11	0	0

Source: USDA-FS 2011

II Oil and Gas

A All temporary roads will be planned and constructed to be revegetated within one year of termination of contract, lease or permit. **G**

B Roads must use existing transportation corridors when compatible, feasible and practical. **G**

Appendix C – Recreation Opportunity Spectrum (ROS) Review

As part of the SEIS process, the Forest Service conducted a review of the current ROS characteristics of each of the 14 analysis areas. The Forest Service applied the guidance provided in the 1982 ROS Guide. Those elements which conform to the ROS characteristic are listed as “Y” (YES). Those elements which do not conform are listed as “N” (NO). Some areas have activities, such as snowmobiling, which occur on motorized trails in the area. For those areas with motorized activities, a conforming determination is made. For those areas with no motorized trails, the motorized activities are listed as a N/A (not applicable).

Table C- 1. ROS Review, Semiprimitive Nonmotorized Class

ROS Semiprimitive Nonmotorized Characteristics	Au Sable River	Bowman Lake	Briar Hills	Condon Lakes	Cooke	Hoist Lakes	Manistee River	Reid Lake	South Branch Au Sable	Wakeley Lake	Whalen Lake	White River	Whitewater Creek	Nordhouse Dunes
Activities														
Non-firearm Hunting	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firearm Hunting	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Dispersed Camping	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hiking	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cross-country Skiing	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Snowmobile use	N	N/A	N/A	N/A	N/A	N	N	N/A	N/A	N/A	N/A	N/A	N	N/A
Motorboats use	N	N/A	N/A	N/A	N/A	N/A	N	N/A	N/A	N/A	N/A	N/A	N/A	N/A
OHV/ORV use	N/A	N/A	N/A	N	N/A	N/A	N/A	N/A	N/A	N/A	N	N/A	N	N/A
Setting														
Interactions between users is low	N	N	N	N	N	Y	N	N	Y	Y	N	N	N	N
Minimum on site controls and restrictions	N	Y	N	Y	Y	Y	N	Y	Y	N	Y	N	N	Y
Moderate to large size (2,500 acres)	Y	N	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y	Y
Motorized use within the area is not permitted	N	Y	N	N	N	Y	N	Y	N	N	N	N	N	Y
Predominantly natural	N	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	N	Y	Y

ROS Semiprimitive Nonmotorized Characteristics	Au Sable River	Bowman Lake	Briar Hills	Condon Lakes	Cooke	Hoist Lakes	Manistee River	Reid Lake	South Branch Au Sable	Wakeley Lake	Whalen Lake	White River	Whitewater Creek	Nordhouse Dunes
or natural appearing environment														
Some evidence of other users	N	N	Y	Y	Y	Y	Y	Y	Y	Y	Y	N	Y	Y
Vegetative alterations	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Experience														
Closeness to nature	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Environment offers challenge and risk	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
High but not extremely high probability of experiencing isolation from the sights and sounds of humans	N	N	N	N	N	N	N	N	N	N	N	N	N	Y
Independence	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Self reliance	Y	Y	Y	Y	Y	Y	N	Y	Y	Y	Y	Y	Y	Y
Tranquility	Y	N	N	Y	N	Y	N	Y	Y	Y	N	Y	N	Y
Summary (Does Area Meet ROS Standards)	N	N	N	N	N	N	N	N	N	N	N	N	N	N

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Table C- 2. ROS Review, Primitive Class

ROS Primitive Characteristics	Au Sable River	Bowman Lake	Briar Hills	Condon Lakes	Cooke	Hoist Lakes	Manistee River	Reid Lake	South Branch Au Sable	Wakeley Lake	Whalen Lake	White River	Whitewater Creek	Nordhouse Dunes
Activities														
Non-firearm Hunting	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Firearm Hunting	N	N	N	N	N	N	N	N	N	N	N	N	N	N
Dispersed Camping	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Hiking	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Cross Country Skiing	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
Setting														
Access and travel is nonmotorized on trails and cross-country	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y
Evidence of other users is minimal	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y
Fairly large size (5,000 acres)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y
Interactions between users is very low	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N
No vegetative alterations	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N
Restrictions and controls not evident after entry	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y

ROS Primitive Characteristics	Au Sable River	Bowman Lake	Briar Hills	Condon Lakes	Cooke	Hoist Lakes	Manistee River	Reid Lake	South Branch Au Sable	Wakeley Lake	Whalen Lake	White River	Whitewater Creek	Nordhouse Dunes
Unmodified natural or natural-appearing environment	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y
Experience														
Closeness to nature	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y
Challenge and risk	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y
Freedom	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y
Self reliance	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y
Tranquility	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Y
Very high probability of experiencing isolation from the sights and sounds of humans	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N
Summary (Does Area Meet ROS Standards)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N

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Appendix D – Relevant Statutes, Regulations, Policies and Agreements

This appendix lists the statutes, regulations, policies and agreements that are relevant to forest planning and forest management activities on NFS lands.

Forest Service Direction

The following is a partial listing of Forest Service policies relevant to the 2006 Forest Plan. A complete listing can be found in the Forest Service Manual and the Forest Service Handbook. Together, these are known as the Forest Service Directives System.

The Forest Service Directives System is the primary basis for the management and control of all internal programs and serves as the primary source of administrative direction to Forest Service employees. The system sets forth legal authorities, management objectives, policies, responsibilities, delegations, standards, procedures and other instructions.

The Forest Service Manuals contain legal authorities, goals, objectives, policies, responsibilities, instructions and guidance needed on a continuing basis by Forest Service line officers and primary staff, in more than one unit, to plan and execute assigned programs and activities.

The Forest Service Handbooks contain directives that provide instructions and guidance on how to proceed with a specialized phase of a program or activity. Handbooks are either based on a part of the Manual or they incorporate external directives.

The majority of S&Gs used to implement Forest Plans are located in the Directives System under the following general headings and codes:

1600 Information Services

1900 Planning

2000 National Forest Resources Management (2080 Noxious Weeds Management)

2100 Environmental Management

2200 Rangeland Management

2300 Recreation, Wilderness and Related Resource Management

2400 Timber Management

2500 Watershed and Air Management

2600 Wildlife, Fish and Sensitive Plant Habitat Management

2700 Special Uses Management

2800 Minerals and Geology

3400 Forest Pest Management

4000 Research and Development

5100 Fire Management

5300 Law Enforcement

5400 Landownership

7300 Buildings and Other Structures

7400 Public Health and Pollution Control Facilities

7700 Transportation System

The intent of many forestwide S&Gs is incorporated into permits that authorize specific uses on the National Forests. General permitting requirements can be referenced as follows:

Minerals	Forest Service Manual 2800
Rangeland Management	Forest Service Manual 2200
Recreation	Forest Service Manual 2300
Special Uses	Forest Service Manual 2700
Timber Management	Forest Service Manual 2400
Transportation System	Forest Service Manual 7700

Federal Statues

- Alaska National Interest Lands Conservation Act of December 2, 1980.
- American Indian Religious Freedom Act of August 11, 1978.
- Americans with Disabilities Act of 1990.
- Anderson-Mansfield Reforestation and Revegetation Act of October 11, 1949.
- Antiquities Act of June 8, 1906.
- Archaeological and Historic Preservation Act of 1974.
- Archaeological Resources Protection Act of October 31, 1979, as amended 1988.
- Architectural Barriers Act of 1968.
- Bankhead-Jones Farm Tenant Act of July 22, 1937.
- Clarke-McNary Act of June 7, 1924.
- Clean Air Act of August 7, 1977, as amended (1977 and 1990).
- Clean Water Act (1948-87).
- Clean Water Amendments, (“Federal Water Pollution Control Act Amendments of 1972”).
- Color of Title Act of December 22, 1928.
- Common Varieties of Mineral Materials Act of July 31, 1947.

- Cooperative Forestry Assistance Act of July 1, 1978.
- Disaster Relief Act of May 22, 1974.
- Eastern Wilderness Act of January 3, 1975.
- Economy Act of June 30, 1932.
- Emergency Flood Prevention (Agricultural Credit Act) Act of August 4, 1978.
- Endangered Species Act (ESA) of December 28, 1973.
- Energy Security Act of June 30, 1980.
- Energy Security Act of 2005.
- Federal Advisory Committee Act of October 6, 1972.
- Federal Insecticide, Rodenticide and Fungicide Act of October 21, 1972.
- Federal Land Exchange Facilitation Act of 1988.
- Federal Land Policy and Management Act of October 21, 1976.
- Federal Onshore Oil and Gas Leasing Reform Act of 1987.
- Federal Noxious Weed Act of 1974.
- Federal Plant Protection Act of 2000.
- Federal Power Act of June 10, 1920.
- Federal-State Cooperation for Soil Conservation Act of December 22, 1944.
- Federal Water Pollution Control Act of July 9, 1956, as amended (Water Quality Act of 1965, Clean Water Restoration Act of 1966).
- Federal Water Project Recreation Act of July 9, 1965.
- Fish and Wildlife Conservation Act of September 15, 1960.
- Fish and Wildlife Coordination Act of March 10, 1934.
- Forest Highways Act of August 27, 1958.
- Forest and Rangeland Renewable Resources Planning Act of August 17, 1974.
- Freedom of Information Act of November 21, 1974.
- Granger-Thye Act of April 24, 1950.
- Healthy Forest Restoration Act of 2003 (November 21, 2003).
- Historic Sites Act of 1935.
- Joint Surveys of Watershed Areas Act of September 5, 1962.
- Knutson-Vandenberg Act of June 9, 1930.
- Land Acquisition Act of March 3, 1925.
- Land Acquisition – Declaration of Taking Act of February 26, 1931.
- Land Acquisition – Title Adjustment Act of July 8, 1943.

- Land and Water Conservation Fund Act of 1965 (September 3, 1964).
- Law Enforcement Authority Act of March 3, 1905.
- Leases Around Reservoirs Act of March 3, 1962.
- Mineral Leasing Act of February 25, 1920.
- Mineral Leasing Act for Acquired Lands of August 7, 1947.
- Mineral Resources on Weeks Law Lands Act of March 4, 1917.
- Mineral Springs Leasing Act of February 28, 1899.
- Mining Claims Rights Restoration Act of August 11, 1955.
- Mining and Minerals Policy Act of December 31, 1970.
- Multiple-Use Sustained-Yield Act of June 12, 1960.
- Native American Graves Protection and Repatriation Act of November 16, 1990.
- National Environmental Education Act of November 16, 1990.
- National Environmental Policy Act (NEPA) of 1969, as amended.
- National 1990 Farm Bill (title XII – Forest Stewardship Act) Act of November 28, 1990.
- National Forest Management Act (NFMA) of October 22, 1976.
- National Forest Roads and Trails Act of October 13, 1964.
- National Historic Preservation Act of October 15, 1966, as amended (1980 and 1992).
- National Trails System Act of October 2, 1968.
- Occupancy Permits Act of March 4, 1915.
- Organic Administration Act of June 4, 1897.
- Payments for Entitlement Land Act of 1982.
- Payments in Lieu of Taxes Act of 1976.
- Petrified Wood Act of September 28, 1962.
- Pipelines Act of February 25, 1920.
- Preservation of American Antiquities Act of June 8, 1906.
- Preservation of Historical and Archaeological Data Act of May 24, 1974.
- Public Buildings Cooperative Use Act of 1976.
- Public Land Surveys Act of March 3, 1899.
- Public Rangelands Improvement Act of October 25, 1978.
- Rehabilitation Act of 1973, as amended.
- Renewable Resources Extension Act of June 30, 1978.
- Reorganization Plan Numbered 3 of 1946.

- Research Grants Act of September 6, 1958.
- Rural Development Act of August 30, 1972.
- Safe, Accountable, Flexible, Efficient Transportation Equity Act A Legacy for Users (SAFETEA-LU August 10, 2005).
- Safe Drinking Water Amendments Act of November 16, 1977.
- Secure Rural Schools and Community Self-Determination Act of 2000, reauthorized as part of PL 110-343.
- Sikes Act of October 18, 1974.
- Small Tracts Act of January 22, 1983.
- Soil and Water Resources Conservation Act of November 18, 1977.
- Solid Waste Disposal (Resource Conservation & Recovery Act) Act of October 21, 1976.
- Supplemental National Forest Reforestation Fund Act of September 18, 1972.
- Surface Mining Control and Reclamation Act of August 3, 1977.
- Sustained Yield Forest Management Act of March 29, 1944.
- Timber Export Act of March 4, 1917.
- Timber Exportation Act of April 12, 1926.
- Title Adjustment Act of April 28, 1930.
- Toxic Substances Control Act of October 11, 1976.
- Transfer Act of February 1, 1905.
- Twenty-Five Percent Fund Act of May 23, 1908.
- Uniform Federal Accessibility Standards U.S. Criminal Code (Title 18 USC Chapter 92 – Public Lands) Act of June 25, 1948.
- U.S. Mining Laws (Public Domain Lands) Act of May 10, 1872.
- Volunteers in the National Forests Act of May 18, 1972.
- Water Quality Improvement Act of April 3, 1965.
- Water Resources Planning Act of July 22, 1965.
- Watershed Protection and Flood Prevention Act of August 4, 1954.
- Weeks Act Status for Certain Lands Act of September 2, 1958.
- Weeks Law of March 1, 1911.
- Wild and Scenic Rivers Act of October 2, 1968.
- Wilderness Act of September 3, 1964.
- Wildlife Game Refuges Act of August 11, 1916.
- Wood Residue Utilization Act of December 19, 1980.

- Youth Conservation Corps Act of August 13, 1970.

Code of Federal Regulations (CFR)

- 36 CFR 60 National Register of Historic Places
- 36 CFR 63 Determination of Eligibility for Inclusion in the National Register for Historic Places
- 36 CFR 65 National Historic Landmarks Program
- 36 CFR 68 The Secretary of the Interior's Standards for Treatment of Historic Properties
- 36 CFR 79 Curation of Federally Owned and Administered Archeological Collections
- 36 CFR 212 Forest Development Transportation System
- 36 CFR 213 Administration Under Bankhead-Jones Act
- 36 CFR 215 Notice, Comment and Appeal Procedures for National Forest System Projects and Activities
- 36 CRF 218 Predecisional Administrative Review Process
- 36 CFR 219 Planning
- 36 CFR 220 National Environmental Policy Act (NEPA) Compliance
- 36 CFR 221 Timber Management Planning
- 36 CFR 222 Range Management
- 36 CFR 223 Sale and Disposal of NFS Timber
- 36 CFR 228 Minerals
- 36 CFR 241 Fish and Wildlife
- 36 CFR 251 Land Uses
- 36 CFR 254 Landownership Adjustments
- 36 CFR 261 Prohibitions
- 36 CFR 291 Occupancy and Use of Developed Sites and Areas of Concentrated Public Use
- 36 CFR 292 National Recreation Areas
- 36 CFR 293 Wilderness Primitive Areas
- 36 CFR 294 Special Areas
- 36 CFR 296 Protection of Archaeological Resources
- 36 CFR 197 Wild and Scenic Rivers
- 36 CFR 800 Protection of Historic Properties
- 40 CFR 1500-1508 Council on Environmental Quality
- 43 CFR 7 Protection of Archeological Resources

- 43 CFR 10 Native American Graves Protection and Repatriation Act Final Rule

Executive Orders

- EO 11593 Protection and Enhancement of the Cultural Environment
- EO 11990 Protection of Wetlands
- EO 11991 Protection and Enhancement of Environmental Quality
- EO 11644/11989 Use of Off-Road Vehicles
- EO 11988 Floodplain Management
- EO 12113 Independent Water Project Review
- EO 12682 Setting Customer Service Standards
- EO 12898 Environmental Justice
- EO 13007 Indian Sacred Sites
- EO 13175 Consultation and Coordination with Indian Tribal Governments
- EO 13212 Actions to Expedite Energy-Related Projects
- EO 13287 Preserve America
- EO 13443 Facilitation of Hunting Heritage and Wildlife Conservation

State and Local Laws and Regulations

- Natural Resources and Environmental Protection Act, Act. No. 451 of the Public Acts of 1994, as amended (Part 615, Supervisor of Wells and the Administrative Rules).
- Natural Resources and Environmental Protection Act, Act. No. 451 of the Public Acts of 1994, Part 91.
- Natural Resources and Environmental Protection Act, Act. No. 451 of the Public Acts of 1994, as amended (Michigan Safe Drinking Water Act).
- PA 74, 1970, as amended, Corner Recordation Act.
- PA 345, 1990, State Survey Act.
- PA 132, 1970, Certified Survey Act.
- PA 155, 1976, Right of Entry by Surveyors Act.
- PA 299, 1980, Occupational Code Requiring Licensing.
- PA 0240, which amends Part 811 (Off-Road Recreation Vehicles) of the Natural Resources and Environmental Protection Act.

Agreements and Memoranda of Understanding

- Agreement of Settlement – Federal Energy Regulatory Commission

- Memorandums of Understanding Regarding Tribal/USDA-Forest Service relations on National Forest System land within the territories ceded in the treaties of 1836, 1837 and 1842.
- Memorandum of Understanding Regarding Tribal USDA Forest Service Relations on National Forest Lands Within the Territory Ceded in the Washington Treaty of 1836 and any National Forest Lands Located within the Exterior Boundaries of the Reservation of any Signatory Tribe (2006).
- Memorandum of Understanding Between USDA Forest Service and U.S. Department of Transportation, Federal Highway Administration.
- Michigan Natural Features Inventory Memorandum of Understanding
- National Invasive Species Management Plan
- Michigan State Historic Preservation Office Memorandum of Understanding
- U.S. Department of the Interior Bureau of Land Management Memorandum of Understanding
- U.S. Department of the Interior, National Park Service

Appendix E – Public Comment Analysis Summary

Number	Comment Summary	Response	Issue
1	Non-consumptive wildlife activities bring in tourism dollars (viewing, photography, etc) and should be supported with a quiet setting.	The effects on tourism will be covered in the effects analysis. The alternative put forth in the NOI responds to this concern (Alternative 2).	2
2	Reports/Studies - The reports listed in the NOI for the recreation assessment are biased toward hunters.	The list in the NOI was not all inclusive but new information that has become available since the analysis for the 2006 Forest Plan. The Forest is looking at other sources of information recommended during the scoping period.	N/A
3	Cooperating Agencies - The Forests should invite animal protection groups to be cooperating agencies	Council on Environmental Quality regulations define a cooperating agency as: Any agency that has jurisdiction by law or special expertise for proposals covered by NEPA. Any Federal, State, local or Tribal government with these qualifications may become a cooperating agency.	N/A
4	Support for closing the SPNM management areas and Primitive area to motorized uses and/or snowmobiles.	The alternative put forth in the NOI (Alternative 2) will display the effects of closing SPNM areas to motorized use including snowmobiles. The Nordhouse Dunes Wildnerness is already closed to these activities.	1
5	Support for gun ban in SMNM management areas and the primitive area.	The recreation analysis will evaluate the supply and demand for recreation opportunities. The alternative put forth in the NOI will address this concern (Alternative 2).	Effects will be disclosed for the full range of alternatives.
6	Studies- Government workers should monitor people using SPNM areas to see how many users and what activities they do. They should monitor noise or study noise from snowmobiles and/or firearms.	The effects section will discuss the effects of the Alternatives on recreation use and noise. The recreation analysis will disclose use of the forest and demand for recreation opportunities.	N/A

Number	Comment Summary	Response	Issue
7	Public/Equal Rights - Do not limit the use of public land, it belongs to all.	This is a recreation concern about how the Forest Service will limit the use of the Forest or access to recreation resources. The recreation analysis will include an evaluation of the opportunities the Forest can supply and the supply and demand for those resources in the State. The effects analysis will disclose user conflicts and the effects on recreationists and resources of the various alternatives for the Responsible Official to make a reasoned choice among the alternatives.	3
8	Precedent setting - limiting gun hunting and snowmobile or other recreation activities would set a precedent that could lead to further restrictions (Additional activities being restricted or these bans in other places). Violation of multiple use mandate.	The issue of setting a precedent will be discussed by the Responsible Official when making a decision. The direct, indirect and cumulative effects of each alternative will be disclosed in the effects section.	Effects will be disclosed for the full range of alternatives.
9	Economy is bad. Restricting hunting and/or snowmobiling will cause further harm to the local economy.	Economic analysis will disclose the effects of each alternative on the economy. This will display the range of economic effects from the proposed changes to the recreation opportunities provided on the Huron-Manistee National Forests.	3
10	Restricting snowmobiling and hunting is harmful to the handicapped and seniors.	The effects of the alternatives on individuals with handicaps and senior citizens will be disclosed in the effects analysis.	3
11	Supports closure on no more than one (1) area on each forest. Supports restricting snowmobile use in critical deer yards.	The effects of each alternative on deer will be evaluated in the analysis. No trails are located near critical deer yards. Alternative 4 will be used to evaluate this issue.	Effects will be disclosed for the full range of alternatives.
12	The MDNR has jurisdiction on managing wildlife populations and/or hunting regulations.	The Council on Environmental Quality Regulation at 40 CFR 1502.14 States agencies shall include reasonable alternatives not within the jurisdiction of the lead agency.	N/A

Number	Comment Summary	Response	Issue
13	Managing wildlife population is necessary to protect forest health, deer herd health or deer population. Hunting is a cost-effective part of that management.	The direct and indirect effects of the alternatives to wildlife, vegetation and Forest visitors/neighbors will be evaluated in the effects analysis. The No Action Alternative will be used as the baseline to compare the effects of changes proposed in other alternatives.	Effects will be disclosed for the full range of alternatives.
14	Designation Process - Disagree with designation process of semi-primitive areas, Wilderness, Bear Swamp from 1986 and or Concern about lack of implementation since 1986.	The process used during the 1986 Forest Planning process is beyond the scope of this analysis. The environmental effects of the alternatives will be displayed in the analysis.	N/A
15	No Action - Opposes firearm and snowmobile ban.	The No Action Alternative and Alternatives 3, 4, 6, 7 and 8 respond to this concern.	3
16	Sportsman/Snowmobilers pay fees for use, license fees, these fees pay for management activities.	The effects analysis will disclose the economic effects of the alternatives. The Forest Service does not receive any of these fees directly; they go to the State for support of their programs. Some of the snowmobile user groups receive grant moneys which they use to maintain segments of trail, some of which cross NFS lands under agreements worked out with the MDNR for establishing trail routes.	Effects will be disclosed for the full range of alternatives.
17	Supports closure to motorized vehicles and hunting, as well as closure of additional areas (to provide primitive experience). Supports road closures.	The alternative of creating additional SPNM areas was considered in the 2006 Forest Plan revision process, no additional opportunities were identified.	N/A
18	More Law Enforcement- Regulate illegal motorized use snowmobile, Off-road-vehicle (ORV) and motorcycle use off of designated trails, illegal hunting blinds and hunting blinds and litter left in the woods.	There are already laws and regulations in place. The effects analysis will evaluate the effects of motorized vehicles illegally leaving authorized routes and of blinds and littering for each alternative.	Effects will be disclosed for the full range of alternatives.

Number	Comment Summary	Response	Issue
19	No Quiet Areas - Doesn't support designating quiet areas (anything beyond the current proposal)	The range of alternatives will provide comparison for effects to changes in current activities. Alternatives 3 and 4 were created to respond to the concerns about changes to existing recreation opportunities.	N/A
20	There is limited motorized access to Nordhouse Dunes Wilderness already, no change needed there.	No changes to the Nordhouse Dunes Wilderness Area with regard to motorize use within the area, are proposed under any alternative.	N/A
21	Snowmobilers and hunter activity only occurs part of the year. Use is already restricted seasonally.	The supply of recreation opportunities will be compared between alternatives in the recreation effects in the SEIS.	3
22	Historic, Established Use - Hunting and/or snowmobiling should continue. Section 106 110 Compliance. (National Historic Preservation Act).	Social analysis will evaluate the effects to established uses. The supply of recreation opportunities will be compared between alternatives in the recreation effects in the SEIS. The effects to recreationists will be disclosed in the effects section. Alternatives 3, 4, 5, 6, 7 and 8 were created to respond to this issue.	3
23	There are other places to go in Michigan to avoid hunting and/or snowmobiling.	A supply and demand analysis will be conducted for snowmobiling and hunting. The effects to recreationist seeking to avoid hunting and snowmobiling will be disclosed for each alternative.	N/A
24	Constitutional right to bear arms (God-given right)	This is beyond the scope of the proposal as it only considers a ban on firearm hunting in specific areas of the Forest not firearm ownership.	N/A
25	Snowmobiling and/or hunting noise is short-lived and therefore low-impact. (A brief interruption) Hunters actually shoot only rarely.	The effects analysis will discuss the effects of the alternatives on the recreation experience.	Effects will be disclosed for the full range of alternatives.

Number	Comment Summary	Response	Issue
26	Snowmobile noise impacts recreation experiences for hunters and other recreation users	The effects analysis will discuss the effect of noise on other users' experience and on wildlife.	Effects will be disclosed for the full range of alternatives.
27	Restricting snowmobiling and/or hunting will not provide quiet areas or solitude. (Other noise factors affect the areas i.e. county road traffic, activities on private property, air traffic, etc.)	The effects analysis will discuss the effects of noise under the various alternatives. Alternatives 3, 4, 5 and 6 were developed to respond to this issue.	1
28	Opposes snowmobile ban. Snowmobiles are already restricted to designated trails. Interconnected trail system involves partnership between State/Federal/private lands.	The effects of the alternatives on snowmobile use and the trail system will be disclosed in the effects section of the SEIS. The No Action alternative as well as Alternatives 3, 4, 5, 6, 7 and 8 will be used to evaluate this issue.	3
29	Opposes hunting ban.	The effect on hunters and hunting opportunities for each alternative will be disclosed in the effects section of the SEIS. The No Action alternative would continue current use. Alternatives 3, 4, 5, 6, 7 and 8 were developed to respond to this issue.	3
30	Number of hunters is down FS should promote hunting per executive order and State policy.	The cumulative effects to hunting in the State will be disclosed in the effects section. This is already addressed in Policy per executive order. The actions considered here do not promote hunting only consider allowing or restricting firearm hunting in portions of the Forest. The land available for firearm hunting under each alternative will be disclosed in the effects section.	Effects will be disclosed for the full range of alternatives.
31	Allow archery hunting to manage deer population and provide quiet.	No alternative proposes a ban on archery hunting. The recreation analysis will include a supply and demand analysis for hunting. The effects of limiting hunting will be disclosed by comparing the no action alternative and the alternatives which limit hunting.	Effects will be disclosed for the full range of alternatives.

Number	Comment Summary	Response	Issue
32	Remove SPNM designation (since they don't meet the designation criteria and/or folks want motorized access)	Alternatives 3 and 6 were created to address this issue.	1
33	Support Forest Service providing more quiet areas and nonmotorized areas. Restrict more than just hunting and snowmobiles. Restrict noise generating activities and additional quiet areas beyond just SPNM and the Nordhouse Dunes Wilderness Areasuch as North Country Trail and Wild and Scenic River corridors (WSR) etc.	Alternatives 4-10 were created to address this issue.	2
34	Hunting and/or snowmobiling are safe sports, not affecting safety of other users/uses	The effects section will disclose the effects of each alternative to visitor safety.	Effects will be disclosed for the full range of alternatives.
35	Quality Recreation - The Forests Service should provide quality of recreation opportunities for the recreation preferences of users.	The recreation assessment will evaluate this and the effects of the various alternatives will be disclosed in the effects section.	Effects will be disclosed for the full range of alternatives.
36	FS has authority and experience to manage land, they should decide.	The Regional Forester is the Deciding Officer for this decision.	N/A
37	Ban recreation uses that may conflict with hunting/ snowmobiling during hunting/snowmobile seasons. (Banned activities - Hiking, bird watching, etc.)	The recreation analysis will evaluate the supply and demand for various recreation opportunities provided by the SPNM areas and the Nordhouse Dunes Wilderness area. The available supply and demand for various recreation opportunities will be used in evaluation of possible user conflicts and both will be compared by alternative in the effects section. Alternatives 7 and 8 were created to respond to this issue.	3

Number	Comment Summary	Response	Issue
38	Multiple recreation activities occur in same area now with minimal conflicts.	User conflicts for each alternative will be discussed in the effects section. Alternatives 3-8 were created to respond to concerns about changes in recreation opportunities.	3
39	The SEIS has an impact on employee time and resources that could have been used to manage forest.	This is an analysis ordered by the U.S. Court of Appeals for the Sixth Circuit.	N/A
40	Primitive and SPNM areas currently provide unique isolated recreation experiences, including hunting and/or snowmobiling solitude.	The effects section will discuss the effects of the alternatives on recreationists. Alternatives 3-8 were created to respond to concerns about changes to recreation opportunities.	3
41	Use of guns and/or snowmobiles is disruptive to and has a negative impact on wildlife.	The alternative put forth in the NOI would address this concern . The effects section will discuss the effect of noise on other users experience and on wildlife for each alternative.	Effects will be disclosed for the full range of alternatives.
42	Ban snowmobiling and hunting on entire forest.	The purpose and need of the proposal is to respond to the U.S. Court of Appeals for the Sixth Circuit ruling that found the Forest Service should have considered an alternative to ban firearm hunting and snowmobiling in the M.A. 6.1 (SPNM) and the Nordhouse Dunes Wilderness Area. This is beyond the purpose and need for this proposal. The supply and demand analysis shows there is a demand for hunting opportunities on the National Forests and the Forests have coordinated with the State of Michigan on hunting supply and demand.	N/A
43	Closing areas will concentrate use (recreation activities) into other areas, creating more user conflicts.	The effects of the alternatives on user conflicts will be evaluated in the SEIS. Alternatives 3-8 were created to respond to concerns about changes to recreation opportunities.	Effects will be disclosed for the full range of alternatives.

Number	Comment Summary	Response	Issue
44	Snowmobiling on the forest is safer than in urban areas	SPNM areas are not urban areas. Removing the trails in the SPNM areas, does not necessarily mean users would be forced to urban areas. The effect on snowmobilers of each alternative will be evaluated in the SEIS effects section.	Effects will be disclosed for the full range of alternatives.
45	Motorized restriction in SPNM areas would limit access to vegetation management, wildlife management opportunities and wildlife viewing opportunities.	This proposal does not call for limiting roads (management access) - just recreation trails. The effect on recreationists will be evaluated for each alternative.	Effects will be disclosed for the full range of alternatives.
46	These restriction won't work because don’t have personnel to enforce it.	The effects analysis will evaluate the effects of snowmobiles illegally leaving authorized routes and illegal hunting for each alternative.	Effects will be disclosed for the full range of alternatives.
47	Closing snowmobile trails would force many users to be on county roads/using more county roads - creating a safety concern.	The supply and demand analysis will evaluate number of miles of trail available under each alternative and compare the effects on recreationists for each alternative include public safety. Alternatives 3- 8 were created to respond to concerns about changes to recreation opportunities.	Effects will be disclosed for the full range of alternatives.
48	All users should pay fees to use public lands - not just hunters, anglers, motorized uses.	The proposal and alternatives address issues of noise and use conflicts, in response to U.S. Court of Appeals for the Sixth Circuit requirements. Fee changes are not part of the purpose and need.	N/A
49	Firearm hunting is unsafe.	The effects section will disclose the effects of alternatives to visitor safety.	Effects will be disclosed for the full range of alternatives.

Number	Comment Summary	Response	Issue
50	Firearm hunting is loud and disruptive.	The alternative put forth in the NOI (Alternative 2) and Alternatives 4-10 address this issue. The effects section will disclose the effects of alternatives on noise and recreation experience.	2
51	Snowmobiles are unsafe for other recreationists	The effects section will disclose the effects of alternatives to visitor safety.	Effects will be disclosed for the full range of alternatives.
52	Snowmobile trails are a benefit to wildlife and should not be closed.	The effects on wildlife of the various alternatives will be discussed in the effects section of the SEIS.	3
53	Snowmobiles and hunting damage ecosystems.	Comparison of the alternatives will display the range of effects to vegetation, wildlife and other ecosystem resources.	Effects will be disclosed for the full range of alternatives.
54	Snowmobiles cause air pollution.	The effects to air quality from the various alternatives arediscussed in the SEIS.	Effects will be disclosed for the full range of alternatives.
55	Not enough snowmobile trails in Michigan to meet demand.	The recreation supply and demand analysis will display the supply and demand for various recreation opportunities in Michigan. Alternatives 3-8 were created to respond to this issue.	3
56	Unplowed Forest roads should be open to snowmobiles.	This would not address the purpose and need for this proposal. The demand for and supply of areas for snowmobile use on ungroomed trail/unplowed roads will be analyzed in the supply and demand analysis. The effects section will disclose the miles of designated trail by alternative and the effect of each alternative on snowmobilers.	Effects will be disclosed for the full range of alternatives.

Number	Comment Summary	Response	Issue
57	Forest Service doesn't have jurisdiction to close trails on county roads.	The Council of Environmental Quality Regulation at 40 CFR 1502.14 states that agencies shall include reasonable alternatives not within the jurisdiction of the lead agency.	N/A
58	Hunting is a means of subsistence for families- Food on the table.	Social/economic analysis will discuss the effects to the local economy and the effects to hunters. The effect of the alternatives on opportunities for hunting will be discussed in the SEIS. Alternatives 4-8 were created to respond to concerns about changes to recreation opportunities.	Existing Rec
59	Access to hunting/snowmobiling activities is in limited supply (esp. in southern Michigan).	The recreation assessment will include a supply and demand analysis for hunting and snowmobiling opportunities in Michigan. The effects on snowmobiling opportunities will be disclosed for each alternative.	Effects will be disclosed for the full range of alternatives.
60	Snowmobiles have minimal impacts on the ecosystem.	The effects on snowmobile trails on the environment will be disclosed in the SEIS.	Effects will be disclosed for the full range of alternatives.
61	New snowmobiles meet Environmental Protection Agency (EPA) standards for air quality protection	The MDNR licenses snowmobiles. The trail segments being evaluated are part of an interconnected Statewide system. The effects of snowmobile trails on air quality will be evaluated in the analysis.	Effects will be disclosed for the full range of alternatives.
62	Hunting does not cause environmental harm.	The environmental effects of the alternatives will be discussed in the SEIS.	Effects will be disclosed for the full range of alternatives.

Number	Comment Summary	Response	Issue
63	Limiting hunting and snowmobiling in these areas will decrease local property values or decrease the recreation opportunity that caused vacation home owners to purchase and use their vacation homes.	The social and economic effects of the alternatives will be discussed in the SEIS. The alternatives will display the range of effects that are expected. Alternatives 3-8 were developed to respond to concerns about changes to the exsiting recreation opportunities.	3
64	Establish a Quiet Season.	Supply and demand analysis will evaluate the supply and demand for recreation opportunities and the effects of noise on recreation opportunities will be evaluated in the effects for each alternative. Alternatives 7 and 8 will address this issue for the analysis.	2
65	Lots of other places to ride snowmobiles.	The recreation analysis will include a supply and demand study for the opportunity to ride snowmobiles in Michigan.	Effects will be disclosed for the full range of alternatives.
66	Since Treaty Rights will make some areas proposed for closure open only to Tribal members, the Forest Service won't achieve its objective, but would create exclusive use hunting areas.	The effect to Tribes will be disclosed in the Social justice (impact, backlash to tribal members) section of the EA. The effects of each alternative on the recreation experience (achieve quiet for solitude) will be disclosed in the EIS. Alternative 4 was created to respond to this issue.	3
67	Support a SPNM area for primitive weapons only (including firearms) - flintlock, etc.	The U.S. Court of Appeals for the Sixth Circuit opinion did not differentiate between types of firearms this would not meet the purpose and need.	N/A
68	Hunting and snowmobiling are different, separate the issues in planning.	The SEIS addresses snowmobiling and hunting as separate issues.	N/A
69	Who will pay for the snowmobile re-routes (We already paid to build them)?	The effects section will include as economic effect of each alternative.	3

Number	Comment Summary	Response	Issue
70	Most users hunt and/or snowmobile.	The recreation assessment will include a supply and demand analysis for recreation opportunities and the latest National Visitor Use Monitoring study showing use of the National Forest will be used as part of this analysis.	3
71	Hunting meets the Recreation Opportunity Spectrum standards for these areas and so should continue.	Hunting is listed as an appropriate use of all ROS classes except for Urban. Under the no action alternative hunting would continue. The U.S. Court of Appeals for the Sixth Circuit opinion was that the Forest Service should have evaluated an alternative that restricted firearm hunting in the SPNM Management areas and the Nordhouse Dunes Wilderness Area. Alternatives 3 - 8 were created to respond to concerns about changes to recreation opportunities.	3
72	Hunting and/or snowmobiling on public lands provides a health benefit (exercise) or a mental health benefit.	The No Action Alternative will address this concern. The effects on the opportunities for recreation use will be discussed in the SEIS. Alternatives 3-8 were developed to respond to concerns about changes to the existing recreation opportunities.	Effects will be disclosed for the full range of alternatives.
73	Quiet experiences provide mental/spiritual benefits.	Alternatives 4-10 were created to respond to this issue. The recreation analysis will evaluate the availability of areas for solitude/quiet recreation.	2
74	Limited supply of areas for solitude/quiet recreation.	Alternatives 4-10 were created to respond to this issue. The recreation analysis will evaluate the availability of areas for solitude/quiet recreation.	2
75	There are plenty of other places to hunt.	The recreation analysis will include a supply and demand study for hunting opportunities in Michigan.	Effects will be disclosed for the full range of alternatives.
76	We had quiet, we deserve quiet again - historic quiet, no motorized use.	Alternatives 4-10 were created to respond to this issue. The recreation analysis will evaluate the availability of areas for solitude/quiet recreation.	2

Number	Comment Summary	Response	Issue
77	All Forest roads should be open to all traffic (motorized, wheelchair, etc.).	This is outside the scope. This is beyond the purpose and need for this proposal.	N/A
78	If quiet areas (outside SPNM area) are established, consider allowing only quiet electric vehicles.	The alternative of creating additional SPNM areas was considered in the 2006 Forest Plan revision process no additional opportunities were identified.	N/A
79	Don't spend public funds promoting hunting- Few people hunt.	Executive Order number 13443 directs the agency to facilitate the expansion and enhancement of hunting opportunities and the management of game species and their habitat. The recreation analysis includes a supply demand study for hunting opportunities in Michigan. The SEIS will disclose the results of the demand study for hunting and the effect on the hunting opportunities for each alternative.	N/A

Number	Comment Summary	Response	Issue
80	The Law designating the wilderness area listed hunting as one of the purposes, so you can't restrict hunting here.	The ability of the Forest Service to regulate hunting and fishing within designated wilderness areas on the Huron-Manistee NF is no different than in areas outside the wilderness areas. Section 8 of the Michigan Wilderness Act specifically states "[a]s provided in section 4(d)(7) of the Wilderness Act, nothing in this Act shall be construed as affecting the jurisdiction or responsibilities of the State of Michigan with respect to wildlife and fish in the national forests in Michigan." (P.L. 100-184, December 8, 1987). The Michigan Wilderness Act also provides that all wildernesses in Michigan shall be administered "in accordance with the provisions of the Wilderness Act of 1964." The 1964 Wilderness Act provides that "Nothing in this Act shall be deemed to be in interference with the purpose for which national forests are established as set forth in the Act of June 4, 1897 (30 Stat. 11) and the Multiple Use Sustained-Yield Act of June 12, 1960 (74 Stat. 215). (P.L. 88-577, September 3, 1964). Designation as wilderness does not change the authority of neither the State of Michigan nor the Federal government in terms of regulating hunting within wilderness areas within the Huron-Manistee National Forests.	N/A
81	Educate the public about hunting and post areas during hunting season instead of banning hunting.	Possible mitigation - to No Action alternative.	Effects will be disclosed for the full range of alternatives.
82	Expand Nordhouse Dunes Wilderness Area to provide more opportunities for solitude.	The alternative of creating additional SPNM areas was considered in the 2006 Forest Plan revision process no additional opportunities were identified.	N/A
83	Ban areas must be posted, legally. Who will pay? How? Costs to FS/DNR?	The Forest will post maps of closure areas that will be available at the Forest Supervisor's office and each district office. The areas will not be posted on the ground	N/A

Number	Comment Summary	Response	Issue
84	Some hunters cross-country ski, hike, etc. Not all users are disrupted by hunting.	The effects of the alternatives on recreationists will be discussed in the SEIS.	3
85	Honor deed restrictions such as valid and existing rights and tribal rights (outstanding and existing).	The Council on Environmental Quality Regulation at 40 CFR 1502.14 States agencies shall include reasonable alternatives not within the jurisdiction of the lead agency.	N/A
86	Allow hunting in SPNMA's, but restrict target shooting and/or snowmobile noise.	Snowmobile noise will be evaluated for each alternative. The effects of a hunting area availability and noise from hunting will be evaluated for each alternative. The range of alternatives includes allowing and restricting snowmobile use and firearm use. Target shooting would be banned under Alternatives 4 and 6-10. Alternative 4, 5 and 7-10 were created to respond to the issue of snowmobile use.	Effects will be disclosed for the full range of alternatives.
87	Put silencers on guns and legalize them.	This is currently illegal and the Forest Service has no authority to do this. Doing so would only address part of the concern that the U.S. Court of Appeals for the Sixth Circuit asked the Forest Service to remedy. It would not address the perceived safety of other Forest users and not address the court's finding that we address an alternative that restricts firearm hunting in the SPNM areas and the Nordhouse Dunes Wilderness Area. It is also unlikely that the law would be changed in the immediate future. Therefore this issue will not be used to develop an alternative.	N/A
88	Ban snowmobiling on entire forest at night. Harmful to wildlife, disruptive to neighbors.	This is beyond the purpose and need for this proposal. The effects of the alternatives on wildlife and with respect to noise will be discussed in the analysis.	Effects will be disclosed for the full range of alternatives.

Number	Comment Summary	Response	Issue
89	Firearms are a more humane method of game harvest (than bow hunting) and so should continue.	No action would address this concern. The effects of the alternatives on wildlife will be discussed in the effects section of the SEIS. Alternatives 3-6 were also developed to respond to concerns with changing the current hunting opportunities.	3
90	Establish Hunting free days (Sunday) instead of banning hunting.	The supply and demand analysis will show the supply and demand for recreation opportunities. The effects of noise on recreation visitors will be evaluated in the effects section for each alternative. Alternative 6 was developed to respond to this issue.	2, 3
91	Leave the SPNM and Primitive areas only open for hunting during deer season and closed the rest of the year.	Alternatives 7 and 8 were developed to respond to this issue.	2, 3
92	Wildlife viewers (non-consumptive) support wildlife management through the State of Michigan's Nongame Wildlife Fund.	Many people do contribute to this fund providing funds to the State of Michigan. These funds are used for initiating, developing and implementing critical projects vital to the needs of Michigan's endangered, threatened and nongame animals, plants and their habitats. This does not lead to the creation of an alternative.	N/A
93	Establish a "Buffer zone" to ensure quiet in the SPNM areas and Nordhouse Dunes Wilderness Area.	Alternative 10 was developed to respond to this concern.	2
94	Adopt the Yellowstone National Park standards for snowmobiles for noise and air pollution.	Trying to enforce the use of particular models of snowmobiles and restrict use to guided tours would be very difficult to administer for such a small segment of the Statewide trail network and provide an unreasonable burden to the Statewide trail system users. So for that reason the forests will not consider this mitigation.	N/A
95	Create new SPNM areas for hunting and close the existing areas to hunting.	The alternative of creating additional SPNM areas was considered in the 2006 Forest Plan revision process and no additional opportunities were identified.	N/A

Number	Comment Summary	Response	Issue
96	Closing areas to hunting and snowmobiling will have little effect on the local economy.	The effect of the various alternatives on the local economy will be disclosed in the effects section of the SEIS.	Effects will be disclosed for the full range of alternatives.
97	Most users participate in quiet recreation activities and want quiet.	The recreation assessment will include a supply and demand analysis for recreation opportunities and the latest National Visitor Use Monitoring study showing use of the National Forest will be used as part of this analysis. Alternatives 4 - 10 were created to respond to concerns for quiet recreation opportunities.	2
98	The Forest Service may use the 2000 Planning Rule or the 1982 Planning Rule. The 2000 Rule does not require duplication studies and so closure would not be necessary (The Huron-Manistee National Forests Plan Revision was conducted under the 1982 version of the Forest Service Planning rules, as permitted by 36 C.F.R section 219.13(e)).	The U.S. Court of Appeals for the Sixth Circuit made its findings based on the 1982 rule procedures, which were used to revise the plan. To facilitate a coherent and integrated revision, we have chosen to continue to use the 1982 procedures.	N/A

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Appendix G – Social and Economic Analysis

The first portion of Appendix G provides interested readers with additional details regarding the social and economic analyses utilizing the economic computer models IMPLAN (Impact Analysis for Planning) and FEAST (Forest Economic Analysis Spreadsheet Tool). This section does not provide sufficient information to replicate the analysis. For that level of detail, the specialist reports contained in the project record should be consulted.

Defining Economic Impact Analysis Area

Introduction

The impact area for the Huron-Manistee National Forests as used in the 2006 FEIS includes the following counties:

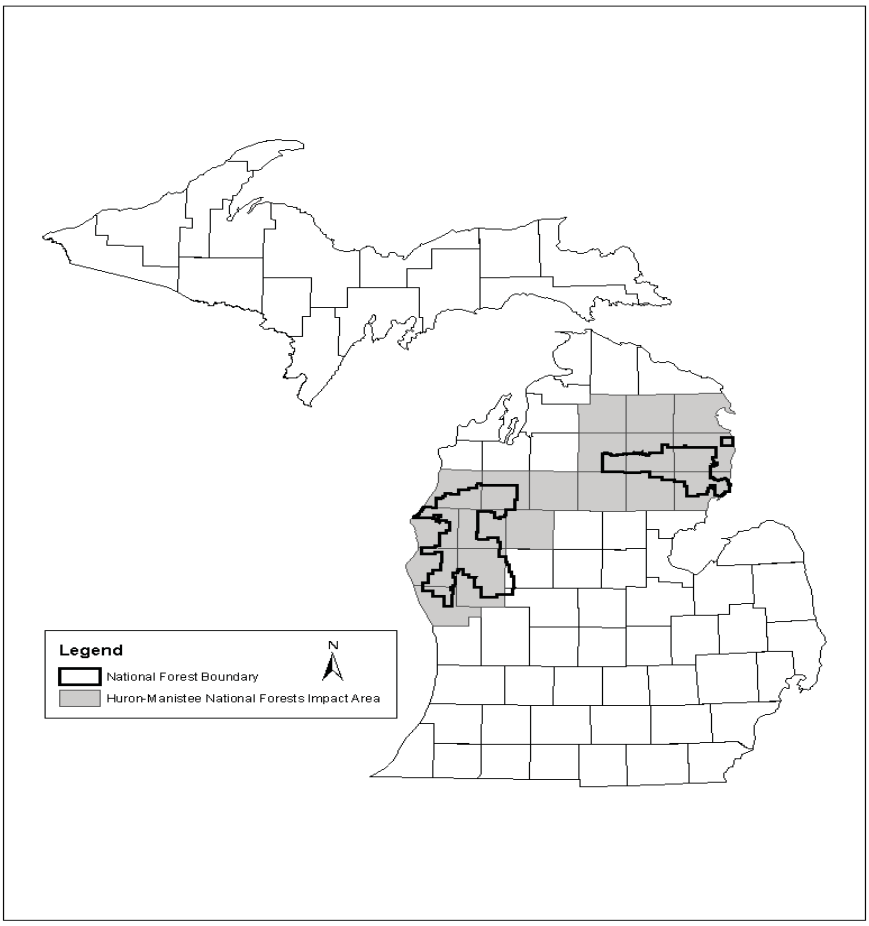
- Alcona
- Alpena
- Crawford
- Iosco
- Montmorency
- Ogemaw
- Oscoda
- Otsego
- Roscommon
- Lake
- Manistee
- Mason
- Missaukee
- Muskegon
- Newaygo
- Oceana
- Osceola
- Wexford

Huron-Manistee National Forests' Economic Impact Area

Economic relationships for all businesses in the above counties were modeled within IMPLAN using economic data collected in 2009. This is the most recent data available because it takes about two years to analyze survey data and prepare an IMPLAN databases for each county in the country. These modeled relationships were extracted and used in the FEAST spreadsheet tool. FEAST was used at the Forest level to analyze the economic relationships of current spending, incomes, recreation visitation and other current estimates associated with Forest Plan alternatives. The structure of the local economy is expected to be similar to 2009. Some businesses may be gone and some new ones may have been created. The numbers of jobs and income associated with 2010 or newer economic activity are expected to be similar. The purpose of this analysis is to compare alternatives so using the same models for each alternative provides the best means of comparison, even though estimates of jobs and income are not and never will be, perfect, given the dynamic nature of business economies.

Impact areas are defined using historic and anticipated effects of National Forest management. However, there is no guarantee that they will provide the best fit for assessing future effects. Effects of future National Forest management should be monitored to see whether the criteria for impact area definition discussed above and their application are providing the most credible and useful estimates of local economic impacts.

Figure G- 1. Economic Impact Area for the Huron-Manistee National Forests



Economic Impact Model

Economic effects to local counties were estimated using an economic input-output model developed with IMPLAN Version 3.0.9.2 using 2009 business data for the entire State of Michigan and for the individual counties listed. IMPLAN is software for personal computers that uses the latest national input-output tables from the Bureau of Economic Analysis, secondary economic data at the county level from a variety of public sources and proprietary procedures to develop an input-output model for a study area. The model was originally developed by the Forest Service and is now the property of the Minnesota IMPLAN Group. Someone who is unfamiliar with IMPLAN cannot readily perform input-output analysis with IMPLAN. A detailed explanation of every step in building the model and constructing individual resource and activity impact files was not made a part of this appendix. To know the procedural process for running IMPLAN, refer to the knowledge base on www.implan.com referring to the current IMPLAN software. The Minnesota IMPLAN Group also offers training classes for model usage.

The model area was determined with consideration of such things as generally recognized functional economies, supply-based regions and resident concepts of “local” and contiguous counties.

Forest Contribution and Economic Impact Analysis

Impact analysis describes what happens when a change in final sales (such as exports and consumer purchases) occurs for goods and services in the model area. Changes in final sales are the result of multiplying units of production (for example, hundred cubic feet of timber harvest or recreation visitor days of recreation use) times sales per unit. Economic impacts were estimated using the best available production and sales data. The source of each is listed below.

Impacts to local economies are measured in two ways: employment and labor income. Employment is expressed in jobs; a job can be seasonal or year-round, full-time or part-time. The number of jobs is computed by averaging monthly employment data from State sources over one year. The income measure used was labor income expressed in 2010 dollars. Labor income includes both employee compensation (pay plus benefits) and proprietors' income (for example profits by self-employed).

The planning area model was used to determine the employment and income consequences throughout the economy of one-million-dollar changes for each kind of impact. The results are called response coefficients. Because input-output models are linear, multipliers or response coefficients need only be calculated once per model and then applied to the direct change in output. Spreadsheets were used to calculate total effects by multiplying the response coefficients by estimated levels of dollar activity. A customized Visual Basic application in an Excel workbook called Forest Economic Analysis Software Tool (FEAST) was developed and used for this purpose. Details of FEAST may be examined in the project record. Specifications for developing response coefficients and levels of dollar activity are stated below.

Timber

Sales Data

Information on timber stumpage values was provided from historical sales records available on each National Forest. Direct information on the shipped value of finished timber products for all processing sectors was not available from any source. Because this information was unavailable, the IMPLAN model was used to derive these production values.

Use of the Social and Economic Assessment

The Social and Economic Assessment for the Michigan National Forests, 2003, provided the basis for the 2006 FEIS. Additional assessment information has been prepared and is available in the project record. Supplemental timber information was not compiled because timber outputs are not expected to change by alternative in the SEIS.

Use of the Model

Employment in the lumber and wood products industry is provided inside the IMPLAN model. One million dollars of exports were modeled through each timber-processing sector to determine a "response coefficient." Timber volume from the National Forests was multiplied by historical stumpage prices and multiplied by the response coefficient for "logging camps" to obtain the total economic impact. The distribution of National Forest timber processors and model relationships between "logging camps" and other sectors were then used to derive the export value for each timber sector. This value was then multiplied by the appropriate response coefficient to determine total economic impact for each sector. All results were then summed for presentation in the SEIS. This process was repeated for each alternative.

Recreation and Wildlife/Fish

Expenditure Data

Visitors to the National Forests in Michigan often engage in a variety of activities during a trip. Often these activities cross over boundary lines between public and private lands. Consequently, a general tourism/recreationist expenditure pattern can reliably represent visitors to the National Forests. National Visitor Use Modeling (White and Stynes 2010) spending survey data were used to build expenditure profiles applicable for recreationists on the Huron-Manistee National Forests. This details how they spend their money when visiting the area and participating in the various activities available. Where studies that are more specific were not available, general expenditure profiles from these surveys were used.

Use of the Model

One million dollars of expenditures for the categories of recreation discussed above were run through the model. The results were then incorporated into the FEAST workbook where they were multiplied by total expenditures for each category. Economic impact is defined, in recreation, as dollars brought in to an impact area and spent during a recreation visit. A resident of the area spending money to recreate where they live is not defined as “impact” to economists. That is not to say that spending is not important to the businesses where it takes place. Both points of view are recognized in this analysis. Main discussions of recreation impacts are based on non-local spending. Additional discussions providing estimates associated with local resident spending are included.

Minerals

Expenditure Data

Mineral activities on NFS lands generate revenues for the local economy through renting/leasing of heavy equipment; purchase of supplies and materials and payments of salaries to workers. Expenditures vary by depth of well, type of well and stage of development. Typical spending profiles for wells in Michigan were used to document spending profiles for typical wells expected to be drilled on the Forests. Data was acquired for both dry holes and productive wells.

Use of the Model

One million dollars of expenditures for the categories of minerals discussed above were run through the model. The results were then incorporated into the FEAST workbook where they were multiplied by total expenditures for each category.

Federal Expenditures and Employment

Expenditure Data

The Forests adjusted budget estimates by alternative. This budget constraint was used to estimate total Forest expenditures, some of which had local economic effects. Total Forests obligations by budget object code for FY 2011 were used to estimate how the budget would be spent. Forest Service employment was estimated by the Forests staff based on examination of historical Forest Service obligations. Details regarding the expenditures may be found in the project record.

Use of the Model

To obtain an estimate of total impacts from Forest Service spending, salary and non-salary portions of the impact were handled separately. Non-salary expenditures were determined by using the budget object code information noted above. This profile was run through the model for non-salary expenditures per one million dollars and the results multiplied by total Forests non-salary expenditures. Sales to the Federal Government are treated in the same manner as exports.

Salary impacts result from Forests employees spending a portion of their salaries locally. IMPLAN includes a profile of personal consumption expenditures for several income categories.

Revenue Sharing – 25 Percent Fund Payments

Expenditure Data

Federal law requires that a portion of current or historical revenues be returned to the States and counties within which the revenues were received. These payments may be used for a variety of purposes, including schools and roads. It was assumed that 25 percent of all National Forest revenues would be returned to the local impact area and that a split of 75 percent for schools and 25 percent for roads would represent how local governments spend these revenues. A profile of expenditures for each of these purposes was derived from the model itself. Details regarding the expenditures may be found in the project record. Counties opting out of 25 Percent and electing Secure Rural Schools payments have been appropriately accounted-for, including Title I, II and III elections.

Use of the Model

The national expenditure profile for State/local government education (schools) and local model estimates for road construction (roads) are provided within IMPLAN. One million dollars of each profile was used to estimate a response coefficient for these Forest Service payments to impact area counties. The results were then incorporated into a spreadsheet where they were multiplied by total expenditures. Sales to local government are treated in the same manner as exports.

Output Levels

Output levels are specified in the FEAST Excel spreadsheet, located in the project record.