

3.10.1 Management Outcomes and Activities

Table 3-9. Summary of Estimated Vegetative Treatment Outcomes and Activities by Alternative for the Chippewa NF

Outcome or Activity	Current Condition	Unit		Time-frame	Alternative						
					A No Action	B	C	D	Mod. E	F	G
Suitable Timber Land	479,032 ac.	Acres		NA	471,365	456,399	471,365	0	459,313	444,360	456,933
Total Area Harvested	67,107 acres from 1992-2002	Maximum acres		1 st ten years of implementation	85,340	55,141	117,828	34,752	77,637	47,288	60,652
Clearcutting Proportion	69% of total acres treated from 1992-2002	Percent of total acres treated		1 st ten years of implementation	70%	30%	65%	0%	38%	50%	39%
Timber Volume	average volume from '92-'02 was 65 MMBF	Maximum MMBF		1 st ten years of implementation	70	38	91	21	58	37	46
Site Preparation (mechanical & prescribed fire)	6,710 acres treated from 1993-2002	Maximum acres that could be treated		1 st ten years of implementation	3,300	2,900	900	0	2,600	5,400	2,700
Prescribed Fire for Ecosystem Disturbance in the 1 st ten years	0 acres treated from 1993-2002	Maximum number of acres of red and white pine over 40 yrs old and not scheduled for harvest that could be treated		1 st ten years of implementation	6,900	7,800	7,200	9,000	7,900	7,500	6,800
Prescribed Fire for Hazardous Fuel Reduction	27,992 acres from 1993-2002	Max acres that could be treated		1 st ten years of implementation	25,600	28,200	22,700	30,100	26,200	28,900	27,700
Present Net Value* (full implementation)		Millions of dollars	w/market values	100 yrs at 4%	-\$420	-\$524	-\$438	-\$600	-\$479	-\$520	-\$500
		Millions of dollars	w/market and non-market values	100 yrs at 4%	\$9,798	\$9,675	\$9,842	\$9,601	\$9,771	\$9,667	\$9,695

Table 3-10. Summary of Estimated Vegetative Treatment Outcomes and Activities by Alternative for the Superior NF

Outcome or Activity	Current Condition	Units		Time-frame	Alternative						
					A No Action	B	C	D	Mod. E	F	G
Suitable Timber Land acres	645,035 ac.	Acres		NA	981,908	884,727	991,954	0	944,909	959,428	944,024
Total Area Harvested	78,058 acres from 1992-2002	Maximum acres		1 st ten years of implementation	156,202	88,292	221,191	76,099	130,967	107,365	116,763
Clearcutting Proportion	98% of total acres treated from 1992-2002	Percent of total acres treated		1 st ten years of implementation	73%	42%	74%	0%	63%	61%	52%
Timber Volume	average volume from '92-'02 was 75 MMBF	Maximum MMBF		1 st ten years of implementation	100	51	150	37	102	70	70
Site Preparation (mechanical & prescribed fire)	7,828 acres treated from 1993-2002	Maximum acres that could be treated		1 st ten years of implementation	6,200	6,200	1,700	0	6,700	15,100	7,000
Prescribed Fire for Ecosystem Disturbance	7,715 acres treated from 1993-2002 as Wildland Fire Use fires within the BWCAW	Maximum number of acres of red and white pine over 40 yrs old and not scheduled for harvest that could be treated outside the BWCAW		1 st ten years of implementation	7,600	8,000	7,200	9,200	6,200	6,800	7,100
Prescribed Fire for Hazardous Fuel Reduction	26,437 acres from 1993-2002	Maximum acres that could be treated		1 st ten years of implementation	62,000	68,200	56,300	69,300	66,100	66,400	65,700
Present Net Value* (full implementation)		Millions of dollars	w/market values	100 yrs at 4%	-\$1,131	-\$1,258	-\$1,153	-\$1,362	-\$1,210	-\$1,245	-\$1,225
		Millions of dollars	w/market and non-market values	100 yrs at 4%	\$10,199	\$10,143	\$10,209	\$10,045	\$10,183	\$10,065	\$10,126

* Present net value is calculated by subtracting discounted costs from discounted benefits (or revenues). It is a measure of how efficiently the Forest Service is using tax dollars to obtain the goals of each alternative. Market values are products and services that the Forests Service provides that have an established price, such as timber, campground fees, and special use fees. Non-market values are estimated "prices" for items that do not have an established price, such as recreation visitor days for snowmobiling, hiking, or hunting.

3.10.2 Summary Comparison of Alternatives

Table 3-11. Comparison of Effects and Outcomes - CHIPPEWA NF																
Issue	Units	Current Condition	Alternatives													
			A – No Action		B		C		D		Modified E		F		G	
Vegetation																
Vegetation Condition at the end of Decades 2 & 10	decade		Dec. 2	Dec. 10	Dec. 2	Dec. 10	Dec. 2	Dec. 10	Dec. 2	Dec. 10	Dec. 2	Dec. 10	Dec. 2	Dec. 10	Dec. 2	Dec. 10
	% conifer	27%	28%	31%	34%	57%	39%	36%	35%	58%	34%	42%	34%	52%	34%	51%
	% deciduous	73%	72%	69%	66%	43%	61%	64%	65%	42%	66%	58%	66%	48%	66%	49%
	upland % 0-10 yrs.	11%	13%	16%	4%	4%	14%	15%	4%	2%	8%	7%	5%	6%	7%	7%
	upland % 100+yrs.	7%	11%	18%	14%	51%	9%	22%	14%	53%	14%	35%	14%	50%	13%	38%
Wildlife																
Emphasized Habitat	management direction in Forest Plans	Provides habitat mostly for species associated with young, early successional forests and edges.	Provides habitat mostly for species associated with young, early successional forests and edges.	Landscape is dominated by habitat for species associated with older forest, later successional forest, and interior areas.	Provides habitat mostly for species associated with young forests, early successional forests, and edges.	Provides habitat for species associated with older forest, later successional forest and interior areas.	Provides habitat for species associated with a variety of forest conditions and successional stages.	Habitat characteristic of natural disturbance regime. Older forests, but some ecosystems dominated by habitat associated with early successional species.	Provides habitat for species associated with a variety of forest conditions and successional stages.	Habitat characteristic of natural disturbance regime. Older forests, but some ecosystems dominated by habitat associated with early successional species.	Provides habitat for species associated with a variety of forest conditions and successional stages. Habitat zoned by management area.					
Older Forest	how older forest is provided for in the alternatives	MA Objectives for old/extended rotation forest	MA Objectives for old/extended rotation forest	Landscape ecosystem vegetation and habitat objectives; MA allocations: all SMCs, all pRNAs, wilderness study areas; Standards and guidelines	Landscape ecosystem vegetation and habitat objectives; Some extended rotation; Standards and guidelines	Landscape ecosystem vegetation and habitat objectives; Non-suitable land MA allocations: Minimum Management Natural Areas, all pRNAs, all wilderness study areas; Standards and guidelines	Landscape ecosystem vegetation and habitat objectives: Standards and guidelines	Landscape ecosystem vegetation and habitat objectives: MA allocation: all pRNAs; Standards and guidelines	Landscape ecosystem vegetation and habitat objectives: MA allocation: upper level SMCs and some wilderness study areas; Standards and guidelines							
Fragmentation of Forest Habitats	management direction in Forest Plans	Objectives, standards, and guidelines increase fragmentation in young and old forest, 40 acre opening size limit	Objectives, standards, and guidelines increase fragmentation in young and old forest, 40 acre opening size limit	Objectives, standards and guides reduce fragmentation in old and young forest; 1000 acres opening size limit	Objectives, standards and guides reduce fragmentation primarily in young forest; 1000 acres opening size limit	Objectives, standards and guides reduce fragmentation primarily in older forest; 1000 acres opening size limit	Objectives, standards and guides reduce fragmentation young forest, mitigate fragmentation in older forest; 1000 acres opening size limit	Objectives, standards and guides reduce fragmentation in young and old forest; 1000 acres opening size limit	Objectives, standards and guides reduce fragmentation in young and old forest; 1000 acres opening size limit							
Old-growth Forest	acres of management areas that are managed to promote or contribute to old-growth	27,941	27,941	248,586	41,002	649,821	110,691	84,591	169,685							
Timber																
	ratio of sawtimber to pulpwood for decade 1		29:71	34:66	26:74	16:84	32:68	29:71	35:65							
Relative Fire Risk																
	fire risk index at the end of decade	Moderate	Low	High	Low	High	Moderate	Moderate	Moderate							

Table 3-11. Comparison of Effects and Outcomes - CHIPPEWA NF - Continued

Issue	Units	Current Condition	Alternatives													
			A – No Action		B		C		D		Modified E		F		G	
Watershed/Riparian																
Riparian Area Vegetation Condition at end of Decades 2 & 10 RMZ = riparian management zone	decade		Dec. 2	Dec. 10	Dec. 2	Dec. 10	Dec. 2	Dec. 10	Dec. 2	Dec. 10	Dec. 2	Dec. 10	Dec. 2	Dec. 10	Dec. 2	Dec. 10
	% old growth age class in forested portion of combined inner and outer RMZs	16%	23%	49%	33%	75%	22%	51%	32%	74%	29%	71%	32%	68%	32%	71%
	% long lived species in forested portion of inner RMZs	50%	59%	72%	66%	100%	58%	70%	66%	100%	68%	99%	63%	90%	66%	100%
	% long lived species in forested portion of outer RMZs	49%	55%	64%	61%	88%	56%	66%	59%	86%	57%	73%	61%	84%	57%	75%
Riparian Management	management approach	Mitigative Approach	Mitigative Approach	Proactive Approach & Riparian MA		Mitigative Approach	Proactive Approach		Proactive Approach & Riparian MA		Mitigative Approach & Riparian MA		Proactive Approach & Riparian MA			
Potential Impacts to Watersheds of New System and Temp. Roads	% of 6 th level watersheds that increase in riparian road interaction class at end of decade 2	NA	14%		9%		14%		8%		11%		10%		11%	
Recreation																
Recreation Opportunity Spectrum Class Objectives (% of total NFS acres)	Semi-primitive Non-motorized	2%	2%		29%		2%		58%		4%		3%		5%	
	Semi-primitive Motorized	0%	0%		1%		0%		34%		2%		1%		16%	
	Roaded Natural	95%	95%		68%		95%		5%		91%		94%		76%	
	Rural	3%	3%		3%		3%		3%		3%		3%		3%	
All Terrain Vehicle (ATV) Trails	maximum miles of additional designated trails	20 existing miles	60		30		60		0		90		60		60	
RMV use of NFS Roads[†]	NFS existing [‡] low standard system roads*	Allowed	Allowed		Allowed		Allowed		Allowed		Allowed		Allowed		Allowed	
	NFS unclassified roads*	Allowed	Allowed		Prohibited		Prohibited		Prohibited		Prohibited		Prohibited		Prohibited	
Cross-country Travel Policy	OHV use*	Prohibited	Prohibited		Prohibited		ATV big game retrieval & trapping access only		Prohibited		Prohibited		Prohibited		Prohibited	
	snowmobile use	Prohibited	Prohibited		Prohibited		Prohibited		Prohibited		Prohibited		Prohibited		Prohibited	
Snowmobile Trails	maximum miles of additional designated trails	378 existing miles	100		40		100		0		100		70		70	
Water Access	facility development level for new access sites	High	High		Low		High		No new		High		Moderate		Moderate	

[†] Snowmobiles only allowed on unplowed roads.
^{*} 'Allowed' uses may have limits in some management areas. Exceptions are noted in the RMV section of Chapter 3 of the EIS
[‡] RMV use would generally be prohibited on newly constructed low standard roads.

Table 3-11. Comparison of Effects and Outcomes - CHIPPEWA NF - Continued									
Issue	Units	Current Condition	Alternatives						
			A – No Action	B	C	D	Modified E	F	G
Special Designations									
Wilderness Study Areas	number of areas NFS acres	0 areas	0 areas 0	2 areas 6,213	0 areas 0	2 areas 6,213	0 areas 0	0 areas	1 area 2,727
Special Management Complexes	NFS acres	0 areas	0	169,098	0	0	0	0	85,595
Potential Research Natural Areas	number of areas NFS acres	4 existing RNAs 2,140	1 area 769	9 areas 6,316	1 area 769	8 areas 5,617	3 areas 1,699	10 areas 9,530	9 areas 8,831
Economic									
Jobs	total jobs in the year 2012 in the economic impact area	14,479	19,047	15,858	18,446	12,332	17,097	15,350	17,859
Labor Income	total labor income in the year 2012 (\$ million) in the economic impact area	\$348.2	\$479.6	\$374.6	\$462.8	\$262.2	\$415.8	\$358.5	\$438.1
Roads									
Total Maintenance Level 1 Roads	miles at the end of decade 1	324	155	152	156	140	155	151	154
Temporary Roads	miles in decade 1	355 miles built between '92 – '02	473	262	653	183	324	237	304

Table 3-12. Comparison of Effects and Outcomes– SUPERIOR NF

Issue	Units	Current Condition	Alternatives													
			A		B		C		D		Modified E		F		G	
Vegetation																
Vegetation Condition in Decades 2 & 10 (does not include BWCA)	decade		Dec. 2	Dec. 10	Dec. 2	Dec. 10	Dec. 2	Dec. 10	Dec. 2	Dec. 10	Dec. 2	Dec. 10	Dec. 2	Dec. 10	Dec. 2	Dec. 10
	% conifer	40%	42%	52%	45%	80%	42%	53%	50%	81%	46%	60%	46%	72%	47%	67%
	% deciduous	60%	58%	48%	55%	20%	58%	47%	50%	19%	54%	40%	54%	28%	53%	33%
	upland % 0-10 yrs.	14%	13%	15%	5%	6%	15%	14%	5%	2%	11%	10%	8%	9%	9%	10%
	upland % 100+ yrs.	9%	8%	15%	19%	50%	13%	22%	18%	51%	17%	32%	18%	38%	16%	33%
Timber																
	ratio of sawtimber to pulpwood for decade 1		19:81		24:76		18:82		16:84		21:79		24:76		23:77	
Wildlife																
Emphasized Habitat	management direction in Forest Plans	Provides habitat mostly for species associated with young, early successional forests and edges.	Provides habitat mostly for species associated with young, early successional forests and edges.	Landscape is dominated by habitat for species associated with older forest, later successional forest, and interior areas.	Provides habitat mostly for species associated with young forests, early successional forests, and edges.	Provides habitat for species associated with older forest, later successional forest and interior areas.	Provides habitat for species associated with a variety of forest conditions and successional stages.	Habitat characteristic of natural disturbance regime. Older forests, but some ecosystems dominated by habitat associated with early successional species.	Provides habitat for species associated with a variety of forest conditions and successional stages.	Habitat characteristic of natural disturbance regime. Older forests, but some ecosystems dominated by habitat associated with early successional species.	Provides habitat for species associated with a variety of forest conditions and successional stages. Habitat zoned by Management area.					
Older Forest	how older forest is provided for in the alternatives	Wildlife standards and guidelines	Wildlife standards and guidelines	Landscape ecosystem vegetation and habitat objectives; MA allocations: all SMCs, all pRNAs, wilderness study areas; Standards and guidelines	Landscape ecosystem vegetation and habitat objectives; Some extended rotation; Standards and guidelines	Landscape ecosystem vegetation and habitat objectives; Non-suitable land MA allocations: Minimum Management Natural Areas, all pRNAs, all wilderness study areas; Standards and guidelines	Landscape ecosystem vegetation and habitat objectives; Standards and guidelines	Landscape ecosystem vegetation and habitat objectives: MA allocation: all pRNAs; Standards and guidelines	Landscape ecosystem vegetation and habitat objectives: MA allocation: upper level SMCs and some wilderness study areas; Standards and guidelines							
Fragmentation of Forest Habitats	management direction in Forest Plans	Objectives, standards, and guidelines increase fragmentation in young and old forest, 40 acre or 200 acre opening size limit depending on MA	Objectives, standards, and guidelines increase fragmentation in young and old forest, 40 acre or 200 acre opening size limit depending on MA	Objectives, standards and guides reduce fragmentation in old and young forest; 1000 acres opening size limit	Objectives, standards and guides reduce fragmentation primarily in young forest; 1000 acres opening size limit	Objectives, standards and guides reduce fragmentation primarily in older forest; 1000 acres opening size limit	Objectives, standards and guides reduce fragmentation young forest, mitigate fragmentation in older forest; 1000 acres opening size limit	Objectives, standards and guides reduce fragmentation in young and old forest; 1000 acres opening size limit	Objectives, standards and guides reduce fragmentation in young and old forest; 1000 acres opening size limit							
Old-growth Forest	acres of management areas that would contribute to old-growth	1,000,003 (BWCAW = 810,609)	1,000,003	1,589,419	1,000,302	2,208,421	1,119,449	1,045,071	1,178,929							
Relative Fire Risk																
	fire risk index at the end of decade 1	Mod/High	Low	High	Low	High	Moderate	Moderate	Moderate							

Issue	Units	Current Condition	Alternatives													
			A		B		C		D		Modified E		F		G	
Watershed/Riparian																
	decade		Dec. 2	Dec. 10	Dec. 2	Dec. 10	Dec. 2	Dec. 10	Dec. 2	Dec. 10	Dec. 2	Dec. 10	Dec. 2	Dec. 10	Dec. 2	Dec. 10
Riparian Area Vegetation Condition at end of Decades 2 & 10	% old growth age class in forested portion of combined inner and outer RMZs	36%	41%	49%	50%	69%	36%	48%	48%	70%	54%	74%	46%	59%	49%	67%
	RMZ = riparian management zone															
	% long lived species in forested portion of inner RMZs	48%	56%	80%	58%	96%	56%	74%	58%	96%	58%	96%	57%	88%	58%	96%
	% long lived species in forested portion of outer RMZs	46%	52%	68%	53%	85%	51%	64%	53%	81%	53%	74%	53%	75%	53%	75%
Riparian Management	management approach	Mitigative Approach	Mitigative Approach		Proactive Approach		Mitigative Approach		Proactive Approach		Proactive Approach & Riparian MA		Mitigative Approach		Proactive Approach	
Potential Impacts to Watersheds of New Summer System and Temporary Roads	% of 6 th level watersheds that increase in riparian road interaction class at end of decade 2	NA	17%		11%		22%		7%		12%		10%		15%	
Recreation																
Recreation Opportunity Spectrum Class Objectives (% total acres)	Primitive	5 %	5 %		5 %		5 %		5 %		5 %		5 %		5 %	
	Semi-primitive Non-motorized	29%	29%		60%		29%		65%		31%		31%		30%	
	Semi-primitive Motorized	5%	5%		4%		5%		28%		7%		8%		15%	
	Roaded Natural	60%	60%		30%		60%		1%		56%		55%		49%	
	Rural	1%	1%		1%		1%		1%		1%		1%		1%	
All Terrain Vehicle (ATV) Trails	maximum miles of additional designated trails	40 existing miles	60		30		60		0		90		60		60	
RMV use of NFS Roads[†]	NFS existing [†] low standard system roads*	Allowed	Allowed		Allowed		Allowed		Allowed		Allowed		Allowed		Allowed	
	NFS unclassified roads*	Allowed	Allowed		Allowed		Allowed		Prohibited		Allowed		Allowed		Allowed	
Cross-country Travel Policy	OHV use*	ATV allowed	ATV Allowed		Prohibited		ATV big game retrieval & trapping access only		Prohibited		Prohibited		Prohibited		Prohibited	
	snowmobile use*	Allowed	Allowed		Allowed		Allowed		Prohibited		Allowed		Allowed		Allowed	
Snowmobile Trails	maximum miles of additional designated trails	705 existing miles	90		50		90		0		130		90		90	
Water Access	facility development level of new access sites	High	High		Low		High		Low		High		Moderate		Moderate	

[†] Snowmobiles only allowed on unplowed roads.
^{*} 'Allowed' uses may have limits in some management areas. Exceptions are noted in the RMV section of Chapter 3 of the EIS
[‡] RMV use would generally be prohibited on newly constructed low standard roads.

Table 3-12. Comparison of Effects and Outcomes– SUPERIOR NF - <i>continued</i>									
Issue	Units	Current Condition	Alternatives						
			A	B	C	D	Modified E	F	G
Special Designations									
Wilderness Study Areas	number of new areas NFS acres	BWCAW designated wilderness 810,609	0 areas 0	12 areas 17,485	0 areas 0	30 areas 60,163	0 areas 0	0 areas 0	4 areas 3,672
Special Management Complexes	NFS Acres (0 acres existing)	0 areas existing	0	345,751	0	0	0	0	183,302
Potential Research Natural Areas	number of areas NFS acres (1 existing RNA)	4 existing RNAs 3,184	1 area 792	41 areas 45,571	1 area 792	41 areas 45,571	11 areas 19,448	41 areas 45,571	26 areas 34,537
Economic									
Jobs	total jobs in the year 2012 in the economic impact area	24,720	27,428	25,288	28,241	23,581	27,140	27,111	26,763
Labor Income	total labor income in the year 2012 (\$ million) in the economic impact area	\$561.0	\$652.0	\$578.9	\$681.7	\$525.1	\$642.5	\$638.7	\$627.8
Roads									
Total Maintenance Level 1 Roads	miles at the end of decade 1 (883 existing)	883 existing miles	1,172	1,046	1,292	1,024	1,132	1,082	1,099
Temporary Roads	miles in decade 1	432 miles built from '92-'01	873	494	1,236	425	754	600	653

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