

## Appendix B-Accomplishments

Resource	Monitoring Drivers	FP Objective or FEIS Projection for Decade 1	Accomplishments or Conditions	
			Implemented	Approved NEPA Decisions
<b>Air</b>	<b>Desired Condition. D-AQ-1.</b> Air on the forest is of high quality so that: 1) ecosystems are not impaired by pollutants originating in the air, 2) the health of visitors, residents, and employees are not impaired, 3) poor visibility does not impair scenic quality, and 4) other air quality related values are not adversely affected. AND <b>Desired Condition. D-AQ-3.</b> Air emissions from NF management actions do not degrade natural resources or uses of the Forest	<b>Annual Stnd:</b> 15 PM25  <b>24hr Stnd:</b> 65 PM25 <b>Fernberg Site:</b> No major changes from that seen over the past 5 years.	<b>Fernberg Site:</b> No major changes from that seen over the past 5 years.  <b>BWCAW BURNS:</b> 61/2 days with values over our benchmark or EPA health standard	~
<b>Cooperation &amp; Partnerships</b>	<b>Objective. D-CM-1.</b> "The Forest works cooperatively with other landowners and land managers to protect, enhance, and restore physical and biological resources as well as social and economic values. Cooperative management includes tribal, state, county, local governments as well as other federal agencies."	<b>NA</b>	<b>Formal Agreements</b> Number;..... 71 Agreements. Contribution Value (Cash & Non Cash).....\$600,000 <b>Volunteer Agreements</b> Number;..... 497 Volunteers Contribution Value (Cash & Non Cash).....\$124,000	~
<b>Fire</b>	<b>Desired Condition D-ID-6.</b> The presence of wildland fire on the landscape is appropriate and desirable, but unwanted wildland fire is actively suppressed where necessary to protect life, investments, and natural resources. The full range of appropriate management responses are considered for unwanted wild land fires.	<b>Prescribed Fire activity acres</b> Fire: Ecological Objectives: 6,200 Ac Fire: Hazardous Fuels: 66,100 Ac Site Prep: 6,700 Total: 79,000 Ac	<b>Hazardous Fuels:</b> 2004-1,357 2005-475 Total: 1,832 Acres 2004 - 42 fires totaling 40 acres burned 2005 - 61 fires totaling 1,548 acres burned	2115 Acres
	<b>Objective.O-ID-2.</b> Establish, maintain, or improve the condition of vegetation using prescribed fire, mechanical treatments, and other tools AND <b>Objective.O-ID-4.</b> Reduce fuels and control vegetation in the understory of stands that had naturally occurring low intensity surface fires	Avg Annual 7,900 acres treated with fire Avg Annual 13,000 acres treated with timber harvest TOTAL for DECADE 1=200,900	1,832 acres treated with fire and 193 acres treated w/timber harvest= <b>2025 Total Acres</b>	Timber=25,217 Fire=2115 <b>=27,332 Acres</b>

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Fire Cont'd	<b>Desired Condition O-ID-3.</b> Treat areas of highest fire risk (based on Fire Regime and Condition Class) to minimize effects of unwanted wildland fire.	~	1 Community Wildfire Protection Plan.	2 Community Wildfire Protection Plans
Heritage	<b>Objective. O-HR-1.</b> Identify, evaluate, protect, monitor, & preserve heritage resources.	Maintenance or Improvement of heritage resource conditions.	Inventories. <b>23,500 ac</b> New Sites; <b>40.</b> Sites Monitored: <b>154</b>	
Insects & Disease	<b>36 CFR 219.12 (k)(5)(iv).</b> Destructive insects and disease organisms do not increase to potentially damaging levels following management activities	Spruce Budworm population maintained at endemic levels (D-ID-3) Gypsy moth infestation at low, non-reproducing level. D-ID-2 Gypsy moth infestation at low, non-reproducing levels.	No acres treated.  640 acres treated;	No accomplishments NEPA decisions  640 acres treated; Tower Cooperative GM Project EA. 72,600 proposed on North Shore. Total= 73,240
	<b>O-ID-1.</b> Increase the amount of forest restored to or maintained in a healthy condition to reduce risk and damage from fires, insects and diseases.	Acres Susceptible to Spruce Budworm; 271,000 Acres Susceptible to Gypsy Moth; 387,000	None  Planted 1,235,000 conifer seedlings; improved vigor/composition 4250 ac	None  Virginia, Eastside Red-White Pine Thinning, Gunflint Corridor Fuels, Holms-Chipmunk, Behind-the-Ridge & others
Non Native Invasive Species	<b>Objective. O-WL-37. Terrestrial.</b> Reduce the spread of terrestrial or aquatic non-native invasive species that pose a risk to native ecosystems.	NNIS exist on SNF as minor ecosystem component (D-WL-9)	<b>Silver Island:</b> 5 new NNIS sites totaling .008 ac <b>BWCAW Fuels EIS:</b> No new NNIS sites.	Same
	<b>Objective. O-WL-37. Aquatic.</b> Reduce the spread of terrestrial or aquatic non-native invasive species that pose a risk to native ecosystems.	NNIS exist on SNF as minor ecosystem component (D-WL-9)	-5 lakes likely occupied by spiny water flea. -19 lakes now known to be occupied by rusty crayfish.	<b>N-A</b>
	<b>Objective. O-WL-38.</b> Use Integrated Pest Management to: a. Eradicate any populations of new invaders. b. Contain or eradicate populations of recent invaders. c. Limit the spread of widespread, established invaders within the planning area.	Acres of NNIS Managed	8 acres treated >90% decrease in cover of spotted knapweed.	Same
Public Health	<b>Objective. O-PH-1.</b> Public & Non public water & wastewater systems are updated, maintained, & managed to standards set forth in federal guidelines & state standards during this plan period AND <b>Objective. O-PH-4.</b> Forest owned facilities & designated rec sites and/or natural resource amenities are inspected & managed to ensure safe operation.	Management of Forest recreation and administrative sites provides for the health of employees and the public (e.g. D-PH-1, D-PH-2, D-PH-4, O-PH-1, and O-PH-4)	<b>PWSB results:</b> TC & E.Coli. 320 monthly water supply tests were performed, covering 50 separate public facilities. Test results at 43 of these facilities demonstrated full compliance will applicable drinking water standards for bacteriological contaminants. Five of the 50 facilities tested positive for TC in only one monthly test; water supplies at an additional two facilities tested positive for TC in two monthly tests. <b>PWSN results:</b> All water supplies met applicable	

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<b>Public Health</b> <i>Cont'd</i>			standards. <b>DSSB results:</b> All beaches met applicable standards. <b>Wastewater Treatment Results:</b> During FY 2005 new or upgraded septic tanks were added to the wastewater treatment systems at both the Tofte and Gunflint administrative sites.	
<b>Recreation Motor Vehicles</b>	<b>36 CFR 219.21[g].</b> Off-road vehicle use shall be planned and implemented to protect land and other....AND <b>Desired Condition. D-RMV-1.</b> The Forest provides RMV road & trail riding opportunities.... AND <b>Desired Condition. D-RMV-2.</b> Allowed, restricted, and prohibited RMV uses are clearly defined to the public.	<b>Road Miles Open To RMV Travel</b> OML 1 Summer; 565 OML 2..... 867 Subtotal.....1432 Unclassified.....0 TOTAL.....1432		<b>Road Miles Open To RMVs</b> OML 1 Summer; 424 OML 2.....867 Unclassified.....160 TOTAL.....1412**
*As more in depth inventories have been accomplished during project planning, "current conditions" reflect both new management actions on the ground as well as the fresh inventory data.				
	<b>Objective. O-RMV-1.</b> A maximum of 90 additional ATV trail miles and 130 snowmobile trail miles with associated trail facilities (trailhead parking, signs, toilets, etc.) may be added to the designated National Forest Trail System.	Up to 90 addtl. Miles	4.75 miles	4.75 miles
<b>Scenic Resources</b>	<b>Desired Condition. D-SC-1.</b> The scenic environment within the Forest ranges from landscapes with high scenic quality, displaying little or no evidence of mgt. activities, to landscapes with low scenic quality where evidence of management activities dominate. High scenic quality is protected or enhanced in landscapes with outstanding scenic value and in other highly used recreation areas and corridors AND <b>Objective. O-SC-1.</b> Management activities will maintain the Forest's scenic resource values by meeting as a minimum the Scenic Integrity Objectives in Table O-SC-1 and on Figure O-SC-1. Higher SIOs may be managed for if deemed appropriate. Areas that do not currently meet SIOs will be considered for scenic enhancement and rehabilitation. (SIO boundaries lie at least one-quarter mile from the actual location of travel ways, recreation sites, and bodies of water with access.)	Very High: 0 High: 361,391. Moderate: 828,582. Low: 167,121.	Over the past 15 months, the scenery resource management on the Forest has focused primarily on input to midlevel analyses, EISs, EAs for vegetation management projects, and a CE for a fuels reduction project. No post-project monitoring has occurred to date; the majority of projects analyzed during the past 15 months have not been implemented yet.	
<b>Socio-Economic</b>	<b>36 CFR 219.19.12(k) 1.</b> A Quantitative estimate of performance comparing outputs & services with those projected by the Forest Plans. <b>36CFR 219.7(f).</b> A program of monitoring and evaluation shall be conducted that includes consideration of the effects of	D-SE-1: The Forest provides commodity resources in an environmentally sustainable and acceptable manner to contribute to the social and	Total Expenditures for the Superior National Forest = \$23,720,000  FY-2004 Ratio of	

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<b>Socio-Economic</b> <i>Cont'd</i>	National Forest Management on land, resources, and communities adjacent to or near the National Forest being planned and the effects upon National Forest management from activities on nearby lands managed by other Federal or other government agencies or under the jurisdiction of local governments. (D-TM-1, O-TM-1)	economic sustainability and diversity of local communities.	Sawtimber:Pulpwood (Cut and Sold) = 10:90	
	<b>36 CFR 219.12(k) [3]; (CFR 2004)</b> Documentation of costs associated with carrying out the planned management prescriptions as compared with costs estimated in the Forest Plan.		An indicator of how the Forest is moving toward the desired condition is the total expenditures and funding that the Forest is committing to Forest-wide resource management and Forest Plan implementation. Total expenditures (funding) for FY-2005 were about \$23,720,000. This represents about a 5% decrease in expenditures compared to FY-2004, and is part of an ongoing trend in reduced expenditures/funding.	
<b>Soils</b>	<b>Desired Condition. FWD. D-WS-12; and 36 CFR 219.12k2.</b> Soils recover from natural disturbance events and absorb the effects of human disturbances without reducing productivity & function. Soils contribute to ecosystem sustainability. Soil-hydrologic function & productivity is protected, preserving the ability to serve as a filter for good water quality & regulation of nutrient cycling. Soil exposure is minimized. There is minimal compaction, displacement, & puddling. Severely burned conditions resulting from mgt-ignited fire occur infrequently.	Treatment units have minimal compaction, rutting, soil displacement, etc	Kadunce Hunter Walking Trail EA pretreatment compaction monitoring.	
	<b>Desired Condition D-WS-3.</b> Watersheds and soils are maintained or restored in a way that allow for the conservation of the genetic integrity of native species. Physical properties of soil are maintained and enhanced. Watershed and habitat restoration projects are natural appearing and favor the use of native materials or naturalized species to the extent practical.	Acres of annual improvement projects.	10 acres (Examples include: Sturgeon River erosion control; Beaver Lake access; Little East Creek road, Beaver R. riparian planting, and more).	Birch Lake CE Little East Creek EA Virginia EIS

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<i>Soils Cont'd</i>	<b>O-WS-9.</b> Protect & where appropriate, restore the soil resource. Improve & protect watershed conditions to provide the soil productivity necessary to support ecological functions. Protect & restore areas where soils are adversely impaired & contributing to an overall decline in watershed condition, soil productivity & quality, & soil function. Do this by using mgt practices, inventory & monitoring results, & findings from the inventory of ecological units. During all mgt actions involving soil disturbance, minimize soil displacement, nutrient loss, & severe burning effects.	<b>FP:</b> LANDSCAPE LEVEL: Nutrient sensitive sites Treated.  Nutrient sensitive sites Treated.  <b>EIS:</b> 4328 ac/yr 7900 ac/yr	Developing baseline for Landscape level analysis	
	<b>O-WS-10</b> During all management actions involving soil disturbance: Maintain adequate ground cover and soil organic layers, both during and after treatment, to minimize erosion (including rill and gully formation) and allow water to infiltrate the soil. Minimize soil displacement, nutrient loss, and effects of severe burning. Restore and re-vegetate disturbed areas. Provide for the maintenance of physical, chemical and biological properties of the forest floor (soil organic matter, Surface O layer), that makes soil productive. Protect soil-hydrologic functions by minimizing rutting, puddling, and compaction.	Sensitive nutrient ELT treatment units have minimal loss of organic layer (forest floor), and minimal severe Burning. Treatment units also provide for Long term forest to maintain nutrients on site.	Sawbill Creek patch burn; Alpine wildland fire. BWEIS Prescribed burns.	
<i>Timber</i>	<b>(36 CFR 219.12(k)[5][ii].</b> Lands identified as not suited for timber production are examined at least every 10 years to determine if the have become suited; and that, if determined suited, such lands are returned to timber production.	944,900 Suitable Acres	No changes in timber Suitability in 2005.	Same
	<b>(36 CFR 219.12(k)[5][i].</b> Lands are adequately restocked as specified in the forest plan.	130,967 Acres= 13,100 Acres per year	(a) 4,184 acres certified as of 09/30/05 (b) 3,672 acres harvested but not certified as of 09/30/05 (c) 2,686 acres harvested but not certified as of 09/30/05 (3198ac-4185ac+3672ac)	TBD. 5 <sup>th</sup> year stocking surveys under Revised Forest Plan treatments to begin in 2009.
	<b>Forest Plan TABLE APP-D3 p.D-3 and EIS Table 2-9 p2-31.</b> Allowable Clear cutting Proportion in actual and Proposed Harvest Treatments	Up to 63 % of total acres treated would be clear cut	88% of stands clearcut	68.3% of stands clearcut

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<b>Timber Cont'd</b>	<b>(36 CFR 219.12(k)[5][iii].</b> Maximum size limits for harvest areas are evaluated to determine whether such size limits should be continued <b>and Standard S-TM-2.</b> Harvest using even-age regeneration methods (clearcutting, seed tree, shelterwood) may create a temporary forest opening no larger than 1,000 acres.	NTE 1000 acres	No patches > than 1000 acres	No patches > than 1000 acres.
	<b>Objective O-VG-20.</b> Create large (>300 acres) patch temporary openings up to 1000 acres through management activities.	Large Patch temporary openings (harvest units) up to 1000 acres. (1) Area; <b>6,900 acres.</b> (2) # of patches 300 ac or larger; <b>17.</b>	Large Patch temporary openings (harvest units) up to 1000 acres.  <b>Harvested</b> (1) Area; <b>0 acres.</b> (2) # of patches: 300 ac or larger; <b>0</b>	Large Patch temporary openings (harvest units) up to 1000 acres.  <b>Harvested/Sold/Planned</b> (1) Area; <b>approx 4218 acres.</b> (2) # of patches: approx 300 ac or larger; <b>8</b>
	<b>Objective O-VG-21</b> Increase average size of temporary forest openings. Reduce amount of forest edge created through vegetation management activities, while still retaining a range of small patches and edge habitat.	Temporary Forest Opening Size.  To increase	Temporary Forest Opening Size. <b>Harvested</b> Average Size= <b>42</b>	Temporary Forest Opening Size. <b>Planned</b> Average Size= <b>Approx 33 acres.</b>
	<b>O-TM-1.</b> Provides commercial wood for mills in Northern Minnesota. Material is harvested from the NF to supply sawmills, veneer mills, paper mills, & mills constructing engineered wood products. The Forest also provides posts, poles, & logs for log home construction.	<b>Avg Annual Sell Volumes</b> 102 MMBF  <b>Area Harvested</b> 131,900 Acres =13,200 ac per yr avg	<b>Volume</b> 48.5 MMBF  <b>Area Harvested</b> 4230 Acres	<b>Volume Harvested/Sold</b> 48.5 MMBF <b>Area Harvested</b> 4,320 Acres <b>Volume Planned</b> 138 MMBF <b>Area Planned</b> 24,343 Acres
<b>Transportation</b>	<b>Objective. O-TS-3.</b> New roads built to access land for resource management will be primarily OML 1 or temporary and not intended for public motorized use. Temporary roads will be decommissioned after their use is completed. All newly constructed OML 1 roads will be effectively closed to motorized road and recreation vehicles following their use unless they are needed for other management objectives..	<b>Roads in Miles</b> OML1 Roads: 1132 OML2 Roads: 867 OML3 Roads: 248 OML4 Roads: 322 OML5 Roads: 86 Unclassified:0	None actually Accomplished	<b>Roads in Miles</b> <b>OML1</b> Roads: 46*+883=929 <b>OML2</b> Roads: 18.4*+867=885 <b>OML3</b> Roads: 0+248=248 <b>OML4</b> Roads: 0+322=322 <b>OML5</b> Roads: 0+86=86 Miles Unclassified: 223-59=164  *Includes miles converted from existing unclassified roads.

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<b>Transportation</b> <i>Cont'd</i>	<b>Objective O-TS-6 &amp; 8.</b> Decisions will be made on Forest unclassified roads to designate them as a NF system road or trail, or to decommission them. The Forest will decommission approximately 80 miles of road over the next 10 to 15 years.	84 Miles	<b>Miles Decommissioned</b> 2.6	<b>Miles Decommissioned</b> 65
<b>Tribal Rights &amp; Interests</b>	<b>O-TR-3.</b> The Forest Service will work with the appropriate tribal governments to clarify questions regarding the use and protection of miscellaneous forest products with the objective of planning for and allowing the continued free personal use of these products by band members within the sustainable limits of the resources.	SNF facilitates the exercise of the right to hunt, fish and gather .... Ongoing opportunities for such use and constraints necessary for resource protection are determined in consultation ...	Consultation for Pre-NEPA, NEPA, and Government-to-Government contacts; carried out collaborative agreements and project implementation and conducted specific and ongoing meetings.	NA
<b>Vegetation</b>	<b>A. Forest Vegetation Composition and Structure</b> <b>Objective. O-VG-1.</b> Move vegetation conditions from Year 2003 conditions toward the long-term desired composition, age, spatial distribution, and within stand diversity. <b>Objective. O-VG-2.</b> Increase acres of red, white, and jack pine, spruce/fir, and northern hardwood vegetation communities. Decrease acres of aspen vegetation communities. <b>Objective. O-VG-3.</b> Maintain acres of lowland conifer and lowland hardwood vegetation communities. <b>Objective. O-VG-9.</b> Increase the amount of multi-aged forest communities in a variety of vegetative growth stages, including stages dominated by young, mature, old, and old growth trees. To successfully achieve a diversity of healthy multi-aged stands, a variety of vegetation management practices that are ecologically appropriate to the forest community will be used. This will include an increase in the percentage of uneven-aged timber harvest practices used to manipulate vegetation, with a decrease in percentage of clearcutting. <b>B. Forest Vegetation Age Objective. FWD. O-VG-13.</b> Maintain a full range of age classes from young to old, including old growth and multi-aged growth stages, for the variety of forested vegetation communities. <b>Objective. FWD. O-VG-14.</b> Increase acres of old forest, old-growth forest, & multi-aged upland forest vegetation. <b>Objective. FWD. O-VG-16.</b> Increase acres of young lowland black spruce and tamarack forest communities. Increase acres of old-growth lowland black spruce and tamarack forest communities.	<b>Variable</b>	<ul style="list-style-type: none"> <li>➤ Ongoing implementation of vegetation management projects that were decided under the 1986 Forest Plan (such as, Rocky Road EA, Holmes-Chipmunk EIS) is continuing to contribute to some of the current Forest Plan vegetation objectives, such as mature and older forest, spruce/fir forest. (Young forest, in general, will result from projects with decisions made before and after the Forest Plan ROD was signed in July 2004).</li> <li>➤ Site-specific decisions made to implement F. Plan veg mgt projects: Tomahawk EA, Dunka EA, Virginia EIS, Eastside Thinning EA, Compartment 63/64 Salvage CE, and Kadunce EA. For example, timber harvest in these projects will increase young forest, multi-aged forest, jack pine forest, white pine forest, &amp; other objectives using tools such as clearcutting with reserve trees, partial overstory removal, prescribed fire, and planting. Refer to Timber and Fire sections for more details.</li> <li>➤ When implemented, vegetation management projects will generally move Forest-wide Landscape Ecosystems toward forest composition and age objectives (FP, pp. 2-61 to 2-78).</li> </ul>	

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<b>Watershed</b>	<b>O-WS-1.</b> Improve and protect watershed conditions to provide water quality and quantity and the soil productivity necessary to support ecological functions and intended beneficial water uses <b>AND Objective O-WS-2(c)</b> Characterize the ecological composition, structure and function and patterns of individual lakes, streams, wetlands.....and the watershed and landscapes in which they are nested	<b>LAKES &amp; STREAMS</b> Long Term Lake and Stream Water Quality Monitoring - (D-WS-5) - Water quality, altered stream flow, and channel stability do not limit aquatic biota or associated recreational uses. Water in lakes, streams, and wetlands meets or exceeds State water quality requirements.	28 sites on 14 streams  15 lakes (10 multiple sampling locations).	BWCAW Fuels EIS Water Quality Monitoring (10 Lakes)
	<b>Objective O-WS-2 (b).</b> Restore ecological integrity on all or parts of one or two of the Forest's fifth level watersheds per year by: Improving road and trail crossings of streams and wetlands to assure soil stability, unimpeded flow, sediment transport, and/or passage of fish.	Complete 1-2 road/stream crossing projects each year. This will in result in 10-20 projects completed by the end of the 1 <sup>st</sup> Decade.	Road/stream crossing improvement projects; <b>3</b>  Improved/restored stream miles; <b>2</b>	Three of five road/stream crossing improvement projects identified in the Virginia EIS were completed in 2005. Two miles of stream habitat were improved.
	<b>Objective O-WS-6.</b> Reconstruct one-half to three miles of stream channel per year, based on principles of stream geomorphology, to enable the flow of water and sediment to occur without resulting in a change in stream pattern, dimension and profile.	5 TO 30 Miles of improved stream habitat by end of 1 <sup>st</sup> decade	Restored or improved stream habitat  1 mile	Restored or improved 1 mile of stream habitat (Dark River Habitat Improvement Project Categorical Exclusion)
	<b>Desired Condition. D-AQ-1.</b> Air on the forest is of high quality so that: 1) ecosystems are not impaired by pollutants originating in the air, <b>AND Desired Condition. D-AQ-3.</b> Air emissions from National Forest management actions do not degrade natural resources or uses of the Forest.	Air on the forest is of high quality so that: 1) ecosystems are not impaired by pollutants originating in the air, <b>AND</b> Air emissions from National Forest mgt actions do not degrade natural resources or uses of the Forest	<b>(b)</b> one complete year's record of precipitation chemistry as measured by NADP and NADP-Hg protocols <b>(c) Mercury in Fish:</b> >12 lakes sampled for mercury in fish <b>Loons;</b> mercury & other toxics sampled in loons on > 16 lakes d) Water chemistry sampled on about 10 lakes	NA
	<b>36 CFR 219.12 (k) [2].</b> Documentation of the measured prescriptions and effects, including significant changes in productivity of the land.	Compliance with MFRC site level guidelines, with exceptions where provided for by specific Forest Plan direction	Highlights of the audit findings are presented in the paragraph immediately above.	NA
<b>WL. Sensitive Species. Aquatic</b>	<b>Objective O-WL-28.</b> Sensitive Fish, Mollusks, Aquatic Insects In all known sites and breeding locations, enhance, or restore high quality habitat for these species primarily by implementing management direction that promotes desired conditions for healthy	<b>FP;</b> Maintain, Protect, or improve habitat for RFSS. Minimize negative effects to RFSS Restore high quality habitat	One mile of direct stream habitat improvement in the Dark River.  Four road stream crossing restoration projects that improve RFSS habitat. Reference reaches were established at	Dark River Stream Habitat Improvement Project CE  Multiple stream crossing restoration projects

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<b>WL. Sensitive Species. Aquatic Cont'd</b>	and functional watersheds, riparian areas, and vegetation AND <b>O-WL-29</b> . Additionally, during evaluation and restoration of one to two 5th level watersheds per year, known locations of the following sensitive aquatic species will provide priority areas for proactive management to improve habitats: Lake sturgeon, Shortjaw cisco, Northern brook lamprey, Creek heelsplitter, and Black sandshell..	for RFSS Evaluate & restore 1-2 5 <sup>th</sup> level watersheds per year. Protect known RFSS mussel beds. <b>EIS</b> ; Restore 1-2 5 <sup>th</sup> level watersheds that will benefit RFSS each year.	28 sites on 13 streams to monitor water quality, stream channel, & stream habitat conditions. Mussel surveys and monitoring at 17 locations. Permanent monitoring sites were established. Road/stream crossing inventories at 10 & 63 sites in 2004 and 2005, respectively, to evaluate fish passage, stream flow, & sediment transport.	completed under Road Maintenance.
<b>WL. Sensitive Species. Plants.</b>	<b>O-WL-18 [All 58 SNF RFSS plants]:</b> All sensitive species. Maintain, protect, or improve habitat for sensitive species. Meeting this objective will involve two basic and complimentary strategies...: <b>a.</b> Landscape level (or coarse filter) management strategies: Addressing species' needs through integrated resource management at large landscape scales... <b>b.</b> Site-level (or fine filter) management strategies: Addressing species' needs by managing specifically for high quality potential habitat or known locations of sensitive species.	No threats to viability of RFSS plants	. <b>KAW Admin Site</b> – transplanted individuals and saw 65% survival	<b>1Virginia moonwort</b> – baseline monitoring completed <b>Canada yew</b> ; baseline monitoring complete <b>Tomahawk Moonwort</b> baseline monitoring complete

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<p><b>WL. Sensitive Species. Terrestrial Species.</b></p>	<p><b>All sensitive species. O-WL-18.</b> Maintain, protect, or improve habitat for sensitive species. ...  <b>Northern goshawk. O-WL-31.</b> Provide habitat to provide for population goal minimum: 20-30 breeding pairs.  <b>Black tern. O-WL-22.</b> In all known breeding locations maintain or restore high quality nesting habitat....  <b>Great gray; owl. O-WL-21.</b> In known or potential good breeding habitat, maintain or restore high quality habitat conditions: Mature (&gt;50 years old).  <b>Boreal owl. O-WL-20.</b> In known or good potential breeding habitat within the normal expected range of the boreal owl on the NFS land, maintain or restore quality habitat conditions....  <b>Three-toed woodpecker. O-WL-23.</b> Maintain or improve quality nesting and foraging habitat within the woodpecker's range, by managing .....  <b>O-WL-24</b> The amount and distribution of dead and dying trees should provide adequate representation of patterns and amounts that would result from natural disturbances  <b>Olive-sided flycatcher. O-WL-25.</b> Maintain, protect, or improve quality nesting and foraging habitat: variety of boreal forests ...  <b>Wood turtle. O-WL-19.</b> In all known breeding locations maintain or restore high quality breeding habitat and protect nesting areas ...  <b>Sensitive butterflies. O-WL-26.</b> In all known breeding locations, maintain or restore high quality habitat for:  <u>Jutta arctic:</u> moderately forested black spruce bogs with sedges, bog forest openings and edges.  <u>Freija's grizzled skipper:</u> upland acid meadow.  <u>Taiqa alpine:</u> semi-open to well forested lowland black spruce-tamarack.  <b>Nabokov's northern blue butterfly. O-WL-27.</b> In eight known breeding locations, maintain or restore high quality habitat....</p>	<p>Variable</p>	<p><b>All Species.</b> MIH management direction presented in the Forest Plan is by Landscape Ecosystem (LE). A GIS analysis of CDS stand data frozen in September of 2005 was conducted in the fall of 2005. The results are reflected in Tables G.2.3 &amp; G.2.6 below. <b>Heather Vole.</b> Small mammal surveys coordinated by the 1854 Authority have been conducted each fall since 2001 in an attempt to track trends in small mammal populations within the forested and transition zones of northern Minnesota. Nine of the trapping routes are conducted on the SNF. In addition surveys were conducted at several sites by a private researcher (Jannett 2005). A total of 12 heather voles were trapped at 7 sites (Jannett 2005).  <b>Northern Goshawk</b> Twenty territories were surveyed including 7 mid-level and project areas and 7 known breeding territories. There were 14 active territories and breeding activity was confirmed at 10 sites. Ten nests were discovered and 6 fledglings were reported (See Table G.2.2). <b>MIH 1b</b> GIS analysis shows a slight Forest-wide increase in this MIH. Although current data shows the Superior exceeds Decade 1 objectives, the amount of mature/old forest in MIH 1 is expected to decrease in decades 1 and 2. The amount of MIH 1b in the BWCAW is expected to remain relatively constant with the only changes taking place due to natural disturbances and/or succession. <b>MIH 13-</b> GIS analysis shows a slight increase in the amount of this indicator Forest-wide. The amount of MIH 13 in the BWCAW is expected to remain relatively constant with the only changes taking place due to natural disturbances and/or succession.  <b>Breeding Pairs-</b> The number of known breeding pairs per year will vary depending on how many known territories are surveyed and nests found and whether or not follow up surveys were able to be conducted. 2005 survey efforts showed an increase of known breeding pairs over those known in 2003.  <b>Peregrine Falcon</b> NRRI's Breeding Bird Monitoring effort surveys 169 stands on the Superior. It has not detected peregrine falcon on the SNF, however survey points are located primarily in forested areas not occupied by this species. The Midwest Peregrine Falcon Restoration project actively monitors and maintains records on peregrine falcons in the state and region.  <b>Sharp Tail Grouse</b> NRRI's Breeding Bird Monitoring effort surveys 169 stands on the Superior. It has not detected sharp-tailed grouse on the SNF; however timing and location of survey routes are such that this species is not adequately surveyed for. The MNDNR has monitored population indices on sharp-tailed dancing grounds since at least 1977. However, data reporting has been inconsistent from year to year.  <b>Yellow Rail</b> NRRI's Breeding Bird Monitoring effort surveys 169 stands on the Superior. It has not detected yellow rail on the SNF, however survey points are</p>	

Resource	Monitoring Drivers	FP Objective or FEIS Projection for Decade 1	Accomplishments or Conditions	
			Implemented	Approved NEPA Decisions
<p><b>WL. Sensitive Species. Terrestrial Species.</b> Cont'd</p>			<p>located primarily in forested areas not occupied by this species. Surveys conducted on the Whyte mid-level analysis area did not detect this species. <b>Wilson Phalarope</b> NRRI's Breeding Bird Monitoring effort surveys 169 stands on the Superior. It has not detected Wilson's phalarope on the SNF, however survey points are located primarily in forested areas not occupied by this species. Surveys conducted on the Whyte mid-level analysis area did not detect this species. <b>Black Tern</b> NRRI's Breeding Bird Monitoring effort surveys 169 stands on the Superior. It has not detected black tern on the SNF, however survey points are located primarily in forested areas not occupied by this species. Surveys conducted on the Whyte mid-level analysis area did not detect this species. <b>Great Gray Owl</b> NRRI's Breeding Bird Monitoring effort surveys 169 stands on the Superior. It has not detected great gray owl on the SNF; however timing and location of survey routes are such that this species is not adequately surveyed for. Surveys conducted in the Whyte mid-level analysis area and along survey routes on the Laurentian Ranger District did not detect this species. Surveys conducted in the Dunka mid-level analysis area yielded one response, but nesting could not be determined. <b>Boreal Owl</b> NRRI's Breeding Bird Monitoring effort surveys 169 stands on the Superior. It has not detected boreal owl on the SNF; however timing and location of survey routes are such that this species is not adequately surveyed for. Surveys conducted in the Whyte and Dunka mid-level analysis area and along survey routes on the Laurentian Ranger District yielded 4 responses, but no nesting was confirmed. Surveys conducted by a private researcher (Lane) in the Gunflint and Tofte Districts detected 1 singing male but no further breeding activity. Monitoring of nest boxes near Isabella showed no boxes were used by boreal owls. <b>Three Toed Woodpecker</b>. NRRI's Breeding Bird Monitoring effort surveys 169 stands on the Superior. It has not detected three-toed woodpecker on the SNF; however timing and location of survey routes are such that this species is not adequately surveyed for. Surveys conducted in the Tomahawk mid-level analysis area did not detect this species. <b>All Neo-tropical Migrant Bird Species</b> There are 8 North American Breeding Bird Survey (BBS) routes within SNF proclamation boundaries. Trend data for these individual routes are not available. BBS data that is available for this species are reflected in Table G.4 below. <b>Olive Sided Flycatcher</b>. NRRI's Breeding Bird Monitoring effort surveys 169 stands on the Superior. It has been detected in 37 stands on the SNF. However, detections are rare and irregular with only 1 detection in 20 of the stands during the period of 1991 thru 2005 (J.Lind, personal communication). Surveys conducted on the Whyte</p>	

Resource	Monitoring Drivers	FP Objective or FEIS Projection for Decade 1	Accomplishments or Conditions	
			Implemented	Approved NEPA Decisions
<p><b>WL. Sensitive Species. Terrestrial Species.</b> <i>Cont'd</i></p>			<p>and Trail mid-level analysis areas did not detect this species. A detection of a nesting olive-sided flycatcher was reported on the Gunflint Ranger District (M.Grover, personal communication). <b>Black Throated Blue Warbler</b> NRRI's Breeding Bird Monitoring effort surveys 169 stands on the Superior. It has been detected in 50 stands, however, many of the detections are rare with only 1 detection in 21 of the stands during the period of 1991 thru 2005 (J.Lind, personal communication). 21. Surveys conducted on the Whyte and Trail mid-level analysis areas did not detect this species. <b>Bay Breasted Warbler</b> NRRI's Breeding Bird Monitoring effort surveys 169 stands on the Superior. It has been detected in 21 stands on the SNF, however, there has been only 1 detection in each of those 21 stands during the period of 1991 thru 2005 (J.Lind, personal communication). Surveys conducted on the Whyte and Trail mid-level analysis areas did not detect this species. <b>Connecticut Warbler</b> NRRI's Breeding Bird Monitoring effort surveys 169 stands on the Superior. It has been detected in 41 stands on the SNF during the period of 1991 thru 2005 (J.Lind, personal communication). Surveys conducted on the Whyte and Trail mid-level analysis areas did not detect this species. <b>LeConte's Sparrow</b> NRRI's Breeding Bird Monitoring effort surveys 169 stands on the Superior. It has not detected LeConte's sparrow on the SNF, however survey points are located primarily in forested areas not occupied by this species. Surveys conducted on the Whyte and Trail mid-level analysis areas did not detect this species. <b>Wood Turtle</b> Incidental observations in 2005 included a road killed turtle on Highway 2 along the Langley River and another observed along the St. Louis River near Seven Beavers Lake. <b>Taiga Alpine, Red Disked Alpine, Jutta Arctic, &amp; Freija Grizzle Skipper Butterflies</b> Surveys conducted in the Devil Trout mid-level analysis area and the McNair butterfly site on the Laurentian District in 2005 did not document any occurrences for these species. <b>Nabakov Northern Blue Butterfly</b> Surveys in the Devil-Trout mid-level analysis area yielded 2 new occurrences of Nabakov's northern blue. There were no detections in the Trail mid-level analysis area. Surveys in the McNair butterfly area detected 21 individuals. <b>Tiger Beetle</b> Surveys conducted in the Trail mid-level analysis area in 2005 yielded an additional location for this species.</p>	
<p><b>WL. MIH. Aquatic Species.</b></p>	<p><b>O-WL-36. MIH 14: Lake and stream habitat</b></p>	<p>Variable conditions depending on water body. Need to maintain or improve lake &amp; stream habitat to support MIS, RFSS, &amp; other aquatic species.</p>	<p>Established 28 reference reaches on 13 streams and rivers on the Forest</p>	<p>Reference reaches were established in the Virginia and Devil Trout Project Areas.</p>

Resource	Monitoring Drivers	FP Objective or FEIS Projection for Decade 1	Accomplishments or Conditions	
			Implemented	Approved NEPA Decisions
<b>WL- Terrestrial.. Management Indicator Habitats</b>	<p><b>Objective. O-WL-1.</b> Provide ecological conditions to sustain viable populations of native and desired non-native species ... <b>Objective. O-WL-2.</b> Habitats: Move terrestrial and aquatic habitats in the direction of desired conditions and objectives ...<b>Objective. O-WL-3.</b> Human Use: Provide an adequate and representative array of habitat conditions for desired plant and animal species...</p> <p><b>Objective. O-WL-16. Bald Eagle.</b> Promote the conservation and recovery of the bald eagle.... occupied breeding territories. <b>Objective. O-WL-17. Gray wolf.</b> Promote the conservation and recovery of the gray wolf.. contribution to State-wide goal of 1,250 to 1,400. <b>Objective. O WL-31. Northern goshawk.</b> Provide habitat to provide for population goal minimum: 20-30 breeding pairs. <b>Objective. O-WL-32. White Pine.</b> Increase amount of white pine to amounts more representative of native plant communities ... <b>Objective. O-WL-35. MIH 11: Upland edge habitat (management induced).</b> Reduce amount of forest edge created through vegetation management <b>Landscape Ecosystem MIH objectives 1-9.</b> Forest Plan pp 2-63 through2-77.</p>	Variable	<ul style="list-style-type: none"> <li>➢ When implemented, vegetation management projects will generally move Forest-wide Landscape Ecosystems toward forest composition &amp; age objectives (FP, pp. 2-61 to 2-78).</li> <li>➢ Site-specific decisions made to implement Forest Plan vegetation management projects included those for Tomahawk EA, Dunka EA, Virginia EIS, Eastside Thinning EA, Compartment 63/64 Salvage CE, and Kadunce EA. Clearcut and shelterwood timber harvest planned in these projects will provide approximately 16,600 acres of young MIHs. An additional approximately 7,900 acres of thinning and partial overstory removal will change species composition and structure of mature and older MIHs while maintaining their MIH types.</li> <li>➢ Ongoing implementation of vegetation management projects that were decided under the 1986 Forest Plan (such as Rocky Road EA, Holmes-Chipmunk EIS) are continuing to contribute to changing MIH conditions to move the forest toward MIH objectives. In 2005 approximately 3,700 acres of young MIH were created through timber harvest. An additional 508 acres of thinning and partial overstory removal will change species composition and structure of mature and older MIHs while maintaining their MIH type. Approximately 1,900 acres of planting and seeding of pines (white, red, and jack) and spruce (black and white) in young MIHs is restoring young pine and spruce MIHs.</li> <li>➢ Management decisions also provide for maintaining mature and older MIHs by allowing vegetation succession that results in changes in age grouping and forest types of MIHs. For example an aspen stand that is currently part of old MIH 4 Aspen-Birch forest may gradually succeed to an MIH 6 Spruce-Fir to meet objectives for mature and older MIH 6.</li> </ul>	
<b>WL T &amp; E Species</b>	<p><b>Monitoring Driver(s): Objective. O-WL-16. Bald Eagle.</b> Promote the conservation and recovery of the bald eagle. Population goal minimum: 85 occupied breeding territories.</p>	90 breeding territories.	<p>National bald eagle recovery: Bald eagles no longer face extinction and are thriving nationally due to the ban on DDT and protection and management provided by the Endangered Species Act. The bald eagle population in the lower 48 states has recovered from a population estimated at less than 500 breeding pairs in 1967 when the birds were first listed, to a current population of over 6,500 breeding pairs. In February 2006, Fish and Wildlife reopened the comment period on its 1999 proposal to take the bald eagle off the endangered species list. If delisted bald eagles would continue to be protected under the Bald and Golden Eagle Protection Act.. For more information: <a href="http://www.fws.gov/midwest/eagle/">http://www.fws.gov/midwest/eagle/</a></p> <p>Minnesota recovery: In Spring 2005 the Minnesota Department of</p>	

Resource	Monitoring Drivers	FP Objective or FEIS Projection for Decade 1	Accomplishments or Conditions	
			Implemented	Approved NEPA Decisions
<b>WL T &amp; E Species</b> Cont'd			<p>Natural Resources Nongame Wildlife Program (DNR) led two interagency statewide bald eagle surveys. A summary of the results on the DNR website reports: "A survey of all known nest sites identified 872 nests with adult eagles present, a 28% increase over the 681 active nests found in 2000, the year of the most recent similar survey. A separate, first-time survey of 61 random plots yielded an estimate of 1,312 active bald eagle nests within Minnesota, indicating that the locations of only 66% of the state's nests had been found in the survey of known."  <a href="http://files.dnr.state.mn.us/ecological_services/nongame/projects/eagle_report_2005.pdf">http://files.dnr.state.mn.us/ecological_services/nongame/projects/eagle_report_2005.pdf</a>                      Superior National Forest recovery:  <i>Occupied nests:</i>                      Through the Statewide survey in 2005, 90 active nests were found, a 15% increase over 2000 (78 nests). Additionally, in the rest of NE Minnesota, outside the Superior, 60 additional nests were located, a 10% increase over 2000. All land ownerships together, Cook County showed a 30% increase over 2000.  <i>Habitat:</i>                      ↘ Dunka, Tomahawk, and Virginia vegetation management projects protected eagle habitat through project design that maintains and protects suitable nesting habitat and avoids disturbances near nests in breeding season.                      ↘ Dunka project will increase future potential habitat with underplanting and diversity planting of white pine to increase within stand diversity: 1700 acres project area wide and 800 acres within ½ miles of fish bearing streams and lakes 20 acres or greater.                      ↘ Virginia project will increase red and white forest through planting of 380 acres project area wide.                      ↘ Tomahawk project will increase red and white forest through planting of 180 acres project area wide.</p>	
	<b>O-WL-17. Wolf.</b> Promote the conservation and recovery of the gray wolf. Population goal minimum: contribution to State-wide goal of 1,250 to 1,400.	Pop goal minimum: contribution to State goal of 1,250 to 1,400.	<p><i>Population and distribution</i>                      ↘ The most recent statewide or Superior National Forest wolf survey was conducted in 2003-2004 by the Minnesota DNR(<a href="http://files.dnr.state.mn.us/natural_resources/animals/mammals/wolves/wolfplan2000.pdf">http://files.dnr.state.mn.us/natural_resources/animals/mammals/wolves/wolfplan2000.pdf</a>). The results of the survey suggest the statewide population is about 2,300 to 3,700 (90% confidence interval). Since 1997 there has been no significant change in the distribution or abundance of wolves in Minnesota. However, average</p>	

Resource	Monitoring Drivers	FP Objective or FEIS Projection for Decade 1	Accomplishments or Conditions	
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<b>WL T &amp; E</b> <i>Species Cont'd</i>			<p>wolf territory size (with an estimate of 485 pack in Minnesota) has decreased since 1997-1998, likely a result of 70% increase in white-tailed deer populations in wolf range in Minnesota. Based on limited information from Cook and St. Louis Counties, Superior's population is probably stable or increasing and continuing to meet or exceed Forest Plan objectives for contributing to the Statewide goal of 1250-1400 gray wolves. Because of the success of wolf recovery from the local landscape scale of the Superior National to the Western Great Lakes (distinct population segment) the Fish and Wildlife Service proposed removing the gray wolf from the endangered species list (March 2006). The Service's current proposal, if finalized, would also remove Endangered Species Act regulation of critical habitat in Minnesota, and eliminate special rules for wolf management in Minnesota, as they are no longer required. For more information see Fish and Wildlife Service website: <a href="http://www.fws.gov/midwest/wolf/2006pr_dl/index.htm">http://www.fws.gov/midwest/wolf/2006pr_dl/index.htm</a></p> <p><i>Habitat:</i></p> <ul style="list-style-type: none"> <li>√ Vegetation management projects such as the Dunka, Tomahawk, and Virginia are consistent with Forest Plan management direction to promote wolf recovery. Projects maintain, protect, or enhance wolf habitat through establishment of young forest habitat and conifer cover habitat suitable for prey species white-tailed deer and moose and management of roads and trails to reduce human access and associated risks (trapping, illegal shooting, disease).</li> <li>√ All projects for 2004-2005 are consistent with Forest Plan objectives for gray wolf recovery. In addition to many vegetation management actions that will benefit wolves, all projects, would have either have no effect or no adverse effects to timber wolf.</li> </ul>	
	<b>O-WL-8. Lynx.</b> Promote the conservation and recovery of the Canada lynx and its habitat.	Pop goal minimum: contribution to State goal of 1,250 to 1,400.	<p>This is the third year of a project to study Canada lynx ecology and monitor lynx population in the Great Lakes region. The project is designed to address four major questions about this population of Canada lynx: distribution, habitat use, abundance, and persistence. Addressing these major questions is a critical step in learning effective ways to promote lynx conservation and recovery. In the first 33 months of this project 32 Canada lynx have been captured and released with radiotelemetry collars. Attempts were made to locate each animal at least twice a month after being collared. Of the 32 Canada lynx that have been radio-collared, 2 died in 2003, 1 died in 2004, and 8 died in 2005. Out of 10 known kittens born to radio-collared females in 2004, 5 were radio-collared in the winter of 2005, and 2 of these 5 are still alive 19 months later.</p>	

Resource	Monitoring Drivers	FP Objective or FEIS Projection for Decade 1	Accomplishments or Conditions	
			Implemented	Approved NEPA Decisions
<p><b>WL T &amp; E</b> <i>SpeciesCont'd</i></p>			<p>Radio-collared females again raised litters in 2005, and kittens survived through December, 2005 in 3 of the 4 known litters. GPS collars have been deployed on 13 of the Canada lynx in this project. Over 10,000 locations will have been obtained from these collars when they are recovered. GPS collar locations will be fundamental to understanding movements and habitat use of Canada lynx. Ambient temperature and animal activity level is recorded by the collars indicating daily patterns in activity, and also shows how active an animal was when each GPS location was obtained.</p> <p>✎ In addition to the telemetry component of the lynx project, a third year of surveys for snowshoe hare, the major prey species of Canada lynx has been conducted. Permanent pellet plots were established throughout the SNF for monitoring snowshoe hare density. Plots were distributed based on stratified random, systematic, and selective site selection strategies. Many stratified random plots had few or no pellets. The highest pellet density over three years of pellet surveys continues to occur in young red pine and young upland black spruce cover types. Results after the first year of a marker-capture study indicate a significant relationship between hare density and pellet production.</p> <p>✎ For more information on lynx project see website: <a href="http://www.nrri.umn.edu/lynx/">http://www.nrri.umn.edu/lynx/</a></p> <p>✎ <i>Forest Plan implementation projects.</i> In 2004-2005 major vegetation management projects such as Dunka, Virginia, and Tomahawk have been developed to promote habitat for lynx by establishing or maintaining snowshoe hare habitat, ensuring adequate denning habitat and cover/connectivity habitat. Roads and trails are being managed to be consistent with Forest Plan standards and guidelines.</p> <p>✎ All projects for 2004-2005 are consistent with Forest Plan objectives for Canada lynx recovery. In addition to many vegetation management actions that will benefit lynx, all projects, would have either have no effect or no adverse effects to lynx.</p> <p>✎ IN 2005 the Fish and Wildlife Service proposed designation of critical habitat for the lynx nation-wide, including Minnesota. The Superior NF worked with the Service to identify proposed critical habitat in those areas of the Forest outside Lynx Analysis Units (LAU). Areas within LAUs on the Forest were excepted from proposed critical habitat because Forest Plan mgt guidance, adapted from the National Lynx Conservation Assessment Strategy, promotes lynx recovery.</p>	