

Appendix A. Key Points Summary

| Resource | Key Points |
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| Air | <ul style="list-style-type: none"> • Air quality on the Forest in 2009 had no major change from the past five years • Air pollution from sources outside the Forest are not degrading forest ecosystems, human health or enjoyment of forest resources except for the following areas: visibility (from power plants and vehicles) and mercury deposition. • The Forest's experience along with adherence to the State's smoke management plan is preventing adverse impacts to the public. • Continued monitoring of fine particulate matter and use of all appropriate smoke management tools are necessary when prescribed burning in the future |
| Fir/Fuels | <ul style="list-style-type: none"> • The Superior National Forest (SNF) completed 12,895 acres of hazardous fuels reduction with 4,826 acres accomplished through prescribed fire and 8,069 acres treated by mechanical means; such as shearing, pruning, and harvesting. • Since 2004 approximately 72,000 acres of hazardous fuels have been treated with over one half accomplished through prescribed burning of 1999 blowdown fuels within the BWCAW. Accomplishments to date have achieved the Decade 1 Forest Plan projected fuel reduction acres. • Data collected during 2009, four years after the Cavity fire, showed that average fuel loadings remained at approximately 48 percent of pre-burn conditions. |
| Heritage | <ul style="list-style-type: none"> • The integrity of some heritage sites is deteriorating over time, especially on campsites with extremely heavy visitor use (in and out of BWCAW). • Monitoring, of heritage sites located in project areas, not associated with recreational camping, indicates mitigation methods have been successful |
| Lands | <ul style="list-style-type: none"> • We are meeting Forest Plan objectives for land adjustments. Two properties totaling 54.81 acres valued at \$1,639,267 were purchased in 2009. Both acquisitions met Forest Plan criteria listed in G-LA-2. • There were no land exchanges completed in FY 2009 but significant effort was applied to three ongoing cases. The three active exchange cases comply with Forest Plan criteria for acquisition/disposition. • The Strategic Land Acquisition Ranking System (SLARS) is a new set of criteria for ranking Land & Water Conservation Fund projects. Future revisions to the Forest Plan should consider the impact of the SLARS system. |
| Minerals & Geology | <ul style="list-style-type: none"> • Three new private hardrock mineral exploration projects were processed and 124 new sand and gravel permits were issued. All of these included best management practices and Forest guidelines. • Of ten hardrock mineral projects visited, nine were in compliance. One did not have an access road properly closed for interim reclamation. A letter was sent to the company and the problem was resolved. • Three hardrock exploration projects were permitted on private minerals. A total of thirteen holes were drilled in 2009. • Mitigations and best management practice requirements were followed during exploration, development, and production activities. |

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| Non Native Invasive Species | <ul style="list-style-type: none"> • The total terrestrial infested area on the SNF has been slowly increasing. This is primarily due to enhanced inventories and new infestations establishing and expanding along travel corridors associated with access road construction. Other factors contributing to NNIS expansion include movement of gravel from infested pits, road maintenance activities, timber harvest, mineral exploration, and fire management. • Standards and guidelines have been successful at limiting NNIS spread. • Terrestrial NNIS are not approaching a threshold level on the Forest at this time. NNIS continue to spread and affect susceptible habitats. However, NNIS still only represent a small fraction of the vegetative cover across the entire SNF landscape. • NNIS management partnerships need to be expanded. • The amount of acres treated has been increasing annually since 2004. Excluding oxeye daisy and hawkweeds, approximately 61 percent of inventoried infestations, or about twice the amount of previous years, was treated in 2009. This increased treatment was attributed to ARRA funds received in 2009. • Treatment effectiveness was shown to be higher in 2009 compared to previous years. |
| Partnerships | <ul style="list-style-type: none"> • There were 170 agreements in active status in FY09.¹ The majority of these agreements, (98) had no funding exchanged. • There were 72 agreements active in FY09 which had funding tied to the agreement². In addition there were 34 modifications of Agreements in FY09.³ • The total dollar value of the agreements with funding attached to them is \$5,076,000. This figure includes the Forest Service dollar match of \$2,391,000; Forest Service In-kind match of \$1,400; Cooperators dollar match of \$2,590,000; and Cooperators In-kind match of \$93,000.⁴ • Volunteers to the SNF provided 53,190 hours of service at an appraised value of \$ 1,062,000⁵. |
| Recreation Motor Vehicles | <ul style="list-style-type: none"> • Project decisions approved from 2005 through 2009 have closed or propose to close approximately 159 miles of roads to RMV travel, reducing mileage open to RMVs from approximately 1,550 miles (2004) to about 1,405 miles (2009). • During 2009, none of the mapped closed roads visited had unauthorized motorized use. • Resource damage in terms of rutting and damaged vegetation was observed on approximately 37 percent of both open and closed roads. This compares to a high of 57 percent in 2005 and 50 percent in 2008. |
| Soils | <ul style="list-style-type: none"> • Watershed improvement projects are meeting Forest Plan objectives • Forest Plan guidelines are providing adequate protection to the soil resource • Deviations from soil protection guidelines to date have minor, temporary impacts to site productivity but monitoring should be continued |
| Timber | <ul style="list-style-type: none"> • On average, 60 percent of harvest acres have been clearcut annually since 2004, which is similar to the projection for the first decade of the Forest Plan. • The increase in number and acreage of large patches since 2004 is consistent with the desired condition for the first decade of the Forest Plan. • 32 MMBF were sold within twelve sales and 50MMBF were harvested |

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| Timber Cont'd | <ul style="list-style-type: none"> • 25 percent of the Forest Plan first decade volume projection has actually been achieved but when combined with volume currently planned or under contract, 40 percent of the volume projection has been achieved • Timber operational standards and guidelines are sufficient and layout and sale administrators are successfully implementing contract clauses. |
| Transportation | <ul style="list-style-type: none"> • Since 2004, system road mileage has increased while total road mileage has decreased. • 133 miles of road will be decommissioned when decisions up to 2009 are implemented • Contractual practices and techniques effectively prevented motorized recreation vehicle travel on 80 percent of decommissioned roads. |
| Tribal Rights & Interests | <ul style="list-style-type: none"> • The Superior National Forest has very active engagement with Bois Forte, Fond du Lac and Grand Portage Bands of Chippewa. • During FY 2009, as projects were planned, staff from the Superior National Forest (SNF) increased efforts to inform Tribal Chairs, staff, 1854 Treaty Authority, and GLIFWC at the initial planning of the projects so Tribal governments could work with the SNF to develop proposals and actions. |
| Vegetation | <ul style="list-style-type: none"> • As a whole there has been positive movement in moving towards Forest Plan Landscape Ecosystem Decade 1 objectives. However, the Jack Pine/Black Spruce LE appears to have waning opportunities for meeting its overall Decade 1 Objectives. • The SNF is doing well in meeting the Forest Plan standards, guidelines, and objectives for mature and older forest patches, nonetheless, vegetation management project analyses need to continue to fully consider potential negative effects and take advantage of opportunities to promote mature and older forests patches. • Although there are some inconsistencies in the comparison between fiscal year 2009 and the annual average of the Forest Plan proposed harvest treatment, it appears that the harvest treatment projections in the Forest Plan were accurate in the relative magnitudes expected to occur. • The increase of the white pine forest type across the SNF indicates that vegetation management across the SNF has consistently addressed the need for increasing white pine, addressing FP objectives relating to white pine as a Management Indicator species. |
| Watershed/ Riparian | <p><u>Hydrologic connectivity</u></p> <ul style="list-style-type: none"> • 106 culverts were assessed in 2009 on the Superior National Forest of which approximately 20% of the culverts may be a physical barrier to passage because they are in poor condition or may be placed too high. • Since the adoption of the Forest Plan in 2004, twenty nine culverts have been successfully modified or replaced in accordance with established design criteria to accommodate aquatic organism passage. <p><u>Effectiveness of best management practices</u></p> <ul style="list-style-type: none"> • Monitoring of the implementation of the Forest Plan standards and guidelines appears to adequately protect the water resources of the forest. These standards and guidelines should continue to be implemented as part of forest management. <p><u>In-stream impacts of logging activity</u></p> <ul style="list-style-type: none"> • The lack of any discernable physical change (aside from natural variability) at reference sites implies that recent management activity has had no effect on the physical integrity of streams to date. Continued monitoring efforts will assist in evaluating whether best management practices, forest plan standards and guidelines, and project design features are effective at protecting in-stream aquatic resources. <p><u>Riparian integrity</u></p> <ul style="list-style-type: none"> • The Superior National Forest should plant the riparian areas identified to date. It should |

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| Watershed/ Riparian Cont'd | <p>continue to assess other riparian areas within the mid-level process to look for additional opportunities to establish long-lived species in riparian areas as appropriate.</p> <p><u>Lake Assessments</u></p> <ul style="list-style-type: none"> • Overall, the water quality is very good within the lakes and streams of the Superior National Forest. There are some isolated water resources that have been identified as impaired and mercury continues to be an issue for nearly all lakes within the region and nation. There does not appear to be negative trend in water quality associated with USFS land management practices. <p><u>Aquatic Organism Passage</u></p> <ul style="list-style-type: none"> • Aquatic organism passage barriers that have been successfully removed, modified, or replaced will benefit aquatic organisms and biological integrity. As problem crossings are modified over time the stream connectivity will be restored and the biological integrity of aquatic systems will be improved. These improvements will also benefit several Regional Forester Sensitive species of fish and mussels. |
| Wilderness | <p><u>10 Year Wilderness Challenge</u></p> <ul style="list-style-type: none"> • The 10YWSC “scores” have improved steadily since 2005 for elements. Non-native, Invasive Plants (NNIS) inventories, high risk mapping, field treatments and evaluations, and public education and partnerships were implemented within the highest priority areas during 2009. • Continue NNIS management actions within highest priority areas. Initiate and complete NEPA to manage NNIS within the BWCAW. • Start encounter monitoring in 2010 and integrate with 2010 campsite occupancy research to validate whether the travel model reflects current use trends, and maintain/promote solitude. • Beginning in 2010 implement new annual campsite inventory protocols on 20% of the campsites to determine the % of campsites not maintained to standard. <p><u>Wilderness Character</u></p> <p><u>Sound Monitoring</u></p> <ul style="list-style-type: none"> • The decibel difference between ambient conditions and noise associated with ATV travel was very small. None of the ATV activity heard measurably increased the dBA levels. The average dBA associated with ATV travel was only .75 dBA greater than average ambient (non activity) noise (31.75 vs 31 dBA). These sound levels approximates the MPCA “Secluded Woods” setting. • In general, there is an overall correlation between wind speed and decibel readings especially when wind gust speeds are greater than 10 mph. Maximum decibel readings are generally caused by high wind speeds, and wildlife except for the fire operations. While mechanized activities contribute to the decibel level, recorded decibel range duration reflects primarily a natural source of sounds, with the wind moving water and vegetation contributing to the sustained maximum. <p><u>NNIS</u></p> <ul style="list-style-type: none"> • No NNIS infestations resulting from ATV travel near the wilderness were observed. This is similar to previous year findings that ATV travel or any other recent motorized management activities is not contributing to NNIS establishment or expansion into the BWCAW. <p><u>Motorized Intrusions</u></p> <ul style="list-style-type: none"> • Even though the number of roads and trails visited represents a small sample of all Forest roads and trails and are very qualitative, this monitoring provides sufficient information to assess success in managing motorized intrusions into the BWCAW. The incidence of motorized intrusions was less than previous years. |

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| Wildlife, Sensitive Species, Terrestrial. | <ul style="list-style-type: none"> • Management activities on all projects from 2004-2007 complied with 2004 Forest Plan direction for sensitive species. Detailed information on the biology and habitat occupancy of some of our sensitive species is limited. This affects our understanding about our contribution to the conservation of sensitive species. • Lowland conifer (MIH 9a and 9b) acreage is increasing in age and MIH 9a is not trending in the Forest Plan preferred direction to meet Decade 2 objectives. Meeting targets for lowland conifer age classes would result in increased harvesting of mature lowland conifer. • Consolidate on-Forest sensitive species monitoring data to the extent possible. At this time, a Forest-wide database for those species not already covered by the Biotics (MN DNR 2010) database, and open only to Forest biologists is recommended. • Another recommendation is to survey for all sensitive species inside and outside project areas to gain a better understanding of their natural history, habitat needs, and potential management implications • Increase sensitive species surveys and monitoring in lowland conifer complexes. • The MIH's that are not trending towards Forest objectives (MIH 1b, 5b, 6b, and 9a) are most likely to disadvantage RFSS but many of the species use additional habitat types. • Continue and increase implementation of sensitive species' habitat projects in appropriate ranges and suitable habitat and monitor project efficacy and habitat use. • Increase sensitive species surveys and monitoring in lowland conifer complexes. Mature lowland conifer (MIH 9b) is used by more RFSS than any other MIH (8 of 19 species analyzed). |
| Wildlife, Sensitive Species, Plants. | <ul style="list-style-type: none"> • Forest management is contributing to the conservation of RFSS plants. • The expected conditions being analyzed in the Forest Plan Biological Evaluation (BE) are consistent with the current conditions, while viability conclusions made in the Forest Plan BE are still valid. • In many areas of the SNF (excluding the eastern half of the BWCAW and parts of the Gunflint Ranger District) deer browsing is affecting northern white cedar and Canada yew regeneration. In the long term this could reduce the abundance of lowland cedar habitats and cause a downward trend for Canada yew. • Initiate some systematic Forest-wide monitoring of Canada yew and cedar regeneration to document deer browse effects. • Habitat improvement projects completed in 2008 and monitored in 2009 appear to have been successful. • To date about 30% (7 projects) of the projected decade 1 Forest Plan goal of 20 habitat improvement projects (O-WL-30) have been completed. Increased effort at habitat improvement projects would be needed in the next 5 years of the plan to accomplish this. |
| Wildlife, Terrestrial, Management Indicator Species | <ul style="list-style-type: none"> • <i>Bald Eagle.</i> <ul style="list-style-type: none"> ○ Forest Plan bald eagle population goals are being met. ○ Habitat projections confirm that management activities are meeting Forest Plan goals and providing ecological conditions to sustain the viability of the species. ○ Five-year eagle surveys should be continued on the SNF. • <i>Northern Goshawk</i> <ul style="list-style-type: none"> ○ Numbers were close to the Forest Plan goal of 20-30 breeding pairs and number of known nests continues to grow. ○ The latest goshawk habitat projections for Decade 1 are exceeding what the Forest Plan predicted. ○ Known nest monitoring should be continued along with the bio-regional goshawk surveys at five-year intervals to assess population trend. ○ Implementation of timber sale preparation and layout standards and guidelines to |

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| Wildlife, Terrestrial, Management Indicator Species Cont'd | <p>protect stick nests have been successful. However to gain efficiencies sale areas should be aerially surveyed during spring leaf-off conditions when stick nests can easily be identified.</p> <ul style="list-style-type: none"> ○ To assess if protection measures are effective, post treatment nest and bird surveys should occur. |
| Wildlife, Threatened and Endangered Species | <ul style="list-style-type: none"> • SNF is maintaining lynx and gray wolf habitat within the Forest Plan parameters. • Natural disturbances are not adversely affecting lynx habitat. • Habitat is being managed to maintain connectivity between the general forest, the BWCAW and Canada allowing individual animals to move freely across the landscape. • A key linkage area as defined by the Lynx Conservation Assessment and Strategy (LCAS) and SNF Forest Plan is being freely used by lynx, and is being maintained by SNF management practices. • Mortality rates for both species are low, within incidental take allowances, and randomly occur on NFS lands. • There is no cause/effect mortality relationship that is attributable to road management on the Superior NF. • Typical road closure methods used on the SNF to restrict large and small motorized vehicle use are effective. • The lack of formal consultations with the USFWS for these federally-listed species is an indicator that all Forest activities are evaluated, new information is incorporated, and risk factors are minimized and managed appropriately to further the conservation and recovery both species. |