

I. Executive Summary

This M&E Report is the fifth report compiled under the 2004 Superior National Forest (SNF) Land and Resource Management Plan (Forest Plan) approved on July 30, 2004. Each fiscal year (FY) the Forest Service assesses its effectiveness in meeting management goals, desired conditions and management objectives stated in the Forest Plan.

The data compiled and considered for these resource reports is maintained in a monitoring and evaluation project file. This file is maintained and located at the SNF headquarters in Duluth, MN.

The following is a general summary of the report.

Air Quality and Smoke Management

Air quality on the Forest in 2009 had no major change from the past five years. The Forest's experience along with adherence to the State's smoke management plan is preventing adverse impacts to the public.

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

Water Resources

Monitoring indicates that 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.

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.

Overall, the lake water quality is very good within the lakes and streams of the Superior National Forest.

Soils

Watershed improvement projects are meeting Forest Plan objectives and 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.

Fire and Fuels

The 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.

Timber

During 2009 timber harvest and volume accomplishments include 32 MMBF (2,871 acres) sold and 50 MMBF (3,533 acres) harvested. In addition, approximately 124.1 MMBF (24,546 acres) have been approved for treatment in four NEPA documents, but have yet to be implemented.

To date, 255 MMBF (25 percent) of the first decade volume projection has been completed and 16,900 acres have been harvested. When these actual accomplishments are combined with all volume and acres that are currently planned or under contract to be harvested in the future, that volume would be approximately 400 MMBF (40 percent) of the first decade harvest volume projection.

The total harvest acres clearcut was 60 percent and both the number and size of large patches increased as projected in the Forest Plan.

Timber operational standards and guidelines are sufficient and layout and sale administrators are successfully implementing contract clauses.

Non-Native Invasive Species (NNIS)

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. However terrestrial NNIS are not approaching a threshold level on the Forest and at this time represents a small fraction of the vegetative cover across the entire SNF landscape.

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 and standards and guidelines were shown effective at limiting NNIS spread.

Vegetation

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 between FY 2009 and the projected 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 Forest Plan objectives relating to white pine as a Management Indicator species.

Management Indicator Species (MIS)

The bald eagle was delisted from threatened status in 2007 and the population has increased since 2000 with 90 active breeding territories. Forest Plan bald eagle population goals are being met.

Thirty five northern goshawk territories have been found since 1999 with fifteen of the seventeen active nests in 2009 successfully producing young. 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.

Regional Forester Sensitive Species (RFSS)

Management activities for all projects implemented from 2004-2009 complied with 2004 Forest Plan direction for wildlife sensitive species. However, detailed information on the biology and habitat occupancy of some of our sensitive species is limited.

Lowland conifer habitat (MIH 9a and 9b) is used by more RFSS than any other MIH (8 of 19 species analyzed). Monitoring has shown that acreage in this habitat complex is increasing in age and MIH 9a is not trending in the Forest Plan preferred direction to meet Decade 2 objectives. Increasing the harvest of mature lowland conifer would increase young lowland conifer age classes.

Regarding 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 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.

RFSS plant 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.

Threatened and Endangered Species (T&E)

The SNF is maintaining lynx and gray wolf habitat within the Forest Plan parameters. Habitat is being managed to maintain connectivity between the general forest, the BWCAW and Canada allowing individual animals to move freely across the landscape. Moreover natural disturbances are not adversely affecting lynx habitat. 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 and there is no cause/effect mortality relationship that is attributable to road management.

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 of both species.

Minerals

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. Three hardrock exploration projects were permitted on private minerals. Mitigations and best management practice requirements were followed during exploration, development, and production activities.

Tribal Rights and Interests

The Superior National Forest remained very actively engaged with Bois Forte, Fond du Lac and Grand Portage Bands of Chippewa. As projects were planned, SNF staff increased efforts to inform Tribal Chairs, staff, 1854 Treaty Authority, and Great Lakes Indian Fish and Wildlife Commission so Tribal governments could cooperatively develop proposals and actions.

Heritage

The integrity of some heritage sites is deteriorating over time, especially on campsites with extremely heavy visitor use (in and out of BWCAW). However, monitoring, of heritage sites located in project areas, not associated with recreational camping, indicates mitigation methods have been successful.

Recreation Motor Vehicles

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).

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.

Transportation

Since 2004, system road mileage has increased while total road mileage has decreased. Over 133 miles of roads will be decommissioned when 2004 through 2009 decisions are implemented. Contractual practices and techniques effectively prevented motorized recreation vehicle travel on 80 percent of decommissioned roads.

Wilderness (Boundary Waters Canoe Area Wilderness)

The SNF made a substantial improvement in stewardship level (79%) for the Ten Year Wilderness Challenge from 2005 (35%) and from the nationwide average of 18% in 2003.

Wilderness sound monitoring revealed that the decibel (dBA) difference between ambient conditions within the BWCAW and noise associated with All Terrain Vehicle (ATV) travel outside the BWCAW was very small. The average decibel associated with ATV travel was only .75 dBA greater than average ambient (non activity) noise (31.75 vs 31.00 dBA). These sound levels approximate the Minnesota Pollution Control Agency “Secluded Woods” setting. Maximum decibel readings recorded in the BWCAW 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.

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.

Motorized intrusion monitoring revealed that the incidence of motorized intrusions into the BWCAW was less than previous years.

Lands

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.

Partnerships

There were 72 agreements active in FY 2009 which had funding tied to the agreement. In addition there were 34 modifications of Agreements in FY 2009.

The total dollar value of the agreements with funding attached to them was \$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.

Volunteers to the SNF provided 53,190 hours of service at an appraised value of \$1,062,000.