

I. Executive Summary

The 2008 Monitoring and Evaluation (M&E) Report is the fourth report compiled under the 2004 Superior National Forest (SNF) Land and Resource Management Plan (Forest Plan) approved on July 30, 2004. Each fiscal year the Forest Service assesses its effectiveness in meeting management goals, desired conditions and management objectives stated in the Forest Plan. The following is a general summary of the report.

Air Quality and Smoke Management

Air pollution from outside the Forest has not degraded forest ecosystems, human health or enjoyment of forest resources since 2004 besides visibility and mercury deposition.

Water Resources

No large-scale changes in watersheds or stream reach hydraulics were found, while stream crossing reconstruction has improved aquatic organism passage and stream ecosystems. The Sixth Order Hydrologic Unit Code (HUC6) watersheds fall within the threshold of 60 percent upland young and open coverage.

Soils

Post-harvest treatment soil organic matter showed minimal changes in thickness and therefore should not impact nutrient cycling or vegetation regeneration. Fire soil monitoring revealed the moderate burn intensity, natural re-vegetation, residual organic matter, and downed debris created no measurable soil erosion or water repellency.

Insects and Disease

Gypsy moth treatment with the pheromone *Disparlure* is an effective tool in managing the insect while minimizing environmental impacts. To date, no egg masses have been found along the North Shore area of Lake Superior in Minnesota.

Fire and Fuels

Mitigations from burn plans and the Boundary Waters Environmental Impact Statement (BWEIS) protected the soil organic layer, eagle nests, and shoreline and interior old forest during prescribed burning used to reduce wildfire escape into non-wilderness areas while maintaining wilderness values. A continued high fire risk exists in the blowdown fuels eight years after the windstorm, enhanced by conifer succession, particularly increased balsam fir and spruce budworm infestations.

Timber

Twenty-two percent of the harvest volume projection for the first decade of the Forest Plan has been achieved and 13,370 acres have been harvested. When treatments not yet implemented are included the harvest volume will be 27% of the decade 1 projection. During 2008, 4,629 acres were certified for forest regeneration. The total harvest acres clearcut was 62 percent and the number and size of large patches increased both as desired by the Forest Plan.

Non-Native Invasive Species (NNIS)

NNIS plant treatments were on average 53 percent effective and monitoring revealed only small amounts of weed spread. Both new and existing aquatic and terrestrial NNIS populations are increasing however, the rate of increase of treatments is greater than the rate of NNIS increase. The number of lakes infested with rusty crayfish continues to increase while no new spiny water flea infestations were found.

Vegetation

Forest-wide vegetation conditions are generally moving towards the desired Forest Plan objectives. Possible Landscape Ecosystem (LE) exceptions include the Mesic Birch/Aspen/Spruce-fir young (zero to nine years old) age class, Mesic Red and White Pine species composition, 10-49 years age class and 50-79 age class, Jack Pine/Black Spruce young age class and the Lowland Conifer young age class.

Management Indicator Species (MIS)

Brook trout abundance has increased since 2005 in the Dark River habitat improvement project area, while walleye populations sampled in two lakes appear to be relatively stable. The gray wolf was delisted from threatened status in 2007 and relisted in 2008 as the population on the SNF has increased. The bald eagle was delisted from threatened status in 2007 and the population has increased since 2000 with 90 active breeding territories. Twenty-nine northern goshawk territories have been found since 1996 with six of the seven active nests in 2008 successfully producing young. White pine seedlings were planted (1,049 acres in 2008) to change the forest type to white pine and to enhance diversity and improve survival. Survival surveys indicate an average third year white pine survival of 70 percent and therefore, three of the five upland Landscape Ecosystems' objectives for white pine forest type have been met or surpassed.

Management Indicator Habitat (MIH)

MIH's are trending toward Forest Plan objectives except for young spruce-fir and red and white pine forest.

Regional Forester Sensitive Species (RFSS)

Since 2004, management activities either had no impact or were not likely to cause a trend toward federal listing or loss of viability of a species. Monitoring shows that sensitive plant habitat improvement projects are contributing to Forest Plan viability goals and objectives. Watershed scale disturbances are not likely to affect any aquatic RFSS due to the 60 percent threshold for upland open and upland young forest. Monitoring has indicated only minor changes in sediment composition, channel form, and stream reach hydraulics.

Threatened and Endangered Species (T&E)

Management activities on all projects from 2004-2008 either had no effect or were not likely to adversely affect Canada lynx or Gray Wolf. The Fish and Wildlife Service (USFWS) concurred with all these findings.

Minerals

Drilling operations showed good compliance with the operating plans. Collection agreements with companies have allowed the SNF to process projects in a timely manner.

Tribal Rights and Interests

Ongoing collaboration efforts with the Bands of the Ojibwe have occurred through government-to-government consultation, discussions based on National Historic Preservation Act Sec 106 and 110; NEPA related discussions, collaborative agreements, project implementation and regularly scheduled multi-topic meetings.

Heritage

Ongoing monitoring suggests the integrity of some heritage sites is deteriorating over time. One Boundary Waters Canoe Area Wilderness (BWCAW) campsite co-located with a cemetery was permanently closed to public use to protect cultural values. The “flag and avoid” policy has proven to be effective for most projects.

Recreation

Since 2004, road mileage open to recreational motor vehicles has decreased by nearly 150 miles through road re-designation or decommissioning. Management actions have been successful in preventing or reducing motorized intrusions into the BWCAW.

Transportation

Road mileage is trending towards Forest Plan projections with the exception of surpassing OML 2 mileage. The total mileage of roads decommissioned has exceeded the objective of the Forest Plan and motorized recreation vehicle travel was prevented on 80 percent of those roads.

Wilderness (Boundary Waters Canoe Area Wilderness)

The SNF made a substantial improvement in stewardship level (71%) for the Ten Year Wilderness Challenge from 2006 (61%) and from the nationwide average of 18 percent in 2003. Noise detected from ATV's heard outside the wilderness was less than 30 decibels (dBA) of sound which is comparable to those expected within a secluded woods setting. The percentage of active user created trails has decreased since 2005.

Partnerships

Volunteers, partners, and Forest Service staff on the SNF continued to exchange valuable hours of service, cash, goods, and donations valuing over \$2,055,850.