

## Appendix A: Follow-up Actions

<b>Resource</b>	<b>Follow-up Actions</b>
<b>Air</b>	<ul style="list-style-type: none"> <li>* With the number of new industrial projects proposed for the Iron Range, it will be important to continue to monitor the condition of the air, precipitation, and the resources they affect such as lake and fish chemistry. A long term commitment of resources is necessary since trends in these data sets often take years to materialize.</li> </ul>
<b>Cooperation &amp; Partnerships</b>	<ul style="list-style-type: none"> <li>* Continue interviews of Forest Service Program Managers and other staff to ensure their work with partners is documented.</li> <li>* Update the key contacts database to reflect all existing partners and potential partners.</li> <li>* Continue to formalize informal partnerships through Memorandums of Understanding and other Agreements.</li> </ul>
<b>Fire</b>	<ul style="list-style-type: none"> <li>* Increase the use of prescribed fire (under burning) in the red and white pine types. Increase mechanical treatments such as thinning where feasible.</li> </ul>
<b>Heritage</b>	None
<b>Insects &amp; Disease</b>	<ul style="list-style-type: none"> <li>* Continue to conduct annual aerial insect and disease surveys to determine infestation levels and trends across multiple ownerships (conducted by Forest Service State and Private Forestry and in coordination with the Minnesota Department of Natural Resources and Department of Agriculture).</li> <li>* Continue an effective working relationship with State, County and local governments in coordinating management actions to address current and anticipated insect and disease conditions. This activity would include public education and information efforts to insure a common message is provided by all participants.</li> <li>* Continue to use "trapping" techniques to monitor introduction or progress of invasive insect and diseases especially gypsy moth and emerald ash borer.</li> <li>* Provide recurring training to appropriate resource management personnel in the identification and ecological roles of native insect and disease organisms and in the identification and mitigation of non-native insects and diseases.</li> <li>* Insure integrated insect and disease management concepts are included in all analysis, planning and implementation of vegetation treatments.</li> <li>* Proactively implement Forest Plan direction that provides for healthy, sustainable forest conditions.</li> </ul>
<b>Non Native Invasive Species (NNIS)</b>	<p><u>Terrestrial NNIS</u></p> <ul style="list-style-type: none"> <li>* Continue project level monitoring of the effects of project activities on NNIS spread, and monitor the degree of NNIS spread in the Border and Clara project assessment areas.</li> <li>* Visit NNIS sites treated in 2006 to determine the need for re-treatment in 2007.</li> <li>* Treat all known purple loosestrife sites on the Forest, and treat known Canada thistle infestations near the Turtle Lake Fire, Cavity Lake Fire, and East Zone Complex fire</li> </ul> <p><u>Aquatic NNIS</u></p> <ul style="list-style-type: none"> <li>* Continue presence/absence surveys and monitoring efforts in lakes or other waters that have not been surveyed in the past.</li> <li>* Concentrate future survey and monitoring efforts within the US-Canadian Border Lakes Area to determine if the spiny water flea occurs in these waters. If the spiny water flea does not occur within these waters, standard index stations should be established to provide early detection information if an infestation does occur.</li> <li>* Within the recent infestations of spiny water flea in Crane and Namakan Lakes work with the Minnesota Department of Natural Resources, University of Minnesota-Duluth, Minnesota Sea Grant, Voyageurs National Park, Quetico Provincial Park, The Nature Conservancy, and other partners to increase public awareness and education efforts.</li> </ul>

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<b>Public Health</b>	<ul style="list-style-type: none"> <li>* Because this monitoring is required by law/policy, all three types of water testing will continue to be carried out at the indicated locations and frequencies in future fiscal years. Procedures used in FY 06 to follow-up on PWSB sampling results yielding positive test results for total coliform meet requirements as spelled out in the Federal and State Safe Drinking Water law and Forest Service policy. Those procedures will continue to be used in future years.</li> <li>* Improve quality control in the sample collection process for routine monthly PWSB samples. For example, make sure that employees assigned the job of sample collection are adequately trained to guard against contamination while filling the sample bottles. Modify analysis to be quantitative as opposed to presence. This will provide needed information to manage the sites. Training personnel will minimize contaminating samples. Positive test results for total coliform observed in FY 2006 (and in previous years) most likely arise from improper sample collection methods rather actual contamination of the water supply itself.</li> <li>* The method used for testing DSSB should be modified to be a quantitative analysis as opposed to a simple presence/absence test.</li> </ul>
<b>Recreation Motor Vehicles</b>	<ul style="list-style-type: none"> <li>* Ensure road management decisions reflect MA Direction. (Example: cRNA's SPNM)</li> <li>* Issue a correction to the Forest Plan glossary. Replace existing ORV definitions with national definitions, as per Washington Office Plan Appeal direction</li> <li>* Ensure public forest ATV maps reflect accurate inventories</li> </ul>
<b>Socio-Economic</b>	<ul style="list-style-type: none"> <li>* As the Superior National Forest proceeds with Forest Plan implementation, the SNF will be striving to determine appropriate monitoring data needs and methods to indicate trends showing to what extent the SNF provides commodity resources and non-commodity opportunities in an environmentally acceptable manner that contribute to the social and economic sustainability and diversity of local communities.</li> <li>* The SNF will also strive to determine appropriate monitoring data needs and methods to indicate trends for how forest management activities are maintaining the desired characteristics of the areas and species of interest (traditionally and culturally) as identified in research and/or by interested communities and individuals. These efforts would be measured and evaluated/reported on about a 5 year frequency.</li> </ul>
<b>Soils</b>	<ul style="list-style-type: none"> <li>* More soil scientist's time needs to be dedicated to more field monitoring, and documentation of site visits.</li> <li>* There needs to be more focus on biomass harvest activities in the future during which issues on nutrient status of sites will arise.</li> <li>* Address current and future soil carbon sequestration on biomass harvest, fuel reduction, and other activities.</li> <li>* Encourage long term management on nutrient sensitive sites to maximize nutrients available—this ties to the “Activity Limits Code E and F” to be used with Table G-WS-8—Limits on Management Activities Designed to Safeguard Soil Productivity on Superior National Forest.</li> <li>* During the FY 2007 and beyond, field monitoring will occur at the project level on sites pulled from a FACTS report that includes prescribed burning, thinning, and clearcutting with reserves.</li> </ul>
<b>Timber</b>	<ul style="list-style-type: none"> <li>* Unsuitable lands (such as inoperable, steep slopes, ELT 18's, etc) must be addressed as part of the analysis and implementation. If unsuitable lands are identified, ensure any changes in suitability are documented in NEPA decisions &amp; appropriate databases.</li> <li>* Where applicable implement and monitor large patch openings (300-1000 ac);to provide for increased average size while reducing amount of “edge” and retaining a range of sizes/edge habitat.</li> </ul>
<b>Transportation</b>	<ul style="list-style-type: none"> <li>* During project planning, consider analyzing and making transportation decisions within the entire project planning area including roads not associated with vegetation management projects.</li> <li>* Avoid designating RMV use on roads which terminate in sensitive areas that may result in or encourage resource impacts (i.e. wetlands).</li> <li>* Ensure that thorough and accurate road inventories are completed and entered into the roads data base.</li> <li>* Ensure that once NEPA decisions are made, information is shared with appropriate program leader to be entered into the appropriate data base.</li> </ul>

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<b>Tribal Rights &amp; Interests</b>	<ul style="list-style-type: none"> <li>* The SNF has the opportunity to pursue working with the 1854 Treaty Authority resource specialist and other tribal specialists to accomplish monitoring relating to common resource interests and treaty rights.</li> <li>* Address concerns raised by the 1854 Tribal Authority on treaty rights in the ceded territory, specifically those rights relating to hunting access and moose retrieval.</li> </ul>
<b>Vegetation</b>	<ul style="list-style-type: none"> <li>* Continued annual monitoring to measure progress towards achieving desired conditions as described in D-VG-1 through D-VG-8 on a Landscape Ecosystem basis is critical. This will provide the SNF with a timely basis for anticipating trends towards or away from these desired conditions. These efforts primarily involve forest composition, structure, age, within-stand diversity and spatial distribution. Useful tools include the annual "vegetation snapshot" to capture vegetative conditions on the SNF as well as aggressive forest inventory. Recent NEPA decisions can provide a reliable estimate of anticipated changes to vegetation.</li> <li>* The SNF should continue to aggressively seek opportunities, through vegetation manipulation, to address vegetation objectives of the Forest Plan.</li> <li>* Continue to integrate the Native Plant Community Classification concept into inventory efforts on the SNF. In 2006, this classification option was integrated into the Field Sampled Vegetation database, a Forest Service-wide application.</li> </ul>
<b>Watershed</b>	<ul style="list-style-type: none"> <li>* Continue to integrate the Native Plant Community Classification concept into inventory efforts on the SNF. In 2006, this classification option was integrated into the Field Sampled Vegetation database, a Forest Service-wide application.</li> <li>* Long-term monitoring at established monitoring reach sites should occur at least once every 3-5 years.</li> <li>* Road/stream crossing and stream habitat restoration projects should be monitored at least once every 3-5 years. Continue to conduct post-project monitoring to evaluate the effectiveness of each project. Protocols initiated in 2005 will be further refined and adopted in 2007 and beyond.</li> <li>* Annually, continue to add to the mercury-in-fish and precipitation chemistry databases to detect and assess trends. Continue to monitor at intervals of no more than five years to detect trends in mercury levels in loons. The next sample collection for loons should be in the year 2010 or sooner.</li> <li>* Initiate a monitoring program to evaluate road/stream/wetland crossing improvement projects in 2007 and beyond. This monitoring program would utilize the Coarse Level Culvert Survey Protocol and established stream cross sections and longitudinal profiles. A formal monitoring protocol should be developed. Expand the systematic process used to assess road and trail crossings to address wetland crossings. Include "stream" crossings in the identification of priority locations for crossing improvement projects.</li> <li>* Continue establishing stream monitoring sites. Include water chemistry data collection, invertebrates, and sieve analysis. Formally establish lake and wetland monitoring sites as well as monitoring protocols.</li> <li>* There is a need for more focused monitoring of timber and fuel management near wetlands, especially deposition of slash near wetlands.</li> </ul>
<b>Wilderness</b>	<ul style="list-style-type: none"> <li>* Continue to monitor day and overnight use levels, travel patterns, and compliance with rules and regulations.</li> <li>* Continue to monitor and record motorized and mechanized use authorizations.</li> <li>* Continue to ensure the integrity of the permit and reservation system through Reserve America contract compliance, Forest Service staff training, visitor education, and monitoring of permit cancellations, party leader names, alternates, entrance dates, entrance points, and mode of travel as outlined in the Forest Plan.</li> <li>* Continue to monitor the no show rate for overnight and day use motor permits.</li> <li>* Continue to monitor the levels of crowding and changes in travel patterns, and how those levels and changes affect the visitor experience. Visitor experience will also be addressed in a 2007 Aldo Leopold Wilderness Research Institute Survey.</li> </ul>

<b>Resource</b>	<b>Follow-up Actions</b>
<b>Wildlife, Sensitive Species, Aquatic.</b>	<ul style="list-style-type: none"> <li>* Established long term stream monitoring sites at least once every 3-5 years. Need to include water chemistry, invertebrate collection, and substrate sieve analysis in 2007 and beyond.</li> <li>* Continue establishing stream monitoring reaches within established Landscape Assessment Areas. The location of monitoring sites should be downstream from proposed land management activities.</li> <li>* Working with State and Tribal agencies continue survey and inventory efforts to identify individuals and populations of RFSS on the Forest as well as continue establishing long-term RFSS population monitoring sites in the Kawishiwi, St. Louis, Dark River, and Cloquet Rivers.</li> <li>* Continue identification, implementation, and monitoring of road/stream crossing restoration and habitat improvement projects that benefit RFSS populations, habitat, and riparian areas.</li> <li>* A lake habitat monitoring protocol should be developed for the Forest that includes lake habitat, fish population and water quality parameters.</li> <li>* Continue to develop a GIS based standard analysis that will assist with evaluating potential effects to RFSS and habitat as a result of proposed land management activities.</li> <li>* There is a need to update the upland-young/upland-open analysis for the entire Forest every three years. Existing information is based on 10-12 year-old data. This information should be revised to assist with RFSS Biological Evaluation Analyses as well as other NEPA watershed analyses</li> </ul>
<b>Wildlife, Sensitive Plants.</b>	<ul style="list-style-type: none"> <li>* <b>Virginia EIS Botrychium</b> – repeat monitoring in summer 2007</li> <li>* <b>Kawishiwi Admin Site Botrychium</b> – monitoring of site in 2007 – last year of monitoring</li> <li>* <b>Tony Lake Botrychium</b> – site was treated in Oct. 2007, needs follow-up monitoring in summer 2007</li> </ul>
<b>Wildlife, Management Indicator Habitats, Terrestrial.</b>	<ul style="list-style-type: none"> <li>* Continue to monitor MIH amounts and trends annually, but it may not be necessary to document the findings in the Monitoring and Evaluation Report annually. If not documented annually, make data available upon request.</li> <li>* In future Monitoring and Evaluation reports, an analysis could be conducted to compare the total acres planned or implemented in vegetation management project areas to the total acres suitable for vegetative treatment in each Landscape Ecosystem. This would enable the SNF to predict the likelihood of meeting Forest Plan objectives by the end of the first Decade.</li> <li>* At Year 5, MIH habitat amount should be linked to population trends for select species to test the Forest Plan coarse-filter hypothesis that management actions to increase or decrease the different growth stages of MIHs may affect population trends of associated species. This analysis should be done in partnership with the Natural Resources Research Institute and Minnesota DNR.</li> </ul>