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Introduction

Appendix J is organized by topic and summarizes the public comments submitted on the Draft EIS and Proposed Forest Plans. This appendix also includes the Forest Service's response to the public's concerns.

In April 2003, the Draft EIS and Proposed Forest Plans were published, and approximately 425 copies of documents were mailed to agencies, tribal governments, organizations, businesses, and individuals. The public also accessed the documents on the world wide web, at regional libraries, and at Forest Service offices. The Draft EIS comment period ended on September 11, 2003. The Forest Service received about 1,300 comment letters and emails, approximately 70% of which were form letters with identical or nearly identical content. Public comments were used to improve and clarify the EIS and Revised Forest Plans. The Forest Service appreciates the time and effort expended by all commenters.

The planning team carefully read and considered all the letters and emails using a process called content analysis. Content analysis is a systematic method of compiling, categorizing, and capturing the full range of viewpoints and concerns expressed in public comments. In analyzing the content of the public comments, each comment (a letter or an email) was given a unique identifying number that allows analysts to link specific comments to original letters. Commenters' names and addresses were then entered into a project-specific database program, enabling creation of a complete mailing list of all commenters. The database is also used to track pertinent demographic information, such as comments from special interest groups or federal, state, tribal, county, and local governments. The exception to this is form letters. In the case of duplicative material, such as form letters, only a master letter for each distinct form letter was analyzed for content and represented in the mailing list.

By grouping comments by topic, the planning team developed representative public concern statements. Public concerns statements are succinct statements that capture the requests of commenters, vis-à-vis the Draft EIS and Proposed Forest Plans. Public concern statements are a detailed account of specific questions, problems, suggestions, or interests expressed by commenters. A given public concern may represent only one commenter or may represent hundreds of commenters who articulated the identical point. Each public concern is individually numbered, but the numbering system is not sequential. Some of the public concerns have sub-concerns, which are indicated by an indented sub-topic heading.

Once the public concern statements were developed, the planning team prepared responses for each concern. Each public concern and/or sub-concern is followed by an Agency Response. In some cases, more than one concern statement is answered with one agency Response. At the end of this appendix, the reader will find the letters received from government agencies in their entirety. Their comments are represented in the public concern statements.

Each public concern is individually numbered, but the numbering system is not sequential throughout. This is not an error but occurred as individual concern statements were reorganized into more coherent groupings.

Planning Process

Planning – General (0.0)

PC# 0.0-1
Public Concern: The final Forest Plan should address management responses to natural disasters such as disease and wind storms.

Agency Response:
Forest Plan direction listed in O VG-13, G TM-12, and S TM -2 provide management direction for situations of natural catastrophic conditions such as fire, insect and disease attach or windstorms. Documenting analysis in environmental impact statements and environmental assessments is required by the National Environmental Policy Act, if an action is not categorically excluded from such documentation. The Healthy Forest Restoration Act and the Healthy Forest Initiative provide additional direction that in some cases, streamlines the analysis process when responding to fires, insect and disease outbreaks and blowdowns. This direction will be used when implementing the Revised Forest Plan.

PC# 0.0-3
Public Concern: The final Forest Plans should contain more specific, short term objectives.

Agency Response:
Because the Revised Plans are strategic documents, they focus on what conditions are expected, rather than what management practices are to be used to achieve those conditions. While Management Area direction, standards or guidelines may limit the type of activities that may occur, the concept is to make a broad pool of management practices available, so that the practice that best fits a particular piece of ground is used to achieve the objective. This is appropriately done at the project level with additional public involvement.

In addition, there are specific objectives by landscape ecosystem for forest type and age class. While these percentages may vary by individual project, our objective is to achieve these percentages across the entire landscape ecosystem. These objectives are measureable and will be monitored.

PC# 0.0-4
Public Concern: The final Forest Plans should continue to emphasize a strategic management process.

Agency Response:
We agree. The Revised Plans were developed to provide strategic, landscape based direction. The intention is to set broad management direction (the vision of the forest to work toward) and let the means of moving toward that vision (the methods or tools to be used) be determined at the project level, where the appropriate tools can be best determined.

PC# 0.0-5
Public Concern: The final planning record should be complete and available to the public.

Agency Response:
The planning record, as well as all Forest Service manuals and handbooks are available for public review upon request.

PC# 0.0-6
Public Concern: The Final Forest Plans should include specific direction on implementation of forest management.

Agency Response:
Revised Forest Plans are strategic documents, setting desired conditions (what the Forests should look like) and objectives (measurable and planned results to reach desired conditions) for various resources. The processes and the types of management treatments used to achieve the desired conditions and objectives are best determined at the project level, and are therefore, not specified within the Plans.

PC# 0.0-7
Public Concern: The Final Forest Plan should clearly state the intended management opportunities and direction.

Agency Response:
The management direction in the Revised Forest Plan is written to be flexible because conditions vary across the landscape. Guidelines and standards are similar in that both set management minimums or maximums. While standards can not be violated without a Forest Plan amendment, exceptions to guidelines can be made with analysis and rationale in a decision document. Exceptions to guidelines are rare events, but some flexibility is needed to address specific management issues. The Superior Forest Plan takes a strategic, coarse filter approach to address forest-wide issues. Allocating objectives down to a Ranger District may not make sense ecologically and may not be appropriate in the context of other multiple use objectives. Monitoring and evaluation at the forest level will determine if objectives are being met as Forest Plans are implemented.

Purpose and Need (1.0.0)

PC# 1.0.0-1
Public Concern: The Final Plans should not be based upon Alternative A because it fails to address the identified purpose and need for change.

AND

PC# 1.0.0-2
Public Concern: The Final Plans could be based upon Alternative B because it would address many of the identified needs for change.

AND

PC# 1.0.0-3
Public Concern: The Final Plans could be based upon Alternative D because it would address many of the identified needs for change.

AND

PC# 1.0.0-4
Public Concern: The Final Plans should not be based upon Alternative C because it fails to address the identified purpose and need for change.

AND

PC# 1.0.0-5
Public Concern: The Final Plans should not be based upon Alternative E because it fails to address many of the identified purposes and needs for change.

AND

PC# 1.0.0-6
Public Concern: The Final Plans could be based upon Alternative G because it would address many of the identified needs for change.

AND

PC# 1.0.0-7
Public Concern: The Final Plans should be largely based on Alternative F (with modifications) because it addresses nearly all of the identified needs for change.

Agency Response:
Each alternative was designed to provide a viable mix of resources and tradeoffs. The Record of Decision contains the rationale for the selected alternative, and is the official document that lays out the reasons why Modified Alternative E was selected over the other alternatives. Many considerations, including laws, policy, response to issues, and biological, social and economic effects are considered in making the choice.

PC# 1.0.0-8
Public Concern: The Chippewa and Superior NFs should analyze additional ways of meeting the need for change because only the approach of more regulation and less harvest has been pursued.

Agency Response:
The Revised Plans have reduced the amount of management direction from previous plans. They have not repeated management direction located in other places, and the strategy behind the plans is to develop a course filter approach to managing the landscape, thereby reducing the amount of fine filter direction. The overall objective of the forest plan is to establish a desired condition on the land that provides the conditions for the resources and opportunities that best meet the needs of the American people. The amount of timber that is estimated comes as a result of producing the desired condition on the land. Alternatives with higher timber volumes were analyzed in the EIS, but were not selected because the Final Revised Plan was determined to be the alternative that provided the greatest net public benefit.

PC# 1.0.0-9
Public Concern: The Final Plans and EIS should provide more balance in addressing the need for change with regard to wildlife and recognize that the sporting public wants abundant quality game habitat and huntable populations.

Agency Response:

The Revised Plan has added Management Direction in the form of Desired Conditions (D-WL-2) to address providing wildlife habitat for current and future needs for hunting, fishing, trapping, and wildlife watching, and in conjunction with the State of Minnesota regulations, providing a range of quality hunting, trapping, and fishing opportunities.

PC# 1.1.3-3
Public Concern: The Forest Service should encourage people to use non-wood materials in housing construction.

Agency Response:
Non-wood building materials are available in the local marketplace. Many of these materials are made from non-renewable resources and therefore would also have tradeoffs in terms of environmental effects. The Forest Service discloses potential environmental effects with each proposed action (such as timber harvest) so reasonable choices can be made.

General Management Philosophy (1.0.1)

PC# 1.0.1-1
Public Concern: The Chippewa and Superior NFs should place priority on protection and preservation because we cannot benefit from plants or creatures we have destroyed.

AND

PC# 1.0.1-2
Public Concern: The Chippewa and Superior NFs should place the health and nature of the forest first in all considerations.

Agency Response:
Protection and preservation are two of many emphases for which the Chippewa and Superior NFs are being managed. The Forest Service mission is" to sustain the health, diversity, and productivity of the nation's forests and grasslands to meet the needs of present and future generations". In order to meet this broad mission, some areas are identified for protection and preservation. Some areas are identified for active management, both to produce goods for present generations and to ensure productivity and forest health for future generations. All management is geared toward providing for future generations' use, enjoyment and needs. The revised Plans for both Forests have greatly increased allocations to more protective emphases, including candidate Research Natural Areas, Unique Areas, and Riparian Emphasis Areas. On the Superior NF, more than 1/3 of the Forest is classified as Wilderness, the highest level of protection available.

PC# 1.0.1-3
Public Concern: The Chippewa and Superior NFs should be managed for a new paradigm that has sustainability of ecologically diverse, functioning ecosystems.

Agency Response:
Sustainability of diverse, functioning ecosystems is a key component of the Revised Plans, One reason for changing from the 1986 Forest Plan was the need for an ecological approach to forest management that takes into account the physical, biological, economic and social factors that make ecosystems dynamic. The Revised Plans

make use of landscape ecosystems to help determine what ecological conditions are desired from the forest. The Revised Plans are focused on outcomes (or what is left on the forests) not primarily outputs (what is taken from the forest).

PC# 1.0.1-4
Public Concern: The Chippewa and Superior NFs are over-managed and do not need a caretaker.

Agency Response:
The Forest Service has the legal responsibility for managing the National Forests. The Revised Plans identify those management treatments needed to provide for accomplishing the many objectives of the Plans. Because many of the ecosystems on the two forests were disturbance (fire) driven, management in the Revised Plans calls for treatments to mimic these disturbances.

PC# 1.0.1-7
Public Concern: The Chippewa and Superior NF Plans should not weaken environmental standards.

Agency Response:
The Final Revised Plans do not weaken environmental standards. While the management direction in revised plans is more strategic than the 1986 Plans, the revised Plans make greater use of ecological concepts and new information. In addition, the Plans adopt, as a minimum the Minnesota Forest Resource Council guidelines. In several instances, the Plans have more stringent management direction than contained within those guidelines.

PC# 1.0.1-8a
Public Concern: The Chippewa and Superior NFs should not be further decimated and the Plans should focus on restoration.

Agency Response:
A key aspect of the Revised Plans is restoration. Desired Conditions and Objectives for watersheds, riparian areas, soils, vegetation, wildlife, and threatened and endangered species, provide management direction that enhances and restores these resources. The Revised Plans provide for an increase in conifer and especially white pine as another key component of restoration.

PC# 1.0.1-8b
Public Concern: The Chippewa Plan should have major goals to preserve significant intact remnants of the landscape and restore debased forest lands because so much of the Chippewa NF has been disrupted by human activity.

Agency Response:
Vegetative management direction is aimed at restoring vegetation to a condition that is more representative of native vegetation communities, spatial patterns, and ecological processes. This direction is contained in the desired conditions and objectives for vegetation. (D-VG-1 through 8, and O-VG – 1 through 24) The allocation of lands to management areas for candidate Research Natural Areas and Unique Areas will help protect those most unique areas on the forest. The vegetative objectives are geared toward increasing those communities and conditions that are degraded or greatly diminished in quality or extent.

PC# 1.0.1-9
Public Concern: The Chippewa Plan should place greater emphasis on ecosystem enhancement because the preferred alternative puts too little attention on the forest's unique water aspects and how to manage them sustainably.

Agency Response:
The Revised Forest Plan for the Chippewa increases the emphasis on watershed health and riparian areas as compared to the 1986 Forest Plans. National forest lands adjacent to most major lakes and rivers (over 50,000 acres) are allocated to the Riparian Emphasis management area. One quarter mile on either side of the Mississippi River (over 6,000 acres) is allocated to the Unique Biological management area. The Big Fork River and lands one quarter mile on either side (over 1,500 acres) are allocated to the Eligible Scenic and Recreational River management area. Regardless of management area allocation, the forest also provides for watershed health and riparian areas through forest-wide desired conditions, objectives and standards and guidelines. While the National Forest is generally implementing the Minnesota Forest Resource Council guidelines for many resources, we chose a more proactive approach for riparian management, in part because of the importance of the water resources on the Chippewa NF. The proactive approach seeks to manage for riparian functions and values, rather than to just mitigate the effects of other management activities on riparian areas. The revised Plan calls for this proactive approach to be used along most all lakes, streams and open water wetlands that are outside of the "water-focused" management areas described above. In summary, emphasis on watershed health and riparian areas is provided for most major water bodies through management area allocation, and for most other water bodies, through forest-wide management direction.

PC# 1.0.1-11
Public Concern: The Chippewa and Superior NFs should be managed as the treasure it is, it serves as a kind of church for some people.

Agency Response:
The Final EIS recognizes that the National Forests are important for a variety of social opportunities, benefits and values, including spiritual values. The Revised Plan contains management direction that recognizes the importance of continuing to provide rare and unique benefits that may not be available from other public or private lands (D-SE-3).

PC# 1.0.1-16
Public Concern: The Chippewa and Superior NFs should manage the National Forests for the ecosystem services they provide.

Agency Response:
The National Forests are managed under the concept of Ecosystem Management, which is an ecological approach to natural resources management to assure productive, healthy ecosystems by blending social, economic, physical and biological needs and values. We believe that the national forests should be managed for a variety of resources and uses, and the Multiple-Use Sustained Yield Act requires this type of management. One of the key aspects of the Plan Revision was to provide an ecological basis for management direction and that was built into the Revised Plan.

PC# 1.0.1-18
Public Concern: The Chippewa and Superior NFs Plans should not overdue any resources or management because the need to protect the forests is great.

Agency Response:
The Revised Forest Plans seek to provide a balance of goods, services and uses for all Americans. Admittedly, not all people will agree with the balance that is provided. Each national forest allocates the forest area to a variety of management areas and management emphases. In addition, management for different resources on the same piece of ground is often possible. Both the Final EIS and the Record of Decision examine and describe how potential actions and decisions would affect a wide variety of resources, people and communities.

PC# 1.0.1-19
Public Concern: The Final Plans should demonstrate the opportunity to combine science, public values, and a new approach, because the Proposed Plans fails to show such leadership and innovation.

Agency Response:
We believe that the Revised Forest Plans do utilize current science (example, landscape ecosystem approach), do respond to public values (examples include desires for more semi-primitive recreation, more designated motorized trails, a healthy forest, and a continuing supply of timber products), and do make use of a new approach (outcome-based Forest Plan). Public values are not uniformly held, and may often be in conflict between various segments of the public.

PC# 1.0.1-20
Public Concern: The Final Plans should demonstrate better planning and management than is set forth in the Proposed Plan.

Agency Response:
We believe our planning process and decisions are professional, thorough and complete. The reasons for selection of the Revised Plans are set forth in the Record of Decision. We intend for the Revised Plans to be adaptive and to keep them updated through periodic review and, if needed, change.

PC# 1.0.1-23
Public Concern: The Chippewa and Superior NFs should evaluate and regulate competing uses to provide a balance that preserves forests and wildlife, while contributing to the welfare of the state and nation.

-To add to the economic base of local communities
- To provide for the long-range health and diversity of the forest ecosystem.

Agency Response:
We believe the Revised Plans provide for a balance between competing uses and tradeoffs of effects focused on what we leave on the Forests rather than on what we take off. The Record of Decision states the reasons why choices to achieve this balance were made and why the selected alternative maximizes the net benefit to the public. The Forest Service has the legal responsibility for managing the National Forests to provide for a variety of resources, goods, services and uses.

PC# 1.0.1-24
Public Concern: The Chippewa and Superior NFs should be managed so that non-consumptive uses are treated equally with consumptive uses.

Agency Response:
We believe the revised Plans provide a good balance of providing for the many uses that people desire on the national forests. During alternative development, analysis, and ultimately selection of an alternative to implement as the Revised Plans, consideration was given to all of the resources and uses of the Chippewa and Superior National Forests. Both consumptive and non-consumptive uses are important to the American public, and in many cases, management for a consumptive use does not preclude management for a non-consumptive use, and vice versa. An area that is classed as suitable for timber harvest may not be harvested for many decades. During that period, it may provide many consumptive uses (such as hunting, bow gathering and berry gathering) as well as many non-consumptive uses, such as wildlife viewing, remote camping, or viewing scenery). Similarly when it is harvested, it can contribute to desired age class objectives, biological diversity, and viewing of early successsional wildlife.

PC# 1.0.1-26
Public Concern: The Chippewa and Superior NFs should protect and carefully manage the forest for their many uses.

Agency Response:
We agree and believe the Revised Plans do so.

PC# 1.0.1-29
Public Concern: The Chippewa and Superior NFs should be managed for the forest that exists today, because it makes sense to manage for the aspen and pine that exist today. Off-site species should be converted.

Agency Response:
Forest Plans must guide management for forests of tomorrow, as well as what exists today. The Revised Plans describe the desired conditions and objectives for vegetation. These objectives came about as a result of looking at the various resources, uses, goods and services that are desired from the Chippewa and Superior National Forests, and how the Forest Service might best provide them. The objectives are also consistent with the overall desired future forest condition agreed to by the Minnesota Forest Resource Council northeast and north central landscape committees. We will continue to manage for aspen and pine on many acres where aspen and pine exist today. Timber harvest will be the key vegetative manipulation practice that will be used, for regeneration of stands, and for conversion or restoration of stands. Site conditions will be evaluated and are a major consideration in stand regeneration.

PC# 1.0.1-30
Public Concern: The Final Plans should better reflect sound forest management, because the Proposed Plans do not.

Agency Response:
The Revised Forest Plans are based upon sound forest management principles. We have tried to incorporate the most recent information, including using the Landscape Ecosystem process that has been accepted and used by the Minnesota Forest Resources Council. Sustainability of diverse, functioning ecosystems is a key component of the Revised Plans. One reason for changing from the 1986 Forest Plans was the need for an ecological approach to forest management that takes into account the physical, social, and economic factors that make ecosystems dynamic.

PC# 1.0.1-35
Public Concern: The Chippewa and Superior NF Plans should be managed to provide the greatest good for the greatest number of people and wildlife.

Agency Response:
We agree. The public concern statement is a paraphrase from a statement by Gifford Pinchot, the first Chief of the Forest Service and they are a key principle by which the national forests are managed –the greatest good for the greatest number for the long run. We believe the Revised Plans are true to this principle.

PC# 1.0.1-37
Public Concern: The Draft Plans correctly outline Basic Principles of Management, these should be carried into the Final Plans.

Agency Response:
We agree. They are included in the Revised Plans.

PC# 1.0.1-39
Public Concern: The Chippewa and Superior NFs should be clear and specific about their management philosophy regarding timber production. Is timber production a priority, or is managing vegetative condition the priority?

Agency Response:
Both are important. Overall, the Revised Plans focus on outcomes or the condition on the ground. The vegetative objectives in the plan describe the desired condition that the forests are being managed toward. The vegetative objectives were developed to address the various resources, needs, uses and outputs that people desire from the national forests. Therefore, the production of timber does not only come about as a result of striving to reach the vegetative condition, but the timber resource was also considered (along with other resources) in developing the vegetative conditions.

PC# 1.0.1-40
Public Concern: The Chippewa National Forest should be managed like an industrial forest.

Agency Response:
We disagree. Various laws and policies guide the management of the national forests. In particular, the multiple-use sustained yield act directs that the national forests be managed for a wide variety of uses. This is not the same management as an industrial forest, where the primary objective is very likely wood production.

PC# 1.0.1-41
Public Concern: The Chippewa and Superior NFs should not be managed like National Parks because National Parks don't harvest timber.

Agency Response:
The Chippewa and Superior NFs are not being managed as national parks. The mission of the national forests and the national parks is quite different. National Park mission is to preserve unimpaired the natural and cultural resources and values of the National Park System for the enjoyment, education, and inspiration of this and future generations. The Forest Service mission is to sustain the health, diversity, and productivity of the Nation's Forests and Grasslands to meet the needs of present and future generations.

PC# 1.0.1-44
Public Concern: The Forest Service should not adopt regulation changes that are being proposed at a national level, because they would limit public involvement, scientific review, and wildlife protections.

Agency Response:
This comment is outside the scope of Forest Plan revision. It has been forwarded to the Washington Office for consideration. With direction provided by the Healthy Forest Initiative and the Healthy Forest Restoration Act, Congress believes it has provided the Forest Service the tools necessary to address hazardous fuels and risk of wildfire along with associated issues of salvage, forest health, and stewardship contracting. These tools will be considered and utilized during project implementation.

PC# 4.2.2-16
Public Concern: The Chippewa and Superior NF should not consider doing 'no treatment' as management.

Agency Response:
We disagree. The option of no action or no management can be a legitimate management action. The following example demonstrates such a case. Assume forest plan objectives call for 10% of a forest type to be in an old (beyond mature) age class. Presently, only 8% is within that class. Several stands are currently in the mature class, but 20 years shy of the old age class. A decision is made to harvest some stands, but to not harvest the others in order to allow them to age and thereby contribute in the future toward meeting the old age objective. This decision to do no treatment during the 15 year duration of the Revised Plan is a valid management decision because it leads to accomplishing a desired result.

PC# 1.0.5-1
Public Concern: The Plans should allow managers flexibility.

Agency Response:
We agree. The Revised Plans are strategic documents that focus on what is to be accomplished (desired conditions and outcomes) and focus much less on how it is to be accomplished (processes and techniques). This allows the field personnel the flexibility to accomplish the desired conditions by using the most appropriate treatment for the specific site.

PC# 2.3-1
Public Concern: The Chippewa and Superior NFs should take strong measures to insure forests are healthy and peaceful.

-To ensure conditions for future generations
-To regulate climate and protect air quality
-To set a good example
"I

Agency Response:
We believe the Revised Plans do so. The vegetative management objectives are designed to provide for forest and ecosystem health both now and for future generations. One of the recreation-related needs for change was to re-look at the range of recreation opportunities that were provided on both forests. The Revised Plans of both forests make additional allocations to management areas that have semi-primitive recreation as a major emphasis.

We believe that the Revised Plans do set an example of good stewardship, which involves meeting needs of people today, without compromising the ability of the forest to meet the needs of future generations.

PC# 2.3.3-2
Public Concern: The Plans should provide balance between long term protection of resources and short term economic impact.

-To ensure resources are protected for the long term
-To ensure the needs of Indigenous people are provided for
-Because it makes economic sense.
-To avoid environmental disaster.

Agency Response:
We believe the Revised Plans accomplish this balance, and take into consideration long term resource protection, the needs of native peoples, and considerations for economics. By law, Plans must be revised every 15 years. However, in analysis we did consider longer term effects and trends (100+ years). Our ability to change conditions in the short term is limited, as trees only grow and age so fast, and some spatial arrangement of habitat (such as large patches of older trees) can only be developed over time. The short and long term effects contained in the Final EIS were considered when selecting the Revised Plans, in part because they provide for ecological health and protections as well as economic benefits.

Multiple Use Management (1.0.2)

PC# 1.0.2-1
Public Concern: The Chippewa and Superior NFs have overdone the multiple use concept and overstressed the economic aspects of multiple use.

Agency Response:
We believe that the Revised Plans do a good job of providing a balance of multiple uses and do not overemphasize economic aspects of forest management. The vegetative objectives of the Revised Plans were developed to address all aspects of forest management. Many of the ecosystems of northern Minnesota are disturbance-related systems that need some type of disturbance to keep them in balance. In the distant past, that disturbance was wildfire. In many places today, that level of fire is not possible while protecting health, safety and private property. Therefore, carefully planned and controlled timber harvest is often used as the disturbance agent. The Revised Plans for both have greatly increased allocations to more protective emphases, including candidate Research Natural Areas, Unique Areas and Riparian Emphasis Areas. On the Superior National Forest, more than 1/3 of the Forest is classified and managed as Wilderness, the highest level of protection available.

PC# 1.0.2-3
Public Concern: The Final EIS should focus on alternatives that provide a balance of preservation and multiple use. The Draft EIS overemphasized the preservation and biodiversity aspects of the law.

Agency Response:
We believe that the Revised Plans provide such a balance. Preservation and biodiversity are important parts of forest management and the Forest Service mission and are as much a part of our multiple-use mandate as timber management and other more consumptive uses.

PC# 1.0.2-4
Public Concern: The Chippewa Plan should manage the forest as a working forest with multiple-use benefits.

Agency Response:
We agree and believe the Revised Forest Plans do so. The National Forests are managed under myriad statutes, executive orders, regulations, directives and agreements.. Appendix I of the Final EIS provides a list of those considered to be most relevant to National Forest management.

PC# 1.0.2-5
Public Concern: The Chippewa and Superior NFs should be managed under the sustainable, multiple use management concept because the Forest Service has a statutory mandate to produce multiple uses and sustained yields of forest products and benefits.

Agency Response:
We agree. The Revised Plans produce multiple uses and sustained yields of forest products. The Multiple-use Sustained Yield Act speaks to a broad variety of uses, including recreation, timber, water, wildlife and others. We believe the Revised Plans provide an appropriate balance among these many resources.

PC# 1.0.2-6
Public Concern: The Chippewa and Superior NFs Plans should adhere to the Organic Administration Act and Multiple Use-Sustained Yield Act, and National Forest Management Act because they direct the Forest Service to manage for a broad range of resources.

Agency Response:
We agree and believe the Revised Plans do so.

PC# 4.2.1-15
Public Concern: The Chippewa and Superior NF should actively manage the forest

-To provide the greatest cumulative value of commodity and intangible values, sustainable into the future.
-To ensure that resources are consistently available

Agency Response:
The Revised Plans set a broad strategy that provides for an active and comprehensive forest management program. The vegetative management program is designed to achieve desired conditions to meet ecological, social and economic needs and to provide for a variety of resources and uses, including wildlife habitat, biological diversity, timber production, and recreation and visual conditions. The estimated amount of treatment is about 13,000 acres per year on the Superior National Forest and over 6,000 acres per year on the Chippewa. This represents an increase in management treatments when compared to the 1986 Plans and to treatments during the past 15 years.. In addition, the Revised Plans provide desired conditions and objectives for many other resources (watersheds, riparian areas, recreation) that will result in active management of those resources.

Sustainability (1.0.3)

PC# 1.0.3-1
Public Concern: The Final EIS should better address sustainability because the Draft EIS does not deal with sustainability correctly, in either biological or legal terms.

Agency Response:
We believe the Revised Plans and Final EIS meet the requirements of the Planning Rule, especially sections 36 CFR 219.19 and 219.26. Much of the analysis and disclosure in the Final EIS speaks to sustainability, including the following sections on wildlife, management indicator habitats (section 3.3.1), spatial patterns (3.3.2) aquatic indicator habitats (3.3.3), threatened and endangered species (3.3.4), sensitive species (3.3.5) and management indicator species/other species of concern (3.3.6) Other areas that deal with sustainability include the vegetation sections of forest age and composition (3.2.1), spatial patterns (3.2.2) and insects and disease (3.2.3). Social and economic sustainability are treated in section 3.9 of the Final EIS.

PC# 1.0.3-2
Public Concern: The Final EIS and Plans should have social and economic sustainability be treated equally with ecological sustainability.

Agency Response:
The Revised Plans and the Final EIS do balance the consideration of the 3 legs of sustainability – social, economic, and ecological. While it is true that the effects analysis in the Final EIS dedicates more pages to analysis of vegetation, wildlife, and watershed analysis, these resources are also considered in how they contribute to social and economic sustainability. The decision to select Modified Alternative E as the Revised Forest Plans considered the balance and implications to social, economic and social sustainability, and the rationale for the selection of Modified Alternative E is contained in the Records of Decision.

PC# 4.1-1
Public Concern: The Final EIS should take the 'hard look' required by the National Environmental Policy Act with respect to the sustainability of timber sell volumes

Agency Response:
We believe the Final EIS meets the intent of the National Environmental Policy Act and takes the required "hard look" at sustainability of all resources, not just timber. The amount of timber estimated to be produced results from striving to meet vegetative objectives that were developed to meet a variety of resource needs and to sustain them through time. Much of the analysis in the Final EIS looks at the impacts of various resource treatments and the effects those treatments have on the sustainability, including sustainable wildlife, biological diversity, social and economic sustainability, as well as sustainable timber volumes. Modified Alternative E provides a non-declining even-flow of timber, which means that the "quantity of timber planned for sale and harvest for any future decade is equal to or greater than the planned sale and harvest for the preceding decade." (36 CFR 219.3) (See also PC 4.2.1-15)

Landscape View, Ecosystem Management (1.0.4)

PC# 1.0.4-1
Public Concern: The Final EIS and Plans should reverse the order of priorities for ecosystem management.

Agency Response:
Ecosystem management seeks to assure productive healthy ecosystem through consideration and blending of the social, economic, physical and biological needs and values. No priority is established that ranks one need or value over another.

PC# 1.0.4-2
Public Concern: The Final EIS must take a true landscape view when analyzing impacts to Forest Wildlife because Minnesota sits on the edge of three biomes.

Agency Response:
The Final EIS and Revised Plans do consider landscapes larger than the ecological section level. Appendix H utilizes the Minnesota GEIS to take a state-wide look. During the plan revision process, we considered results from the Great Lakes assessment, which looked across ecological province 212. While it is true that Minnesota's national forests exist at a confluence of ecological biomes, that does not diminish the importance of managing for species that exist near the edges of their range. The landscape ecosystem objectives of both Revised Plans provide for considerable (approximately 10%) of upland vegetation to be in the 0-9 year old age class. The shrub/wetland habitat throughout northen Minnesota is expected to remain stable. The Final EIS at 3.3.6.3b indicates that habitat requirements for certain species, such as woodcock, are more complex than just young aspen/birch forest habitat, since this habitat is plentiful on the Superior National Forest, yet populations of woodcock are declining.

PC# 1.0.4-3
Public Concern: The Final Plans should focus more on true ecosystem-based management, and should account for stochastic uncertainties resulting from changing climate, for example severe storms or fires.

Agency Response:
The future is always uncertain and any modeling (including that done for the Final EIS) is less than perfect. Without question, wildfires or severe windstorms will play a role in disturbance of vegetation on the forests. Climate change may also have long term effects. The difficulty in modeling is being able to meaningfully predict the nature, extent, or even the direction of that change. We intend to diligently monitor vegetative conditions under the Revised Plans, and to readily modify the Plans when changes are needed. Where disturbances such as fires or windstorms produce significant, unforeseen or unplanned for changes, we will determine if the management direction of the Plans needs to be adjusted, and will do so, accounting for actual on the ground conditions. We believe this approach has greater validity than trying to estimate the nature and extent of such possible disturbances before they actually occur.

Range of Natural Variability (RNV) as a Planning and Analysis Tool (1.0.6)

PC# 1.0.6-1
Public Concern: The Final Plans should continue to use the concept of range of natural variability.

Agency Response:
We agree. Appendix G of the Final EIS provides a summary of how RNV was used in the plan revision process. While the Revised Plans continue to make use the concept of range on natural variability (RNV), their objective is not to be within RNV. Alternative F was the one alternative that sought to be within RNV, and was not selected because its negative tradeoffs with other resources, goods, services and uses. Also see PCs 1.0.6-13 and 2.7.6-7 for more information about our use of RNV.

PC# 2.7.5-32
Public Concern: The Superior NF should use Range of Natural Variation principles in management.

Agency Response:
We agree, and the Vegetative Objectives of the plan were developed in part through use of RNV information. The vegetative objectives also considered the national forest's roles in providing for recreation, access, wildlife habitat, timber production and various other multiple-use objectives.

PC# 1.0.6-6
Public Concern: The Final EIS and Plans should continue to use RNV as a reference condition but various changes and clarification need to be made in how information is presented and used.

Agency Response:
This public concern listed many diffent ways that the RNV concept should be presented in the Final EIS and suggestions for modifications in how Alternative E should be changed with regard to how it works toward RNV. Chief among these was to have the Revised Plans and Final EIS display a clear tie between landscape ecosystem objectives and the silvicultural practices that would be used to achieve those objectives. While the Final EIS and Revised Plans provide an estimate of the various types of timber harvest selected by the Dualplan model to meet the landscape ecosystem objectives, these are modeling estimates only. The intent of the Revised Plans is to allow such decisions to be made at the project implementation stage, so that the most appropriate treatment can be geared to the specific site being treated. The section of the Revised Plans that introduces the landscape ecosystem objectives (Revised Plan Chapter 2, LE objectives, overview) referes to the need for the use of additional information to" help identify ecological capability, appropriate management practices, and management limitations important to achieve the desired conditions and objectives" Also, the Tree Species Diversity Objectives for each LE state that "Managers must consider more detailed ecological information, together with other multiple-use objectives and desired condtions, to make decisions about where, when, and how much to increase, decrease, or maintain species diversity". Also see response to PC 1.0.6-7 and 1.0.6-16.

PC# 1.0.6-7
Public Concern: The Final EIS and Plans should continue to use RNV as a reference condition but should not consider the era of the early 1900's because of logging changes had already occurred by then.

Agency Response:
The RNV information was prepared by an expert panel chartered by the Minnesota Forest Resource Council.. The expert panel determined that the forested conditions that occurred during the time period from 1600 AD to 1900AD provide a characterization of landscapes under RNV. The range of forested conditions during this time period is thought to most closely represent the natural cycles, processes and disturbances under which the current forest ecosystems and accompanying biological diversity of northern Minnesota evolved. This choice of 1900 as the end of the time period of consideration is not meant as an exact figure. The panel of experts were looking for a period that best reflected climatic conditions and pre-European settlement disturbances.

PC# 1.0.6-10
Public Concern: The Chippewa and Superior NFs, to comply with NFMA, should use Range of Natural Variability as a basis for judging the sustainability of their Plans.

Agency Response:
While RNV can and is used as one measurement of sustainability, we do not agree that sustainability is ensured only by being within the RNV. The NFMA regulations at 219.1 and 219.25 speak to sustainability and diversity within the context of overall multiple-use objectives. Ecosystem management considers social, economic, physical and biological needs and values in determining how to assure productive and healthy ecosystems.

PC# 1.0.6-11
Public Concern: The Chippewa and Superior NFs should maintain or establish representative associations of plant communities that once occurred in northern Minnesota because they provide for long-term stability and viability of forest-dependant wildlife species.

Agency Response:
We agree. The management direction in the revised Plans (Desired Conditions, Objectives and Landscape ecosystem objectives) is geared toward maintaining or establishing a representation of communities that once occurred within the Northern Superior Uplands and the Minnesota Drift and Lake Plains ecological subsections.

PC# 1.0.6-13
Public Concern: The Chippewa and Superior NFs should not use range of natural variability as a goal or a yardstick.

-Because of the negative economic and/or social impacts it would cause.
-Because of the increase in fire risk
-Because it is not possible or not practical to do so.
-Because the concept of RNV is not supported by science, or the process of applying ----
-RNV to the national forests was flawed.
-Because it will cause a decrease in deer, small game and other non-game populations.
-Because the Boundary Waters Canoe Area Wilderness provides old growth now and will provide even more in the future.

Agency Response:

Having vegetative conditions within the RNV is not a goal of the revised Forest Plans. We do believe, however, that use of the concept of RNV is valid and of value, in analyzing the alteratives, and is correctly considered, along with other needs and values, in determining how vegetative communities should be managed on the forest. We do not agree that use of the concept of RNV causes negative economic or social consequences. RNV was only one tool that was used to develop a plan that meets requirements set forth by law and regulations. The Revised Plans do not propose to let wildfires burn across the landscape in order to allow natural disturbances to return to the landscape. While the Revised Plans propose to increase the amount of conifer within the Forests, they also provide for treating and managing fuels that could lead to increased fire risk. We agree that it is not practical to return the forest to conditions within RNV, because there may be some unacceptable tradeoffs of doing so. That is why Alternative F was not selected as the Revised Plan. We believe that current science does support the concept of RNV. The data and concepts being used were specifically developed for NE Minnesota by a panel of experts including the University of Minnesota, the MN DNR, and the Forest Service. RNV was only one component of alternative development. Alternatives were developed around themes that resulted from extensive public involvement on how people wanted the national forests to be managed. The contribution of the Boundary Waters Canoe Area Wilderness was considered in the analysis in the FEIS and in the development of landscape ecosystem objectives in the Superior Forest Plan.

PC# 1.0.6-14
Public Concern: The Final EIS should provide better documentation and rationale for the conclusion to manage for RNV.

Agency Response:
We believe the rationale and documentation in the Final EIS and Revised Plans is adequate. Chapter 1 of the Final EIS (New Information and Management Approaches), Chapter 2, section 3.1.3, Appendix G, and the planning record document the rationale for use of range of natural variability. The planning record is available to the public by request. In addition, the Forest Service is using the same RNV data that was developed through the University of Minnesota and is accepted and used by the Minnesota Forest Resources Council, which is made up of agencies, groups, and individuals from a broad array of interests in forest management in Minnesota. Also see response to PC 1.0.6-13.

PC# 1.0.6-15
Public Concern: The Final EIS should modify the analysis to include all ownerships when analyzing RNV,

> **-Because landscape and cumulative effects of the actions on federal lands are not analyzed.**
> **-Because of the effects that Alternative E will have in the first two decades, especially on remaining large blocks of older interior forest.**
> **-Because the EIS incorrectly categorizes Alternative D's departure from the range of natural variability by only considering National Forest lands.**

Agency Response:
The Final EIS's cumulative effects section for vegetation (FEIS 3.2.1b) does include consideration of all ownerships within the relevant ecological section. The cumulative effects section also categorizes the effect of the federal actions in each alternative when compared to other actions occurring within the ecological section. The conclusions the cumulative effects for Alternatives D and E are also presented at the ecological section. The cumulative effects section relating to spatial vegetative effects (FEIS 3.2.2) discusses the expected effects of the alternatives (including Modified Alternative E) within the ecological section, includes how effects are affected by ownership and cites Wolter and White (2002).

PC# 1.0.6-16
Public Concern: The Final EIS and Plans should be modified to prevent bias against the older age classes.

Agency Response:
We do not believe the Final EIS and Plans are biased against older age classes. Range of Natural Variability is complex, detailed and inexact. Those scientists that helped develop the Range of Natural Variability in Minnesota often preface their discussions and papers with the advice that the numbers are not exact, and are more important in the overall picture or trends they demonstrate. While the Revised Plans and Final EIS has combined or modified the categories of various age classes, we have not disgarded the numbers included in the oldest age classes. Instead, they were factored into the highest category. For example, the 120+ category would include all categories above 120 years old. The Landscape Ecosystem Objectives in the Revised Plans direct managers to consult additional detailed information on landscape ecosystem, and expected future developments of applicable scientific information to determine appropriate management practices to achieve desired conditions or objectives. Management Area direction for vegetation also provides for representation of older growth stages depending upon the specific management area: GF= 1-150 years, GFLR = 1-250 years; RU, SPM, SPNM = maintain or enhance older vegetation growth stages.

PC# 1.0.6-17
Public Concern: The Final EIS should be more specific in how alternative will move toward RNV. Natural disturbances should be factored into the vegetative objectives.

Agency Response:
The Final EIS (Forest Vegetation, section 3.2) contained detailed information comparing the alternatives to RNV. The Revised Plans, (Chapter 2, LE Objectives) contain objectives for decades 1, 2 and the long term goal for moving toward RNV. We believe these adequately portray the relationship between RNV and both the alternatives and the Revised Plans. While natural disturbances are not factored into the vegetative objectives, we will monitor vegetative conditions on the forest and make adjustments to the Plans if conditions warrant.

PC# 1.0.6-19
Public Concern: The Final EIS and Plans should continue to use range of natural variation as a basis for analysis and for developing the vegetative objectives.

Agency Response:
We agree. The FEIS and Revised Plans have continued to make use of the concept of RNV.

PC# 1.0.6-21
Public Concern: The Final Plans should not use both range of natural variability (coarse filter) and mitigation (fine filter) to accomplish ecological sustainability because using both overcompensates for the needed conditions.

Agency Response:
We disagree and believe that both course and fine filters are needed for ecological sustainability. The Revised Plans work toward building a coarse filter, but in some cases, that will take many decades. The Revised Plans move toward the range of natural variability, but do not have an objective to be within the RNV, even in the long term (100+ years). While the course filter is becoming established, it is important to provide fine filter protections for key species, to ensure their sustainability during the short term. Therefore, standards and guidelines for several species are included in the Revised Plans.

Coarse and Fine Filter (1.0.7)

PC# 1.0-7-1
Public Concern: The Final Plans do not contain sufficient fine filter (standards and guidelines) to sustain a number of components of biological diversity and protect sensitive species such as lynx, goshawk, Bay-breasted warbler, and others.

Agency Response:
We disagree, in part. The Revised Plans provide fine filter direction for several species. Wildlife objectives in Chapter 2 of the Revised Plans specifically speak to the need for fine filter direction for certain species. In addition, the desired conditions and objectives for sensitive species direct the maintenance or restoration of quality habitat conditions. In many cases, the project level analysis is the best place to determine exactly how to meet the desired conditions and objectives listed in the Revised Plans. We have been working closely with the Fish and Wildlife Service with regard to recovery of the lynx. As a result, we have added additional lynx management units (LAUs) in the Virginia unit, and have made changes to various management direction regarding lynx, roads and recreational use. The Fish and Wildlife Service agrees that these changes will help conserve and recover the lynx.

PC# 1.0.7-2
Public Concern: The Final Plans need to have a greater allocation of reserves to provide for coarse filter management because the proposed Plan is not adequate in this area.

Agency Response:
We believe the Revised Plans adequately provide for coarse filter management. Many factors go into providing a coarse filter. Allocation of areas is one way of accomplishing a coarse filter (and this was a main approach of some alternatives) but it is not the sole way. The Revised Plans provide for a coarse filter through a variety of desired conditions, objectives and management direction and decisions. These include management allocations – the Revised Plans allocate additional acres to candidate RNAs and Unique Areas, and also make additional allocations to Semi-primitive non-motorized areas. But the Revised Plans also provide a coarse filter through vegetative objectives in terms of age, composition, spatial arrangement, size of harvest units (a large harvest unit today can become a large patch of old forest in 100 years) managing for interior space, and elimination of cross-country ATV use.

PC# 1.0.7-3
Public Concern: The Final Plans should include fine filter standards and special management objectives for globally rare communities within the landscape ecosystems (LEs).

Agency Response:
We agree, in part. The Revised Plans make additional allocations to the Unique Biological, Aquatic, Geologic and Historical management area.

PC# 1.0.7-4
Public Concern: The mix of direction by scale (landscape ecosystem vs fine scale) and by type (vegetation vs management indicator habitats) is confusing. The Final Plan needs an integrated set of mitigations.

Agency Response:

We apologize if the direction appears confusing, but we believe that the management direction is integrated. Management of forest resources is complex and management direction often needs to address resource management at several levels. We do not consider the management direction listed in the above concern to be mitigation. Rather, we see it as a proactive approach for actively managing for resources, rather than trying to mitigate the effects of management. We believe that it is appropriate to have management direction at the landscape ecosystem level, as this level relates well the Minnesota Forest Resource Council's landscape effort and ties well with how the Revised Plans tie in with the management of other landowners. It is also important to have fine scale direction to provide additional guidance that is not covered at the broad scale. It is also appropriate to have objectives for management indicator habitats, as these relate to habitats being managed for specific species.

PC# 1.0.7-5
Public Concern: The Chippewa and Superior NFs should modify Alternative E to allow temporary openings larger than 1,000 acres to meet the biodiversity requirements in NFMA.

Agency Response: We believe that the 1000 acre size limit is appropriate. Where a temporary opening larger than 1000 acres is necessary or justified, the Revised Forest Plan direction allows even larger openings on a case-by-case basis after a 60-day public notice and review by the Regional Forester. The need for many large openings exceeding 1000 acres is expected to be the exception, rather than the rule, therefore, we believe the 60 day notice and Regional Forester review is appropriate.

Landscape Ecosystems (LE) (1.0.8)

PC# 1.0.8-1
Public Concern: The Final EIS and Plans should take the Landscape Ecosystem (LE) approach and management direction to finer scales, because it is necessary for proper implementation of the Plan objectives and for disclosure of effects in the EIS.

Agency Response:
We agree that additional information is needed when implementing the landscape ecosystem direction in the Revised Plans. The Plans themselves acknowledge this in the Overview section for LE Objectives, by clearly stating "Detailed maps, land ownership, information on LE composition, structure and ecological processes, and information on the Aquatic and Terrestrial ecological unit inventories are found in the project record…." "These resources, along with future developments of applicable scientific information, will help identify ecological capability, appropriate management practices, and management limitations important to achieve desired conditions and objectives." The Plan is not intended to deal with site-specific situations or site-level implementation. Similarly, the Final EIS is not intended to analyze or disclose site-level effects, rather, it is to look at the forest-wide effects of a programmatic strategy (the Revised Plan and alternatives). The use of LE's is an appropriate scale for consideration of vegetative resources at the forest plan level. For many other resources, other scales and indicators are used. Examples include use of 6th level watersheds for water-related analyses, use of lynx analysis units for lynx effects, and use of management indicator habitats for wildlife species.

PC# 1.0.8-2
Public Concern: The Final EIS and Plans should recognize and account for the margins of error in the current inventories by LEs and simplification of the natural complexity of the forest, because these errors may effect the habitat availability assessments.

Agency Response:

It is true that the forest is complex and any model or inventory is a simplification of the complexity of the natural system that is being categorized. We have tried to use the best and most recent information that is available. Information from various sources is often in different formats and must be adjusted or crosswalked for use. We have tried to make those conversions and crosswalks as accurate we were reasonably able to do. Both the programmatic direction in the Revised Plans and the forest-level analysis and effects displayed in the Final EIS are appropriate to this level of decision-making. The Record of Decision acknowledges that these are not a perfect plans, nor a perfect analysis. We believe that the analysis provides a sound and sufficient basis for disclosure of effects relative to a programmatic decision.

PC# 1.0.8-3
Public Concern: The Final EIS should not limit landscape level analysis to National Forest Lands, because ecological processes do not respect property boundaries.

Agency Response:
We have tried to address impacts at different scales. Because Forest Plans only provide direction for national forest system lands, we looked at the effects on the national forests. However, we also considered cumulative effects that look beyond national forest system lands. Chapter 3 of the Final EIS contains a cumulative effects section for each resource, and Appendix H of the Final EIS provides information on likely future actions and expected impacts in northern Minnesota and the State as a whole. This information is quoted from the Minnesota Generic Environemental Impact Statement on timber harvesting, and from the Minnesota Forest Resource Council's landscape program.

PC# 1.0.8-4
Public Concern: The Final EIS and Plans should integrate the Landscape Ecosystem Objectives with wildlife mitigation measures, because integrated management direction is needed to disclose effect and effective management at the site level.

Agency Response:
The wildlife mitigation measures are linked to the Landscape Ecosystem Objectives. The LE objectives provide forest-wide, coarse filter management direction. Where that direction was not considered to adequately provide for habitat or protection of species, mitigation measures and fine filter management direction was included. The Revised Plans acknowledge that additional information is needed when implementing landscape ecosystem direction. This language is contained in the LE overview, located in Chapter 2 of the Revised Plans on the first page of the Landscape Ecosystem section.. The Final EIS is not intended to analyze or disclose site-level effects, rather, it is to look at the forest-wide effects of a programmatic strategy (the Revised Plan and alternatives). Determining site level management and mitigation and disclosure of site level effects is done at project-level implementation.

PC# 1.0.8-5
Public Concern: The Final Plans should clarify the relationship between Landscape Ecosystem objectives and Management Area direction.

Agency Response:
There has been quite a bit of comment about how both landscape ecosystems (LE's) and management areas (MA's) are linked together to provide forest management direction. The section of the plan that provides an overview of the Landscape Ecosystems in Chapter 2 contains some explanation of the relationship between LEs and MAs. We have added more explanation of the LE/MA relationship to the Revised Plans and placed it at the beginning of Chapter 3, the introduction to Management Area Direction. The Landscape Ecosystem approach used in setting vegetation objectives examined all forest lands including the BWCAW (Appendix G of the FEIS).

This approach examined historic tree composition throughout the ecological section, including within the Wilderness. Rates of disturbance characteristic to each LE were calculated based on historic information and observations. This also included the Wilderness. While the composition, age, and within stand diversity objectives were set for lands outside the Wilderness, these objectives were made in full consideration of the contributions of Wilderness. We utilized current vegetation information contained within the BWCAW Fuel Treatment EIS (USDA 2000) to specifically guide us in accounting for the Wilderness.

PC# 1.0.8-6
Public Concern: The Final EIS and Superior Plan should rename the Dry-Mesic Pine Landscape Ecosystem, because "Dry" and "Mesic" do not make sense when used together.

Agency Response:
We used this name because it is also used by the Minnesota Forest Resources Council and in the plant community literature that underlies the concept of landscape ecosystems. We try to use language that is similar to that used by other land managers in northern Minnesota.

Role of Interest Groups (1.1)

PC# 1.1-1
Public Concern: The Chippewa and Superior National Forests should not be overly-influenced by environmental groups.

Agency Response:
We strive to treat all people and all comments fairly. When a member of the public provides comments or concerns, we evaluate the concern and determine if a change is needed, regardless of who made the comment. We have received many thoughtful and worthwhile comments that have resulted in a better Revised Plan and Final EIS. These comments came from a wide variety of publics and interest groups, including environmental groups.

PC# 1.1-2
Public Concern: The Chippewa and Superior National Forests should not have their overall multiple uses impacted by special interest groups.

Agency Response:
We believe the Revised Plans do a good job of fulfilling the concept of multiple use. The comments we have received from various groups have helped develop better Revised Plans. Even when we did not agree with a comment, or did not make the change requested by a commentor, the comment was helpful to us because it made us stop and reconsider if we had taken the correct approach. Essentially, every group is some sort of special interest group.

PC# 1.1-3
Public Concern: The Chippewa and Superior NFs should be managed for all citizens, not just for commercial logging interests.

Agency Response:

The Revised Plans were developed to try to provide resources and conditions to meet the needs and desires of the various users of the Chippewa and Superior National Forests. It is important to manage the vegetation of the national forests to meet a variety of needs, including to provide for biological diversity, wildlife habitats, recreational opportunities, and timber production, among others. The use of timber harvest is a key (but certainly not the only) tool in our management toolbox to accomplish the desired vegetative conditions. It may often be more safe or economical than other treatment methods, which may include prescribed fire or mechanical treatment. Also see responses to PC 1.1-1 and 1.1-2.

PC# 1.1-4
Public Concern: The Chippewa and Superior NFs should not be allowing resources to be wasted and incurring high management costs because of trying to cater to all interest groups in every area of the forest.

Agency Response:
We believe the Revised Plans do a good job of addressing the various needs and desires of the many people who use and have interest in the Chippewa and Superior National Forests. We cannot completely satisfy everyone, nor is it wise resource management to try to do so. We do try to provide a range of conditions and opportunities so that most people will have opportunities to use the forest as they desire. We do not believe the Revised Plans allow resources to be wasted. When a stand of trees is not harvested, there is a reason to defer harvest, perhaps to meet an older forest objective or to provide needed wildlife habitat.

PC# 1.1-5
Public Concern: The Chippewa and Superior NFs should be managed by trained professionals of the Forest Service, rather than being influenced by untrained pressure groups.

Agency Response:
We take our responsibility of managing the nation's national forests seriously. We are proud of our staff, their professional expertise and their ability to manage the national forests in Minnesota. We believe that a part of being a professional is to earnestly listen to others who use and have concerns about how the forests are managed. We continue to learn and adapt, and we expect to regulary monitor and make changes to the Revised Plans when they are needed. Listening to and learning from the owners of the national forests (the American people) is a key part of being adaptive.

PC# 1.1-8
Public Concern: The Chippewa and Superior NFs should base their resource management decisions on opinions expressed by those who live or recreate in the Forests, rather than those expressed by people who've never visited the Forests.

Agency Response:
We give attention to all the comments that we receive. The Chippewa and Superior are national forests, and as such, belong to all Americans, whether they visit the forests or not. We do not automatically accept or reject any comment, without first giving it careful consideration and weighing the consequences of making the requested change.

PC# 1.1-9
Public Concern: The Chippewa and Superior NFs, in finalizing their Plans, should listen to the views of conservation groups like Minnesota Deer Hunters Association, Ducks Unlimited, and the Ruffed Grouse Society.

Agency Response:
We do recognize and appreciate the comments of these groups, and have given them careful consideration. Changes in the Final EIS and the Revised Plans were made as a result of the comments these groups provided. It is also true that changes were made as a result of the comments that governments, agencies and various interest groups provided, including conservation organizations, timber industry groups, recreation groups, and others.

Decision-making Role/Authority (1.1.1)

PC# 1.1.1-1
Public Concern: The Forest Service should reduce the number of regulations that restrict people's use of the Forests.

Agency Response:
We understand people's desire to be unencumbered by regulations when using and enjoying the national forests. As managers of the nation's forests, we try to limit rules and regulations where possible. We are also responsible to provide for safety of forest users and visitors, for protection of forest resources, and for providing a wide spectrum of recreational opportunities. Sometimes it is necessary to establish rules to provide for safety, resource protection, or to separate conflicting uses. We know that not all people will agree that specific rules are necessary, we trust and hope that forest users will abide by them, so that all users can have safe and enjoyable use of the national forests now and in the future. The Revised Forest Plans set a broad strategy for managing the national forests. As such they contain less specific management direction (generally in the form of Standard and Guidelines) than the 1986 Forest Plans.

PC# 1.1.1-3
Public Concern: The Chippewa and Superior NFs should produce a separate EIS for each Forest.

Agency Response:
We disagree. There were many similarities between the Chippewa and Superior Revision efforts that led to the decision to produce a joint environmental impact statement. These included similar timing of revision efforts, similar management issues, and a public that was generally interested in both national forests. Another expectation was that, where reasonable, both forests should take a similar approach and do a similar analysis. After the 1986 Plans were produced, there was concern that two national forests in the same area of the state had produced plans that were often inconsistent in their approach for many resources. Doing a joint analysis has helped increase consistency among the forests. It should be noted that there are distinct social, economic and ecological differences between the forests. These differences have been documented in the Final EIS, and a separate Forest Plan and Record of Decision will be issued for each national forest.

PC# 1.1.1-5
Public Concern: The Forest Service should limit it's wildlife management efforts to vegetation management, letting the States manage all other aspects related to game species populations, hunting, fishing, etc.

Agency Response:
Generally on national forest system lands, the Forest Service has the responsibility of managing wildlife habitat, and the State has the responsibility of managing the wildlife populations. The State of Minnesota sets rules

associated with harvest, including season dates, bag limits, and methods for harvest of wildlife and fish. They also set goals for numbers of species. The Forest Service cooperates with the State on national forest system lands, to provide for diverse and sustainable populations of both game and non-game wildlife. The Revised Plans were developed with an objective of providing various vegetative ages, types and spatial arrangements to insure habitat for all wildlife species, and to provide quality hunting experiences associated with game species. The Forest Service has worked with the Minnesota Department of Natural Resources throughout the development of the Plans, and considers the MN DNR a key cooperator in implementation of the Revised Plans.

PC# 1.1.1-6
Public Concern: The Chippewa and Superior NFs should control land use along Lake Superior and inland lakes to assure these lands remain a desirable place to live or visit.

Agency Response:
The Forest Service does not have authority to control land use on non-federal lands. The Revised Plans only provide direction for national forest system lands – those lands owned by the federal government. Non-federal lands within the national forest boundaries are just that – non-federal, and therefore not covered by the management direction of the Revised Plans. .Non-federal lands are generally owned by the State of Minnesota, the counties, tribal governments, or private companies, groups or individuals. There are very few acres of national forest system lands along the shores of Lake Superior. The development or use of private lands along Lake Superior or on inland lakes is generally regulated by State, county and local rules and zoning ordinances.

PC# 1.1.1-7
Public Concern: The Chippewa and Superior NFs should take advantage of the new administrative decision-making tools, including Categorical Exclusions, to accomplish forest management projects.

Agency Response:
The Revised Plans set broad strategy for desired conditions and objectives (what the forest should look like in the future). Project level decisions determine what practices and processes should be used to work toward those desired conditions. However, the Forest Service will consider the entire range of decision-making tools (including recent Categorical Exclusion categories) and will use the tool appropriate to the site and the decision being made

PC# 1.1.1-10
Public Concern: The Chippewa and Superior NFs should finalize their Plans using good science and sound ecological principles.

Agency Response:
We believe the Revised Plans do so. In addition, we expect to keep the Plans current and updated by adjusting or amending them as changed conditions or new information and techniques become available. As new information is available, it is applied to project-level planning and helps highlight when or where Forest Plan change is needed.

PC# 1.1.1-11
Public Concern: The Chippewa and Superior NFs should strive to reduce the influence of upper level (Regional Office and higher) management on Forest-level decisions.

Agency Response:
The planning regulations (36 CFR 219.10) state that "the Regional Forester shall establish regional policy for forest planning and approve all forest plans in the region." Therefore, the Regional Forester (at the Regional Office) is the person ultimately responsible for making the decision on Revised Plans. However, that does not mean that Revised Plans and the Final EIS do not reflect local knowledge and conditions. The development and management of the revision process occurs at the local forest level, and is done by forest-level staff. Starting from the need for change from the current plan, up to the development of the final documents, forest-level staff are the main preparers of the documents. We work closely with Regional Office staff to keep them informed of progress and for their review of documents. This relationship helps the Regional Forester and his staff to be knowledgeable and aware of issues and proposed solutions in plan revision.

PC# 1.1.1-12
Public Concern: The Forest Service should authorize District Rangers to locally amend the current policy which requires trees cut for firewood be dead and down and less than eight inches in diameter.

Agency Response:
This concern is not related to decisions made at the forest plan level. It is being forwarded to District Rangers on the Chippewa National Forest for their consideration.

PC# 1.1.1-13
Public Concern: The Forest Service should fund payment-in-lieu of taxes at 100% of the formula approved by law.

Agency Response:
This concern is beyond the scope of what can be decided in a Forest Plan. The level at which payment in lieu of taxes is funded is determined by Congress through the appropriations process.

PC# 1.1.1-15
Public Concern: The Forest Service should abide by its responsibility to look at the effects of each alternative and assure that resources are protected.

Agency Response:
We believe that EIS includes a thorough analysis of the effects of the alternatives and the Revised Plans provide the appropriate level of protections and uses of the Chippewa and Superior National Forest for the reasons outlined in the Records of Decision.

Public Involvement (1.2)

PC# 1.2-1
Public Concern: The Final EIS should have provided details on Alternative C to help the public comment.

Agency Response:
We believe the Final EIS gives approximately equal treatment to all alternatives in terms of disclosing the effects of implementing each alternative. A standard list of indicators is used to analyze the effects of each alternative. Alternative C receives no greater or lesser analysis than other alternatives.

PC# 1.2-2
Public Concern: The public involvement process should have fewer rules.

Agency Response:
We have tried to provide many opportunities for public involvement throughout the revision process, including helping determine the need for change, helping develop alternatives, and review of alternatives, the Draft EIS and Proposed Plans. Some rules are required, such as the duration of the formal comment periods. In addition, we asked for comments to be substantive, so that we could better understand what people's concerns were and why they had those concerns. We apologize if some of these requests appeared onerous. Our intent was to provide opportunities for many people to provide comments and for those comments to be understandable and useful to us, so that we could improve the Final EIS and Revised Plans.

PC# 1.2-3
Public Concern: The Forest Service should develop another way of informing the public about the process, making it easier to find out what the regular citizens want.

Agency Response:
We understand the commentors concern. We are always looking for ways to inform people about the revision process, so that, if they are interested or affected, they can become informed and provide comments. We use news releases to all major media, we prepare and mail newsletters, we maintain a website, we do programs for local civic groups, we provide copies of documents to local libraries. We are open to new or more effective ways of reaching people. We believe that our outreach effort for the plan revision was extraordinary and that we received comments from a broad spectrum of the American public.

PC# 1.2-4
Public Concern: The Superior NF should listen to the many people on the North Shore who are concerned about losing their rights to use the National Forests in Cook County.

Agency Response:
All comments are considered, regardless of who authored them. The Final EIS contains a section on social sustainability (3.9.2) and evaluates 4 key indicators. Those indicators are 1) Changes in key themes or characteristics of inventoried special places; 2) Changes in traditional and culturally important areas; 3) Changes in forest access; and 4) Changes in community social factors. The alternatives are evaluated and compared against these 4 indicators. The Record of Decision identifies the rationale for why the Superior's Revised Plan was selected from among all alternatives considered. We believe that the Revised Plan provides for a balance of uses and provides ample opportunities for people's use of the Superior National Forest.

PC# 1.2-5
Public Concern: The Chippewa and Superior NFs should openly and repeatedly inform the public in advance of public involvement opportunities.

Agency Response:
We have tried to do so, through news releases to all major media, through newletters, and the Forest Service website. As we implement the Revised Plans through various projects, we will encourage public participation and comment through various means, including the NEPA Quarterly newletter. Public meetings related to Plan revision require 30 days public notice, in most cases.

PC#1.2-6
Public Concern: The Final EIS and Chippewa Forest Plan should consider the Leech Lake Band of Ojibwe's attempts to address concerns and issues that need to be resolved to implement a co-management relationship.

Agency Response: No disrespect to the Band was intended during the Planning process. Many Chippewa National Forest personnel participated in meeting with tribal government and Band members on revision issues since 1998. (see Appendix A). Membership of the Planning Team has been consistent during this time. While individuals may have been perceived as functioning in a liaison capacity, the Chippewa National Forest has no designated Tribal Liaison. A commitment for a liaison position has been proposed and included in the Chippewa's longterm organization structure and remains a priority under discussion with the Leech Lake Band, separate from Forest Planning.

By necessity, Forest Plans must by written by and for the agency that must implement them. At the same time, in lieu of a specific fiduiary trust responsibility or specific direction from Congress, the courts, or the executive branch, the national forest satisfies its trust responsibility by following general laws and regulations relevant to federal land management, and within a Forest Plan. Thet Forest Plan and EIS contain many pages specific to tribal concerns raised by the Leech Lake Band. As a result of tribal and public comments, additional information has been included in the Final Plan and FEIS. Utilizing frameworks or sources from other current Plans is a reasonable and expected way of beginning the formatting process. Language must always be tailored to the specific forest and incorporate the received tribal and public comment.

Many issues and concerns of the Band addressing ecological, biological and botanical issues on the Forest are also the concerns of others. In addition to pages specific to tribal concerns raised by the Leech Lake Band, the final Plan and FEIS address these issues resource by resource.

Achieving co-management of a national forest is beyond the authority of the Chippewa National Forest itself and not within the scope and function of a Forest Plan.

PC# 1.2-7
Public Concern: The Final EIS and Plans should reflect the public input Sierra Club members provided at early public meetings.

Agency Response:
We have considered input provided by various groups throughout the revision process, and many aspects of the Sierra Club's input was included in the Final EIS, especially Alternative D which was largely based upon an alternative proposal from the Sierra Club. To keep the analysis manageable, only a limited number of indicators

could be used in assessing the alternatives and their effects. For recreational opportunities and forest settings we chose to use Recreation Opportunity Spectrum (ROS) class as the indicator. ROS is a Forest Service classification that is widely used nationally and also by many states. For the recreation motor vehicles issue, indicators used were miles of new designated ATV trail, miles of new designated snowmobile trail, roads open for RMV use, ATV and snowmobile cross country opportunities, and consistency among public land agencies. These are fairly straightforward numerical and descriptive indicators. For scenic quality, we again used standard Forest Service indicators of Scenery Integrity Objectives and a narrative description of Scenic Character. We believe these indicators do the best overall job of analyzing effects of the alternatives from a recreation standpoint.

PC# 1.2-8
Public Concern: The Final EIS and Plans should consider all Sierra Club comments as you make the final revisions.

Agency Response:
All comments are considered, regardless of who authored them. We have read and given consideration to all the letters and comments we have received. Where we have received form letters or postcards with identical wording, we have read and coded one, and made note of the number that we received.

PC# 1.2-9
Public Concern: The Chippewa and Superior NFs should not rationalize public comments.

Agency Response:
We have tried our best to openly and honestly respond to public comments. Where we agree, we have said that and have made changes to documents. There are other times when we do not agree with the comment or suggestion and we have tried to explain our reasons for disagreement.

PC# 1.2-10
Public Concern: The Forest Service should use a public involvement process that would allow citizens to allocate adequate time, study, expense, and effort required to comment on more than personal preferences.

Agency Response:
We have made a sincere effort to do what is being asked. During the course of the revision effort, we have held several informational meetings, including meetings where the public could talk directly with revision team members so as to better understand the documents. We held 3 workshops, run by a professional facilitator, where the public could help develop alternatives. We extended the formal comment period on the Draft EIS and Proposed Plan for an additional month, resulting in a comment period that ran for 120 days. During that time, we held meetings in northern Minnesota and in St. Paul so that the public could meet and talk with revision team members. The purpose of these meetings was to help the public better understand the Proposed Plans, the Draft EIS, and the issues in order for them to provide good, substantive comments that would help us improve the final documents. See appendix A of the FEIS for a complete listing of public involvement activities.

PC# 1.2-11
Public Concern: The Chippewa and Superior NFs should contract with an independent contractor to review, categorize, and summarize the forest plan comments to have an unbiased review.

Agency Response:
We considered doing something similar to what is being requested, although our Plan revision budget this fiscal year was not sufficient to fund what would be a very expensive contract. The Forest Service has a national Content Analysis Team that contracts with national forests to do this work. This is not an independent contractor, but is made up of Forest Service employees from across the nation. The Chequamegon-Nicolet National Forest contracted with this group to prepare their public concern statements. The public comments on the Chippewa and Superior were reviewed and summarized by members of the planning team. We strove to be objective and unbiased in categorizing the comments. The sheer size of this response to comments section should provide evidence that we tried to do the best possible job of identifying and listing people's concerns.

PC# 1.2-12
Public Concern: The Chippewa and Superior NFs should hold more public hearings.

Agency Response:
While we could have held more public meetings, we believe we provided unprecedented opportunities for public involvement. Appendix A of the Final EIS documents those public involvement opportunities. Early on in the process, public meetings were held to develop and review issue papers and later to help develop alternatives. During the formal comment period for the Draft EIS, a series of open houses were held on the Forest and in St. Paul. This was followed by a series of meetings where people could meet with Forest Service specialists. In addition, the formal comment period on the Draft EIS was extended to 120 days.

PC# 1.2-15
Public Concern: The Forest Service should extend the comment period for the Draft EIS and Plans.

Agency Response:
Several people requested extension of the 90 day comment period and the Regional Forester granted an extension of the comment period until September 11, 2003. This resulted in an additional 30 days being added to the comment period.

PC# 1.3-16
Public Concern: The Forest Service should shorten the planning process so that the public and Forest Service employees do not get discouraged.

Agency Response:
We agree that the plan revision process is long and cumbersome and should be shortened. New planning regulations aimed at streamlining the process are being developed. The huge response and numbers of comments we received on the Draft EIS and Proposed Plans are an indication that many people are actively interested and engaged in the planning process.

PC# 1.2-17
Public Concern: The Chippewa and Superior NFs should continue to involve in forest planning the American Indian Bands and the Township, County, and School Boards that are within the National Forest boundaries.

Agency Response:

We agree. Desired Condition D-CM-1 in the Revised Plans states our intent to work cooperatively with tribal, state, county and local governments. In addition, consultation procedures with Tribal bands have been developed. The Forest Service relationship with Indian Nations is unique from other governmental relationships because of treaty rights and trust responsibilities.

PC# 1.2-18
Public Concern: The Chippewa and Superior NFs should emphasize educating the public about resource management and develop a self-guided auto tour.

Agency Response:
Public education on forest management is usually beneficial. This public concern is beyond the scope of Forest Plan revision. It deals with process (public education) and with a site-specific proposal (auto-tour), both of which may be considered during implementation of the Revised Plans. The comment has been forwarded to the Public Information and Recreation staffs of each national forest

Agency Trust and Credibility (1.3)

PC# 1.3-3
Public Concern: The Forest Service should not allow logging industry sales to finance its budget.

Agency Response:
The revenues generated from sale of timber from national forest system do not return directly to the forest. Instead, they return to the general treasury (the same place that taxes and other revenues go). The exception to this is that 25% of returns from timber sales and other revenues generated from national forests (such as campground fees) go to the State of Minnesota, and are then allocated to the Counties that have National Forests within them. These monies are to support local schools and roads in these counties.

PC# 1.3-4
Public Concern: The Chippewa and Superior NFs should follow the direction in their Final Plans.

Agency Response:
We agree. The Forest Service is required to follow the direction in the Revised Forest Plans. As Revised Plans are implemented, the Forest Service is required to determine if project level decisions are consistent with the Revised Plans before the project can be carried out. If a project is not consistent, the project is either not done, is modified to be consistent with the Plan, or, if needed, the Plan is amended after having public involvement. However, our ability to accomplish the goals and objectives in the Plans is also dependent on funding and therefore will be affected by budget levels.

Use of Science and Maps (1.4)

Use of Science – General (1.4.1)

PC# 1.4.1-5
Public Concern: The Forest Service should make decisions based on research, careful study, and inner integrity.

Agency Response:
We agree and have strived to do so.

PC# 1.4.1-8
Public Concern: The Final EIS and Plans should reflect the best knowledge of the conservation of biological diversity.

Agency Response:
We believe the Final EIS and Revised Plans do so. We have integrated new information regarding landscape ecosystems, range of natural variability, species viability, roles of disturbance and other information in addressing the conservation of biological diversity.

Maps and Inventories (1.4.2)

PC# 1.4.2-1
Public Concern: Maps in the Final EIS and Plan maps should not show management areas where the Forest Service has no ownership.

Agency Response:
We agree in part. Our purpose in coloring all the lands within the national forest boundary was to more clearly demonstrate the differences in the themes among the alternatives. By coloring all the lands, the overall themes and management area allocations of the alternatives are much more readily apparent. We have continued to do this for the maps associated with the Final EIS, because their purpose is to demonstrate the differences amongst alternatives. However, for the map associated with and bound into the Final Revised Plans, we colored only the National Forest System lands, because those are the only lands to which the Revised Plans management direction applies.

PC# 1.4.2-2
Public Concern: The Final EIS and Plans should correct the Superior NF boundary lines on maps.

Agency Response:
We have changed the map in the Superior's Revised Plan to clearly show the proclamation boundary of the Superior National Forest and to identify the Kabetogema and Pigeon River Purchase Units.

PC# 1.4.2-5
Public Concern: The Chippewa NF should improve the database upon which they based Alternative E.

Agency Response:
We realize that our data is less than perfect. During the revision process, we have taken several steps to improve the data. This does not mean that errors in data do not still exist. Because the Revised Plans are Forest-wide, strategic planning documents, we consider the data to be sufficient to analyze and disclose effects at this broad scale. As the Revised Plans are implemented and site specific projects are planned and proposed, we gather additional field data and update inventories. We are continuously looking for ways to update, correct, and maintain good data. When looking at millions of acres, this is never an easy nor inexpensive task.

Relation to or Consistency with other Plans and Directives (1.5)

PC# 1.5-1
Public Concern: The Final EIS cumulative effects analysis should not rely on the Minnesota Generic EIS as a basis for determining foreseeable timber harvesting in Minnesota because it is outdated.

Agency Response:
The GEIS provides a comprehensive, state-wide look at possible effects resulting from varying levels of timber harvest. The base level (4.0 million cords) is closest to the actual level of timber harvest that has occurred throughout Minnesota for the past several years, and is likely to occur in the foreseeable future. Therefore, we believe it provides a reasonable estimate of likely effects, state-wide, from that level of timber harvest. As part of Appendix H, we have also included the Goals and Strategies of the Minnesota Forest Resource Council's Landscape Planning Effort for the Northeast and Northcentral Regions. This information is recent, (2003 and 2004) and the Final EIS updated this information from what was presented in the Draft EIS.

PC# 1.5-2
Public Concern: The Plans should achieve the multi-aged management goals of the Minnesota Generic EIS (GEIS).

Agency Response:
The Revised Plans incorporate many of the suggestions from the GEIS, including increased use of selection and partial harvesting and use of extended rotations to help increase older age classes. The Revised Plans have allocated many thousands of acres to the General Forest Longer Rotation management area. The management direction of the Revised Plans increases the amount of multi-aged stands and conditions on the Forests.

PC# 1.5-3
Public Concern: The Final EIS cumulative effects analysis should address the amount of timber harvest that is occurring, and will occur, on private lands.

Agency Response:

The Final EIS discusses the age and condition of lands within the ecological section. We believe this is the relevant condition to be considered, not the amount of treatment that leads to the condition. Appendix H of the Final EIS does include a discussion of the past and likely statewide timber harvest scenario.

PC# 1.4.1-6
Public Concern: The Final EIS should balance the amount of ecological analysis with the amount of economic and social analysis.

Agency Response:
We believe the level of analysis in the Final EIS is adequate for disclosing the effects of the alternatives and to make a selection from amongst the alternatives. We identified key indicators that were needed to assess the effects of the alternatives relative to each of the Plan Revision issues, and the Final EIS reflects the analysis needed to address those indicators. These sections cannot and should not be considered unrelated to each other, but must be considered together when evaluating effects and also in making decisions or conclusions. The ecological conditions of the forest have social and economic implications, and the social and economic conditions of those who use the forests and live in those communities in proximity to the forests has implications for the ecology of the Forests.

PC# 1.5-4
Public Concern: The Final EIS should provide a clear and detailed description of methods to be used in identifying special conditions involving hazards to wildlife and recreation resources, as required by the Forest and Rangeland Renewable Resources Planning Act of 1977.

Agency Response:
The Final EIS and planning record disclose these situations, and analyze the effects of the alternatives with regard to these resources. In most cases, the conditions refer to habitat conditions for wildlife (forest age, type, and spatial arrangement of habitat) or to the access and solitude conditions for recreation. In some instances, the conditions or hazards may be more specific, such as predation or unintentional or illegal killing. As an example, see the discussion of lynx in the FEIS, which lists habitat vegetative conditions and human access as conditions which affect the lynx.

PC# 1.5-5
Public Concern: The Final EIS Appendix I list of policies and agreements relevant to forest planning should be expanded to include documents which guide federal agencies in management related to National Scenic Trails (NSTs).

Agency Response:
We agree and have added the above listed policies and agreements to the list in Appendix I.

PC# 1.5-6
Public Concern: The Final EIS and Plans should include specific direction and wording to recognize the U.S. military's option, through special use permit, to use National Forest Lands for military training.

Agency Response:

We believe the existing objective O-SU-2 provides adequate language to address the request. In addition, special use guidelines in General Forest and General Forest Longer Rotation management areas (G-GF-3 and G-LR-3) state that most special uses can be accommodated. We do not agree that additional special use guidelines need to be added to accommodate this use.

PC# 1.5-8
Public Concern: The Plans should recognize the need to cooperate with private land owners within the Forests' boundaries.

Agency Response:
We agree and have added private landowners to Desired Condition D-CM-1.

PC# 1.5-9
Public Concern: The Chippewa and Superior NFs should subscribe to implementation of the guidelines developed by the Minnesota Forest Resources Council (MFRC) because these National Forests participated in developing the guidelines and currently serve on the MFRC.

Agency Response:
The Chippewa and Superior National Forests will use, as a minimum, the MFRC's site level guidelines for forest management. In some instances, the standards and guidelines in the Revised Plans may provide equal or greater protection to the resources addressed by the MFRC guidelines. A provision of the MFRC guidelines is that they may be modified if the modifications provide equal or greater benefits to the resource.

Roadless Area Conservation Rule (1.5.1)

PC# 1.5.1-1
Public Concern: The Forest Service should fully implement requirements of the Roadless Area Conservation Rule and not support the Categorical Exclusion Rule proposed directive.

Agency Response:
The Forest Service is legally enjoined from implementing the Roadless Area Conservation Rule. We believe that the use of categorical exclusisons can be appropriate if they are used in the proper site-specific situations. We will look at each proposed use of categorical exclusions to ensure it is being correctly interpreted and used.

Healthy Forest Initiative (1.5.5)

PC# 1.5.5-2
Public Concern: The Chippewa and Superior NF should provide for the restoration of forest health by displaying stronger support of the Healthy Forests Initiative.

> **-Including incorporating in Forest Plans the language of the Healthy Forest Restoration Act legislation.**
> **-Including the development of Plans that define forest health, list forest health as a goal, and don't provide for increases in mature and older forests.**

-Including changing the BWCAW management plan to take into consideration the Healthy Forest Restoration Act.

Agency Response:
The Revised Plans and Record of Decision include language that speaks to the Healthy Forest Restoration Act.. Forest health has been included as a goal, but this does not preclude an increase in mature or older forests. These age classes are important for meeting a variety of resource and social needs. Changes to the BWCAW management plan are not within the scope of this plan revision. Section 1.6 of the FEIS provides the rationale for why the BWCAW management plan is not included in the plan revision.

PC# 1.5.5-3
Public Concern: The Chippewa and Superior NF should provide for the restoration of forest health by not supporting the Healthy Forest policy initiative.

Agency Response:
The Healthy Forest Initiative adds some items to the Forest Service toolbox that can be useful in addressing and working toward forest health. We will use those tools on a site-specific basis when and if it makes good sense to do so. We will not use the tools where they are not appropriate.

PC# 2.0-1
Public Concern: The U.S. Congress should repeal the Healthy Forests Restoration Act of 2003.

Agency Response:
This comment is not within the scope of what can be decided in Forest Plan Revision.

Agency Organization and Funding (1.6)

General Comments About the Agency (1.6.1)

PC# 1.6.1-1
Public Concern: The Forest Service should actively seek ways to streamline processes to secure funding and reduce appeals to management decisions.

Agency Response:
We agree that planning processes can sometimes be cumbersome. New planning regulations designed to streamline processes are being developed and may soon be issued. The Minnesota National Forests continue to look for ways to streamline processes, but often federal law and national policy mandate specific processes and procedures. Our funding requests are done through the Forest-Service wide funding process, and we try to successfully compete for funding by establishing a good performance record. We try to reduce appeals to management decisions by involving people early on in our decision-making.

PC# 1.6.1-2
Public Concern: The Forest Service should make it's planning processes less burdensome and more useful in establishing and achieving timber harvest goals.

Agency Response:
New planning regulations designed to streamline the planning process are being developed. It is possible that, they may already have been issued while this response was being printed and mailed. The Revised Plans set vegetative objectives and timber management activities are the primary method of accomplishing these vegetative conditions. Therefore, determining the amount of timber harvest needed to meet the objectives is fairly straightforward.

PC# 1.6.1-3
Public Concern: The Chippewa NF should preserve the Marcell Ranger Station and keep it open as a visitor's center.

Agency Response:
This is not a Forest Plan level decision. The comment is being forwarded to the Deer River District Ranger for consideration.

Funding (1.6.2)

PC# 1.6.2-1
Public Concern: The Chippewa and Superior NFs should ask Congress for full funding of the timber program.

Agency Response:
Our desire is that all resources covered by the Forest Plan be fully funded. That has rarely, if ever, been the case in the past, given the realities of the federal budget. Within the allocations requested and the actual dispersal of funds to the Forest Service and ultimately to the Forests, we try to achieve a balanced resource program.

PC# 1.6.2-2
Public Concern: The Final EIS analysis and Forest Plans should be based on the assumption of realistic and likely, rather than just optimum, funding levels.

Agency Response:

The funding of the Forest Service as an agency, as well as the Chippewa and Superior National Forests, in particular are dependent upon several factors, and budgets vary from year to year. In addition, emergency events such as wildfires at the national level can affect local funding. The Revised Plans were analyzed at full funding levels to demonstrate the opportunities that exist if funding were to be available, and also to demonstrate the maximum effects that could be expected from the standpoint of NEPA effects disclosure.

PC# 1.6.2-3
Public Concern: The Plans should provide convincing support for funding projects or the accomplishment of objectives which are needed to meet stated goals.

Agency Response:

We believe the Revised Plans and the Final EIS make a convincing argument for funding projects and accomplishing objectives. In order to achieve the desired conditions and accomplish objectives, we need to treat the specified acres, and implement the recreation, wildlife and other resource projects identified in the Plans.

PC# 1.6.2-7
Public Concern: The Forest Service should do a better job of using the funding it gets to implement its timber program based on firm, Plan-established goals and objectives.

Agency Response:
We try to be as efficient as possible with the dollars we are allocated in the Federal budget. We realize these are taxpayers dollars and try to extend them as far as possible. The revised plan contains specific objectives for managing vegetation, and we will work to achieve as much of those objectives as possible, given the funding received. We will pay close attention to the costs of various management treatments, while realizing that the least cost treatment may not always be the best treatment for a specific site.

PC# 1.1.1-2
Public Concern: The Chippewa and Superior NFs should disclose to the public the total cost involved in completing the final revised Plans and the associated EIS.

Agency Response:
The Forest Service and the Regional Forester have recognized the need to simplify and expedite the plan revision process. To that extent, new planning rules that would speed up the revision process are being developed and may soon be issued nationally. In addition, the Regional Forester of the Eastern Region has directed that national forests now entering the revision process expedite their revision efforts to complete a Revised Plan within a 2 to 3 year time frame. Much of the information and work that went into preparation of the Revised Plans would have been needed even in the absence of Plan Revision. They would have been needed to keep our exising information current and to prepare amendments to the 1986 Plan,. The planning process is important and ongoing. Even after the Revised Plan is approved and being implemented, it will be important to monitor, evaluate and do analysis to keep the Revised Plan current. Doing these tasks takes a commitment of people and money. The total cost of revising the Superior National Forest Plan between fiscal years 1997 through 2004 (the period between the Notice of Intent to revise the Plan and the Record of Decision on the Revised Plan) was about 4.4 million dollars. This was about 2.3 percent of the total Superior National Forest Budget during that same time. For revising the Chippewa Forest Plan, the figures are about 4.0 million dollars or about 5 percent of the Chippewa's total budget during those years. We recognize that a considerable amount of money and several years have been spent revising these Forest Plans. Many factors have contributed to the amount of time it has taken to complete the revisions.including having an unprecedented level of public involvement in the revision effort, and also the commitment of our employees to respond to the 1999 Blowdown on the Superior National Forest. We believe that spending between 2 to 5 percent of the Forests' budgets on long term planning and determining how to manage these forests for this and future generations will be an investment that pays long term dividends.

Editorial Corrections (1.7.1)

PC# 1.7.1-1
Public Concern: The Final EIS should clarify the intent of the options.

Agency Response:
Chapter 2 of the FEIS describes the alternatives or options. Each alternative is first described with an overall theme of the intent of the alternative, or what the alternative seeks to accomplish. This is followed by a more detailed description of how the alternative addresses each of the key issues. Finally, a table shows how each alternative allocates or zones the forest by management area. The bulk of the FEIS concentrates on the biological, social and economic effects of each alternative.

PC# 1.7.1-2
Public Concern: The Final EIS should correct a mathematical error in Appendix H.

Agency Response:
We agree and have made the requested change.

PC# 1.7.1-3
Public Concern: The Final EIS should discuss effects in one place so that the reader may easily understand the Forest Service's analysis.

Agency Response:
We understand the concern. However, the analysis of effects for plan revision is often complicated and the analysis is divided into separate resources in order to more accurately consider the effects. Specific indicators are used to measure the effects to different resources. The executive summary of the Final EIS is intended to provide a more concise and summarized explanation of effects.

PC# 1.7.1-5
Public Concern: The Plans should make the following editorial changes to the wildlife direction.

-Correct word omission
-Move O-WL-20

Agency Response:
We agree. Errors have been corrected.

PC# 1.7.1-6
Public Concern: The Final EIS and Plans should not use so many acronyms and define terms in the glossary.

Agency Response:
We have tried to reduce the use of acronyms in the Final Environmental Impact Statement and in the Revised Land and Resource Management Plans. However, we believe that judicial use of acronyms can make documents easier to read. For example, the first sentence of this response would be considerable shorter and easier to read if we had used the acronym FEIS and simply said Revised Plans. When an acronym is used for the first time in a

document, it is always defined. In addition, the inside cover of the Final Environmental Impact Statement (FEIS) contains a list of abbreviations and what they mean. We have also added additional definitions of terms in the glossaries in both the Final Environmental Impact Statement and in the Revised Land and Resource Management Plans.

PC# 1.7.1-7
Public Concern: The Final EIS should define Landscape Ecosystems in the list of key terms in Chapter 2.

Agency Response:
The definition of Landscape Ecosystems is included in the Glossary which is located at the back of the Forest Plan. Landscape Ecosystems are also defined on the first page of the Landscape Ecosystem Objectives section of the Plans. The Plans do not have a list of key terms for Chapter 2, but rather have a key to the numbering and abbreviations for management direction for various resources.

PC# 1.7.1-8
Public Concern: The Chippewa and Superior NFs should modify the Final EIS and Plans to be easier to understand.

Agency Response:
We have tried to make the documents as easy to understand as possible. Forest management and forest-related issues can be extremely complex, and often require detailed analysis and management direction. The Revised Plans and Final EIS are developed not only for public review, but also to serve as management direction that Forest Service employees will use to manage the national forests. As such, some of the management direction must be technical in nature. Those desiring a less complex analysis should refer to the executive summary of the FEIS which provides a quick summary and findings of the analysis. In the Forest Plan, readers should consult the Forest-wide Desired Condition sections and also the Management Area descriptions, particularly the Theme, Setting, and desired conditions.

Cooperative Management and Collaboration (1.7.2)

PC# 1.7.2-1
Public Concern: The Chippewa and Superior NFs should manage forests across jurisdictional boundaries.

-To prevent excessive harvesting
-To promote a supply of timber

Agency Response:
We agree that we must, and will work cooperatively with other landowners and land managers. While the Forest Service only has jurisdiction upon National Forest System lands, it is important to work cooperatively with others to address landscape-level issues. The Minnesota Forest Resources Council Landscape program provides an excellent opportunity to work with other landowners and interests within the Northern Superior Uplands and Minnesota Drift and Lake Plains landscapes.

PC# 1.7.2-2
Public Concern: The Plans should have direction on coordinating with other agencies.

-Substantive State standards are involved
-Managing State-listed endangered/threatened species
-Siting facilities
-Road and trail decommissioning
-Developing large forest patches across ownerships

Agency Response:
The Revised Plans focus on strategic management direction and in describing what desired conditions and objectives are expected from the forests. Management direction focusing on specific processes is generally not included in the Revised Plans. The Desired Condition on Cooperative Management (D-CM-1) lists several agencies as key cooperators. We will be cooperating with these agencies with regard to state standards, state-listed species, facility siting, road and trail construction and decommissioning, development of large forest patches, and the management of various other forest resources.

PC# 1.7.2-3
Public Concern: The Chippewa and Superior NFs should participate with the Minnesota Department of Natural Resources (DNR) in old growth research.

Agency Response:
We will continue to work closely with the MN DNR in all aspects of forest management. Most Forest Service Research is conducted by the Research division, which is separate from the Superior and Chippewa National Forests. However, the national forests will continue to play a role in looking at old growth and in working with the MN DNR in this research.

PC# 1.7.2-4
Public Concern: The Chippewa and Superior NF officials should be directed to work with Minnesota DNR staff from all relevant disciplines on a regular basis.

Agency Response:
We agree that close cooperation among the National Forests and the Minnesota DNR is necessary for effective management of both National Forest lands and for State of Minnesota lands. The Revised Plans list the MN DNR as a key cooperator in D-CM-1. As we implement the Revised Plans, we expect to work closely with all disciplines of the MN DNR.

PC# 1.7.2-5
Public Concern: The Plans should include a representative from the forest industries in the cooperative management group.

Agency Response:
We agree. We will change the final plan to include representation of timber industry in the cooperative management list. Timber management is a key tool in achieving the vegetative conditions called for by the Revised Plans. Therefore cooperation with those organizations involved in carrying out these activities is important.

PC# 1.7.2-6
Public Concern: The Chippewa and Superior NFs should continue working with the counties of the Mississippi Headwaters Board joint powers agreement.

Agency Response:
We agree and will continue to work with counties of the Mississippi Headwaters Board.

PC# 1.7.2-7
Public Concern: The Chippewa and Superior NFs should act in partnership with conservation organizations to keep northern Minnesota one of the last great places in the world for sport hunting.

Agency Response:
We agree that the forests of northern Minnesota provide quality opportunities for sport hunting. We desire to strengthen and improve upon the partnership programs we have had in the past, and look forward to partnering with conservation organizations in order to provide high quality sport hunting opportunities for the future.

PC# 1.7.2-9
Public Concern: The Plans should have the Minnesota Forest Resources Council guidelines in their entirety.

Agency Response:
Because of its focus on strategic level management direction, the Revised Plan references, but does not repeat management direction located in other documents. Therefore, the actual contents of the MFRC guidelines, as well as Forest Service manual and handbook direction is not repeated. The MFRC site level guidelines are readily available throughout the Minnesota forestry community and in the planning record.

PC# 1.7.2-10
Public Concern: The Chippewa and Superior NFs should shoulder a burden at least as great as their proportionate ownerships to encourage other land managers to also work toward landscape goals.

Agency Response:
One objective of the Revised Plans is to contribute toward the Desired Future Forest Condition agreed to by the MN Forest Resource Council and their Landscape Group. We believe the Revised Plans take a significant step toward landscape management by integrating the principles and objectives of the MN Forest Resource Council's landscape reports into Plan objectives, desired conditions, and goals. The Revised Plans tie directly with desired future forest conditions, goals, and strategies agreed to by the Council.

PC# 1.1.3-1
Public Concern: The Chippewa NF draft plan direction on cooperative management should be revised to recognize and address the role of private landowners inside the Forest boundary.

Agency Response:
We agree. We will change the final plan to include private landowners in the cooperative management list.

Alternatives

Introduction

We received many comments that supported specific alternatives, requested an alternative be modified, or requested that a new alternative be developed for a myriad of reasons; these comments are summarized in this section. Some comments simply "voted" for an alternative but did not state why, these comments are not listed here but are available in the planning record. Some comments included a detailed rationale for support for or against an alternative, the rationale being focused on one issue or resource. The reader will find the responses to these comments in the resources section of this appendix, for instance in the timber or recreation section.

This is not a voting process. The Regional Forester will assess and consider all the comments on the Draft EIS and proposed Forest Plans when selecting an alternative to implement as the revised Forest Plans.

Development and Range of Alternatives (1.8)

PC# 1.8-1
Public Concern: The Final EIS should have a wider range of alternatives that includes alternatives with more resource management to increase timber volume

AND

PC# 1.9-12
Public Concern: The Chippewa and Superior NFs should develop and analyze a new alternative like Alternative C that would treat more acres because the modeling can be redone.

Agency Response:
The National Environmental Policy Act (NEPA) requires the Forest to analyze a reasonable range of alternatives, and the Regional Forester has determined that the range of alternatives analyzed is adequate. Consistent with NEPA, the range of alternatives is set by the purpose and need identified in the EIS. The Forest Service is not required to look at every possible alternative consistent with the purpose and need. Rather the agency must analyze alternatives which allow the public and the decision maker to assess the environmental costs and benefits of different approaches of addressing the purpose and need. All of the Alternatives respond to public concerns brought up in our public involvement process (see Appendix A of the EIS for a description of the process). Alternative D responds to the desire on the part of some people to emphasize non-motorized recreation and wilderness and to de-emphasize harvesting. Alternatives E, F, and G would take different approaches to managing the Forests. These alternatives vary in the total acres harvested, the proportion of acres harvested with clearcutting, and the amount of conifer cover type in the long run. Compared to Alternatives F and G, Alternative E would have a higher level of development at water access sites, would allow for more new ATV and snowmobile trails. The MA allocations are also different among these three alternatives, with Alternative G having the most special designations, such as research natural areas and special management complexes.

The rationale for not analyzing an alternative with very high timber yield is described in Chapter 2 of the EIS (section 2.2.2). This alternative was eliminated from detailed study because it would emphasize timber

production to such an extent that management for other resources and resource protection would fall below acceptable levels.

The vegetation objectives for each alternative respond to the purpose and need (see Chapter 1 of the EIS) for compositional diversity. One part of the purpose and need for revising the Forest Plans was to address biological diversity at a landscape level and to provide a mix of tree species that would provide for long-term sustainability and healthy forest communities.

Between Draft and Final EIS, the interdisciplinary team reran the vegetation model for Modified Alternative E, using updated data. Modified Alternative E would treat more acres than Alternative E in the Draft EIS. Modeling is one of the tools used in planning to gauge what landscape conditions and outputs would be in the short and long terms.

Further more, the Regional Forester can modify the alternative he selects for implementation in his decision, including modifying harvest volumes. As a result, these comments can be addressed within the existing range of alternatives and it is not necessary to develop an additional alternative.

See also the response to PC# 4.2.1-12 and PC# 4.2.1-13, which address increased harvesting

PC# 1.8-4
Public Concern: The Chippewa and Superior NFs should have done a benchmark analysis before developing alternatives.

Agency Response:
Benchmark analysis are a part of the Analysis of the Management Situation (AMS). The purpose of the AMS is to provide sideboards for formulating a broad range of reasonable alternatives. The benchmark analysis defines the broad range within which alternatives can be constructed. Hence, there is an emphasis on minimum and maximum conditions for national forests, for example: minimum levels of management, maximum timber potential, and so on. Benchmarks do not constitute alternatives, because alternatives are designed to consider integrated management of all resources. The range of alternatives considered in the EIS is set by the purpose and need identified by the agency, consistent with the requirements of the National Environmental Policy Act. This range of alternatives must be within the broader sideboards determined by the benchmark analyses.

The final benchmark runs for the plan revision process were not run until after the range of alternatives was run, however the regulation cited by the commenter does not mandate the benchmark analyses be done prior to the development of the range of alternatives. Especially in the case of a plan revision where the Forest had the benchmark analyses run for the 1986 Plan, and over a decade worth of information from implementing that Plan.

EIS Appendix B explains how the planning team used benchmarks in more detail.

PC# 1.8-5
Public Concern: The Chippewa and Superior NFs should have modified the Notice of Intent to allow for a wider range of alternatives, allowing more harvesting.

Agency Response:
An NOI does not define the decision space, it gives notice to the public and other agencies that the Forest Service is going to prepare an EIS and describes the proposed action and possible alternatives (40 CFR 1508.22.a). It also describes the scoping process through which the actual range of alternatives analyzed in the Draft EIS will be defined. At the time of an NOI, we ask the public and other agencies for their views on the proposed action to

help us develop alternatives and issues. See also the response to PC# s 1.8-1, 1.9-12, 4.2.1-12, and 4.2.1-13 regarding alternatives with higher timber yield.

PC# 1.8-7
Public Concern: The Final EIS should widen the range of alternatives to include an alternative that considers all eligible areas for wilderness designation.

AND

PC# 1.11.4-3
Public Concern: The Chippewa and Superior NFs should modify Alternative D by the adding the 89,000 acres of potential wilderness on the Superior NF that was studied by the Friends of the BWCAW.

Agency Response:
We used the appropriate planning direction to review the entire Superior National Forest for areas that met criteria for potential wilderness. We also followed the planning regulations for considering roadless areas (see Appendix C of the EIS) and identified 32 areas that met the criteria. The Friends of the Boundary Waters used a different process to evaluate the areas for potential wilderness designation (see their publication "Preserving Canoe Country Heritage") and they identified different areas than we did. The Regional Forester reviewed the work done by the Friends and determined that the Superior NF had conducted an appropriate review of potential wilderness areas and that no additional areas or acres should be considered.

Alternative D would designate both of the two inventoried roadless areas on the Chippewa NF and all 30 of the inventoried roadless areas on the Superior NF. The 30 areas studied are all the areas on the Superior NF that meet the criteria for wilderness.

The EIS includes seven alternatives with different approaches to designating wilderness study areas, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for additional wilderness. Therefore, it is not necessary to modify Alternative D to address this interest. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing the approach to wilderness in Alternative D. It is also not necessary to develop an additional alternative to address this interest.

See also the responses to PC# s 4.0.2-19 and 4.0.2-7.

Recommendations for New Alternatives (1.9)

PC# 1.9-1
Public Concern: The Chippewa and Superior NFs should develop a new alternative that would increase local stewardship.

Agency Response:
It is somewhat unclear what the commenter means by 'local stewardship'; however, we assume it means restoring native ecosystems. We believe we have analyzed alternatives that emphasize restoring native ecosystems.

Alternative B would emphasize restoring older, mixed forests and coniferous species. Protecting unique resources is also emphasized more in this alternative than many other alternatives. Alternative D would emphasize restoring conifers, especially white pines. Under Alternative D, vegetation management would transition away from timber production and toward ecological succession and some restoration. Alternative F would manage for a vegetative condition that is within the range of natural variability. In Alternative G, ecological processes would be maintained or restored by using a variety of timber harvest, prescribed fire, and allowing natural processes to operate.

The EIS includes seven alternatives with different approaches to managing ecosystems, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for managing ecosystems. Therefore, it is not necessary to develop an additional alternative to address this interest. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing the approach to managing ecosystems.

"Local stewardship" could also mean local control of resource management on the National Forests. If so, we believe that our planning process involved many people that live or work in and around the National Forests. Also, granting decision making authority to non-Forest Service personnel is not a decision that can be made in forest plan revision.

PC# 1.9-4
Public Concern: The Chippewa and Superior NFs should develop a new alternative that retains much of Alternative D while including some components of E to ensure that it receives fair consideration and is politically feasible to implement.

Agency Response:
It is unclear from the comment which components of Alternatives D and E should be kept. The alternatives were built around a range of themes and components of each alternative were constructed around those themes. Any alternative, including D and E, can be modified by the Regional Forester as deemed appropriate to assemble a final decision and Forest Plans. Each alternative was analyzed the same way in the EIS and the Regional Forester considered all alternatives equally in his decision. See also the response to PC# s 1.8-1 and 1.9-12.

PC# 1.9-5
Public Concern: The Chippewa and Superior NFs should develop and analyze a new alternative that does not recreate historical conditions but places equal balance on all three components of sustainability – economic, social, and ecological.

Agency Response:
Alternative F is the only alternative that would try to achieve range of natural variability (RNV) on National Forest System land. The goal of Forest Plan revision is to balance economic, social, and ecological factors in forest management, and each alternative is a different way of balancing these factors.

The range of natural variation (RNV) is a widely accepted concept that was used to analyze landscape conditions and their ability to maintain long-term ecological sustainability and assure viability of rare plants and animal species. The Chippewa and Superior National Forests recognized that comparing the past to the present provides a basis for understanding the range of landscape conditions needed to sustain ecosystems and species. Understanding the RNV of ecosystem composition, structure, and processes that formerly were common at a variety of landscape scales but are now greatly reduced can help identify what elements of the ecosystem may

need special consideration in management. Appendix G discusses the role that RNV played in the EIS analysis in more detail. It is impossible for us to have an absolutely complete picture of RNV. The interdisciplinary team concluded that some additional information may have added precision to RNV estimates or better specified a relationship; however, the basic data and central relationships are sufficiently well established in science so that additional information was considered unlikely to reverse or nullify understood relationships. Thus, new information would be welcomed and would add precision but is not essential to providing adequate information for the decision maker to make a reasoned choice among the alternatives.

The EIS includes seven alternatives with different approaches to sustainability, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for sustainability. Therefore, it is not necessary to develop an additional alternative to address this interest. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing the approach to sustainability.

See also the response to PC# 1.0.2-3, which addresses balancing preservation and multiple use.

PC# 1.9-6
Public Concern: The Chippewa and Superior NFs should develop and analyze a new alternative that incorporates Alternatives B and D and that is more mindful of resource protection and management, especially clearcutting.

Agency Response:
The EIS includes seven alternatives with different approaches to resource management, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for resource management. Therefore, it is not necessary to develop an additional alternative to address these interests. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing the approach to resource protection and clearcutting.

Resource protection and management is carefully outlined in the standards, guidelines, desired conditions, and objectives in the revised Forest Plans. See also the response to PC# 4.2.2-13 and 4.2.2-9, which address eliminating or reducing clearcutting

PC# 1.9-7
Public Concern: The Chippewa and Superior NFs should develop and analyze a new alternative that incorporates elements of Alternative B and F of restoring forest types, protecting unique areas, and moving toward RNV.

Agency Response:
The US Environmental Protection Agency has recommended changes to Alternative E and proposed Forest Plans. The Forest Service has consulted with the EPA on our process, Final EIS, and revised Forest Plans. The range presented in the alternatives analyzed gives the Regional Forester sufficient information and a variety of options in making his decision. The detailed analysis presented in these alternatives shows the differing impacts of different approaches taken in each of these alternatives. Although the Forest Service is not looking at a “hybrid alternative” as proposed by the EPA, this does not constrain the Regional Forester’s decision. In his decision, many factors will influence the Regional Forester’s decision; among these are the comments of Federal, State and

other agencies, as well as comments from the public. The Regional Forester has the option to mix and match components of different alternatives, including forest restoration and achieving RNV, in the alternative that he selects for implementation. It is not necessary to develop an additional alternative to address this interest. Also see the response to PC# s 2.7.3-3 and 2.7.8-2, which address moving toward RNV.

PC# 4.0.2-5
Public Concern: The Chippewa and Superior NFs should modify Alternative E to propose an area of wilderness between the acreage proposed in Alternative B and Alternative E.

Agency Response:
The amount of wilderness proposed in Alternative G is between Alternatives B and E. Alternative G would recommend one area (2,727 acres) on the Chippewa NF and 4 areas (3,672 acres) on the Superior NF (EIS section 2.4.7). The EIS includes seven alternatives with different approaches to adding wilderness study areas, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for designating wilderness study areas. Therefore, it is not necessary to modify Alternative E to address this interest. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing the approach to adding wilderness study areas.

The Forest Plan revision process can only recommend additions to wilderness. Adding areas to the national wilderness preservation system takes action by Congress.

See also the response to PC# 4.0.2-19.

PC# 1.9-8
Public Concern: The Chippewa and Superior NFs should develop a new alternative that would restore forest health and diversity

Agency Response:
The EIS includes seven alternatives with different approaches to managing forest health and diversity, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for managing forest health and diversity. Therefore, it is not necessary to develop an additional alternative to address these interests. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing the approach to managing forest health and diversity.

See also the responses to PC# s 2.5.3-3, 2.7.1-1, 2.7.1-20, which address managing for diversity; and PC# 2.7.4-5, regarding forest health.

Alternatives General (1.10)

PC# 1.10-1
Public Concern: The Regional Forester should not select an alternative that would restrict harvest and provide for accessibility of resources for all users and uses.

AND

PC# 1.10-19
Public Concern: The Regional Forester should select an alternative that is a compromise between Alternatives C and E in terms of timber jobs and recreation jobs.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing Forest Plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

All alternatives would allow harvesting, except alternative D, which would not allow it in the long term. Alternative E emphasizes a diverse economic base in local communities. Compared to the other alternatives, the Forests would be managed in a way that provides a variety of economic opportunities. This alternative would promote tourism and its associated revenues by emphasizing resources such as recreational opportunities, scenic landscapes, and diverse wildlife habitats. Alternative E would provide a broad range of recreational opportunities. However timber and other commodity products would also be emphasized. One resource would not be emphasized over the other.

See also the responses to PC# s 4.2.1-12, which deals with increased timber harvest; 2.9-1, which addresses increasing the number of roads and trails; and 5.1.0-4, 5.2-3, 5.3-1, and 5.3-4, regarding jobs.

PC# 1.10-6
Public Concern: The Regional Forester should select an alternative that would recommend areas for wilderness designation.

AND

PC# 1.10-8
Public Concern: The Regional Forester should select an alternative that would reduce logging, prohibit clear cutting, provide for old growth forest, return to RNV, and provide for semi-primitive non-motorized recreational opportunities.

AND

PC# 1.10-9
Public Concern: The Regional Forester should select an alternative that addresses the need for change in biodiversity and ecosystem management.

AND

PC# 1.10-11
Public Concern: The Regional Forester should select an alternative that emphasizes forest diversity, not tree farming.

AND

PC# 5.2-10
Public Concern: The Regional Forester should select either Alternative B or G because they would result in fewer impacts on the land and the present net value would be similar among alternatives and outputs in other alternatives are unrealistic.

AND

PC# 2.6.4-2
Public Concern: The Regional Forester should consider selecting Alternatives B, D, or G because they emphasize varied species, replanting, and renewing plant and animal species.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing Forest Plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

The Regional Forester determined the appropriate amount of wilderness study areas for the Chippewa and Superior NFs in his decision (see the responses to PC# 4.0.2-19 and 4.0.2-7). All resource management activities, including logging and clear cutting will be governed by relevant laws and Forest Plan standards and guidelines (see also the response to PC# 4.2.2-13). The Forest Service will provide for the viability of a variety of species (see also the response to PC# 2.6.4-1). It is the intent to provide an appropriate range of recreational opportunities, and non-motorized recreational opportunities were increased in modified Alternative E between Draft and Final EIS (see also the responses for PC# s 4.0.6-38 and 4.0.6-39). The Regional Forester selected an alternative to implement based on net present value as well as many other social and ecological factors.
Also refer to the responses for PC# s 4.2.1-2 and 4.2.1-3, which address reducing timber harvesting; 2.7.5-2, which deals with protecting old growth forest; 2.7.5-3, which addresses moving toward RNV; 1.0.0-1 to -7, which deals with meeting the needs for change; 2.7.1-20 and 2.5.3.-3 on protecting biodiversity; 1.6.2-2, which addresses realistic vs. optimistic funding levels; 2.6.4-72, on re-planting red pine; 3.4.2-11 regarding managing scenic resources.

PC# 1.10-15
Public Concern: The Regional Forester should select an alternative that restricts ATV use and keeps them separate from non-motorized trails and residences.

AND

PC# 1.10-16
Public Concern: The Regional Forester should select an alternative that would provide a better mix of recreation opportunities, water access development (especially large, undeveloped lakes outside the BWCAW), and scenic quality than Alternative E.

Agency Response:

The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing Forest Plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

Under the selected alternative, ATV use would be restricted primarily to roads and trails (also see the response for PC# 3.4.3-1). It is extremely unlikely that potential ATV trails would be located near residences or non-motorized trails. However, if trails are proposed near residences and non-motorized trails, they would be analyzed with public participation and impacts would be mitigated (also see the response for PC# 3.4.1-2).

It is the Forest Service's intent to provide an appropriate range of recreational opportunities. Non-motorized recreational opportunities were increased in modified Alternative E between Draft and Final EIS (also see the response for PC# 3.4.1-5).

In terms of water access development see the response for PC# 3.4.4-6. See the responses for PC# 3.4.2-9 and 3.4.2-11, which deals with scenic resources. See also the response for PC# 3.4.3-3, which deals with prohibiting or restricting ATV use.

Specific Alternatives (1.11)

Alternative A (1.11.1)

PC# 1.11.1-1
Public Concern: The Regional Forester should select Alternative A.

-To emphasize game and non-game species.
-To emphasize motorized recreation.
-To allow more private use of the National Forests.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing Forest Plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

One part of the purpose and need for revising the Forest Plans is to ensure the viability of a variety of species and to provide economic opportunities for northern Minnesota (see also the response to PC# 2.6.7-55). The Regional

Forester determined the appropriate range of recreational opportunities in his decision (see also the response to PC# 3.4.3-1). The Forests will be open to recreational uses that are consistent with relevant laws, regulations, and Forest Plan standards and guidelines. The theme of Alternative E, the alternative on which the proposed Forest Plans, were based, is to provide for a diverse economic base in local communities. The Regional Forester considered these and other concerns in making a decision.

PC# 1.11.1-2
Public Concern: The Chippewa and Superior NFs should seriously consider Alternative A, the no-action alternative.

Agency Response:
In every part of the EIS and planning process, Alternative A was treated the same as the action alternatives. The Regional Forester's rationale for selecting or not selected an alternative is discussed in the Record of Decision.

PC# 4.0-9
Public Concern: The Chippewa and Superior National Forests need to indicate how Alternative A addresses Goal 6 and 7 areas.

Agency Response: In the EIS Table 2-1 ("Distribution of Management Areas in Alternative A"), Goal 7 (Management Area 7.1 in the 1986 Plan) is represented by the acreage of the Recreation Use in a Scenic Landscape MA and Goal 6 (Management Area 6.1 in the 1986 Plan) is represented by the acreage of Semi-primitive Motorized Recreation MA.

Alternative B (1.11.2)

PC# 1.11.2-1
Public Concern: The Regional Forester should select Alternative B

-To have minimal human impact and enhance longer rotations.
-To emphasize non-commodity resources.
-For a sustainable environment.
-To focus on older forest and would be a better balance among timber, recreation, and wildlife.
-To expand of the Boundary Waters Canoe Area Wilderness.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing Forest Plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative. In making a decision, the Regional Forester considered the trade offs among different interests, including timber, recreation, and wildlife.

Alternative D would have much less management than Alternative B. Alternatives E, F, and G would also increase the amount of longer rotations used (see also the response to PC# 4.1-52).

The Regional Forester considered non-commodity resources in selecting an alternative to implement and looked at many other resources and values (see also the response to PC# s 5.1.0-4 and 5.2-3).

The Forest Service will provide for the viability of a range of species and recreational and economic uses of the Forests will be governed by law, regulations, and Forest Plan standards and guidelines.

The Regional Forester determined the appropriate amount of wilderness study areas in his decision (see also the response to PC# s 4.0.2-19 and 4.0.2-7).

Also refer to PC# s 2.7.1-1 and 2.7.1-18, which address older forest.

Alternative C (1.11.3)

PC# 1.11.3-1
Public Concern: The Regional Forester should select Alternative C

> **-Because it is based on science.**
> **-Because it is the best balance among social, economic, and environmental concerns.**
> **-To be consistent with the Governor's Task Force**
> **-Because it would preserve both the area's economic growth and beauty at the same time.**
> **-To provide additional recreational opportunities, roads, trails, and RMV use.**

Agency Response: The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing Forest Plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

All the alternatives analyzed in detail are based on information available and the Regional Forester determined that enough data were available to do an adequate analysis.

In his decision, the Regional Forester considered the trade offs among alternatives and weighed social, economic, and social concerns.

The theme of Alternative E is to provide a diverse economic base in local communities.

The planning process has involved other agencies and elected officials, including the Governor's office. The Regional Forester considered the Governor's Task Force Recommendations along with many other documents (see also the response to PC# 4.1-14).

The Regional Forester considered economic as well as scenic resource issues in selecting an alternative to implement (see also the responses to PC# s 1.0.1-33, 1.0.1-14, 3.4.2-11, and 3.4.2-9).

The Forest Service's intent is to provide an adequate range of recreational opportunities, and the Regional Forester determined the appropriate range of recreational opportunities, including RMV use, in his decision (see also the responses to PC# s 2.9-1 and 3.4.3-1).

Alternative D (1.11.4)

PC# 1.11.4-1
Public Concern: The Regional Forester should select Alternative D.

> **-To designate all potential Research Natural Areas.**
> **-To propose all of the inventoried areas for wilderness designation.**
> **-To ensure that future generations can enjoy the Forests.**
> **-Because it would result in the highest net public benefit.**
> **-Because the Forests lack sufficient resources to oversee and monitor the higher levels of activity associated with Alternative E.**

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing Forest Plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

The Regional Forester determined the appropriate amount of potential RNAs and wilderness study areas in his decision (see also the responses to PC# s 4.0.4-1 and 4.0.4-3). He considered the range of recreational opportunities available, the ability of the BWCAW to meet demand, as well as needs and desires of future generations (see also the responses to PC# s 4.0.2-19, 4.0.2-7, 5.1.2-1, and 5.1.0-4). He also took into account ecosystem sustainability and the appropriate role of commercial timber harvesting on the two National Forests (also see the response to PC# 4.2.1-2 and 4.2.1-3).

The Regional Forester considered many factors in deciding which alternative would result in the highest net public benefit. In doing so, he looked at the potential impact of recreational uses and harvesting on the environment and on social sustainability and the economy.

See also the responses to PC# 1.6.2-3 and 6.0-8, which deal with funding activities and monitoring.

Alternative E (1.11.5)

PC# 1.11.5-4
Public Concern: The Final EIS should explain why and how Alternative E was selected as the preferred alternative.

Agency Response:
The rationale for why a particular alternative is chosen is not something that is a part of an environmental impact statement (EIS). An EIS is not a decision document, it discloses the effects of alternative courses of action. At the "Draft" stage, a "preferred alternative" may be identified to facilitate public comment and review. Following public comment and review, the information in the EIS is updated and a decision is made as to which alternative to select. The rationale for choosing the selected alternative is then documented in the Record of Decision.

PC# 1.11.5-1
Public Concern: The Regional Forester should select Alternative E.

-Because it could enhance fishing opportunities.
-Because it would provide important income from timber harvest.
-Because it would allow for adequate timber harvest.
-Because it would use controlled burning.
-To focus on recreational opportunities, scenic landscapes, and wildlife habitat.
-Because it represents the most appropriate management for multiple uses.
-Because it would allow cross-country ATV use and provide a local riparian emphasis.
-Because it would move the Forests toward RNV.

Agency Response:
Thank you for your support of Alternative E. The EIS analyzed a wide variety of alternatives with different outcomes and with varying Management Area allocations, addressing Forest Plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The Regional Forester looked at all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The ROD also discusses how the issues are addressed by the Alternatives, including the Selected Alternative.

PC# 1.11.5-3
Public Concern: The Regional Forester should not select Alternative E.

-Because it caters to corporate interests.
-Because the Chippewa and Superior NFs will not have the funds to implement it and it is not cost effective.
-Because it does not support timber industries.
-Because it has similar overall economic impact but less environmental protection than other alternatives.
-Because it would not protect non-motorized recreation.
-Because it would allow clearcutting, increase in logging, and additional road construction.

-Because it would not protect clean water or wildlife, especially threatened and endangered species
-Because it would not restore 'old tree' character and benefit tourism.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing Forest Plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

See also the response to PC# 1.6.2-3, regarding funding forest management activities.

The public involvement process included a wide variety of people from the public, interested organizations, other agencies, and elected officials (see also the response to PC# 1.1-3). People from 35 states across the country and from the District of Columbia commented on the Draft EIS and proposed Forest Plans. The Regional Forester considered the interests of all these people, and more, in his decision.

The Regional Forester determined the appropriate balance of wood production, wildlife habitat, and recreational opportunities in his decision.

Economic impacts of the alternatives were also considered along with many other concerns and issues in the final decision (see also the response to PC# 1.0.1-33 and 5.3-1).

Motorized and non-motorized recreation will be managed according to relevant laws, regulations, and Forest Plan standards and guidelines (see also the response to PC# s 3.3-4, 3.3-5, 3.3-6, and 3.4.1-4).

Part of the purpose and need for Forest Plan revision is to emphasize both even-aged and unevenaged timber management. Alternative E would decrease clearcutting from current levels, especially on the Chippewa NF. New roads will be built in compliance with relevant regulations and Forest Plan standards and guidelines. See also the responses to PC# s 4.2.2-13, 4.2.2-9, 4.2.1-2, 4.2.1-3, and 2.9-1)

The Chippewa and Superior NFs will be managed to provide for an array of wildlife species and to protect water quality. Also refer to the responses to PC# 2.6.5-1, 2.6.5-5.

Scenic resources would be protected by Forest Plan standards and guidelines (see also the responses to PC# 3.4.2-9 and 3.4.2-11). In some management areas, management would emphasize old-tree character. The revised Forest Plans also have the following desired condition "Vegetation management visible from travel ways and public use areas in moderate and high SIO areas should … enhance big-tree appearance" (D-SC-2, Chippewa and Superior Forest Plans).

PC# 1.11.5-8
Public Concern: The Chippewa and Superior NFs should modify the MA allocations in Alternative E to increase the General Forest MA and reduce the Riparian Emphasis and Longer Rotation Management Areas in the northeast corner of the Chippewa NF to prevent negative impact to local economies.
Agency Response:

The EIS includes seven alternatives with different management area allocations, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for management area allocation. Therefore, it is not necessary to modify Alternative E to address this interest. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing the management area allocations.

Overall, the General Forest – Longer Rotation Management Area decreased on the Chippewa NF and the Riparian Area Management Area also decreased. Vegetation objectives were developed by landscape ecosystem; and management areas are applied across the Forests where they best meet social demands and vegetation objectives. The Regional Forester considered the needs and desires of many people in deciding which management areas are appropriate for the northeast corner of the Chippewa NF, including the demand for timber and for recreational opportunities.

PC# 1.11.5-56
Public Concern: The Chippewa NF should modify Alternative E to include the Unique Biological, Aquatic, Geological, or Historical MAs of Alternative F to protect unique biological-historical resources

Agency Response:
Between Draft and Final EIS, allocations in Alternative E to the Unique Biological, Aquatic, Geological, or Historical Management Area were increased on both the Chippewa NF by approximately 10,000 acres and by about 2,000 acres on the Superior NFs.

PC# 1.11.5-9
Public Concern: The Chippewa and Superior NFs should modify Alternative E by proposing the Big Fork River for Wild and Scenic designation.

Agency Response:
The reason for not proposing the Big Fork River for Wild and Scenic designation are described in Chapter 1 of the EIS (section 1.6). In 1988, the Chippewa and Superior Forest Plans were amended to list rivers meeting eligibility criteria in the Wild and Scenic Rivers Act. On the Chippewa NF, the Big Fork River was listed as eligible. Management direction was also added to protect the eligibility of the listed rivers. Studies to determine suitability (whether eligible rivers should actually be recommended for inclusion in the Wild, Scenic and Recreational River System) involve a detailed and expensive process. As a result, Forest Plan revision will not be making a suitability determination but will continue to protect the eligibility of the listed rivers. Over the past several years, local groups have formed river management organizations as a means of planning for river corridor management. The Forest Service has participated in these organizations. The Big Fork River Management Plan is an example of a successful effort at a local level, with the State's and National Forests' participation. The Chippewa NF will continue to participate as active partners in these efforts.

PC# 1.11.5-16
Public Concern: The Chippewa and Superior NFs should modify Alternative E to emphasize income from recreation over income from timber.

Agency Response:
The EIS includes seven alternatives with different economic emphases, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for economic emphasis. Therefore, it is not necessary to modify Alternative E to address this interest. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing the economic emphasis.

The theme of Alternative E is to provide a diverse economic base in local communities. The Regional Forester determined the appropriate emphases for timber and recreation in his decision. See also the response to PC# 5.3-4 and 5.2-3.

PC# 1.11.5-18
Public Concern: The Chippewa and Superior NFs should modify Alternative E by adding more wilderness study areas.

-To benefit future generations
-To boost the region's economy for tourism
-Because economies should be the driving force behind the Plans

Agency Response:
The EIS includes seven alternatives with different approaches to adding wilderness study areas, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for adding wilderness study areas. Therefore, it is not necessary to modify Alternative E to address these interests. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing the amount of wilderness study areas are added.

The Regional Forester determined the appropriate amount of wilderness study areas as well as the appropriate emphasis that will be put on economic development and recreation in his decision. Also refer to the responses to PC# s 4.0.2-19, 4.0.2-7, 5.1.0-4, and 5.3-4.

PC# 1.11.5-35
Public Concern: The Chippewa and Superior NFs should modify Alternative E to emphasize non-market values.

Agency Response:
The EIS includes seven alternatives with a different emphasis on non-market values, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for emphasizing non-market values. Therefore, it is not necessary to modify Alternative E to address this interest. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing the emphasis on non-market values.

Alternative E would emphasize a diverse economic base in local communities; however, management would also focus on other issues. There would be a focus on protecting, enhancing, and restoring riparian areas and

watersheds. Alternative E would also manage for a fully array of wildlife habitats on the landscape. Outdoor recreation would be a high priority for management. Along heavily-used recreation areas and travel corridors, such as major roads, trails, and lakes, there would be a high emphasis on scenic integrity in forest management decisions. In travel ways and other areas that get less use, such as secondary roads, there would be a moderate emphasis on scenic integrity in forest management decisions.

The Regional Forester considered non-market values in his decision along with many other concerns.
See also the responses for PC# 5.2-3, 3.4.2-9, and 3.4.2-11.

Alternative F (1.11.6)

PC# 1.11.6-1
Public Concern: The Regional Forester should select Alternative F.

> **-Because it emphasizes the range of natural variation and would be more sustainable than other alternatives.**
> **-Because economic effects would be minimal compared to Alternatives A, C, and E and still move toward RNV**
> **-To provide more jobs and labor income than Alternative E.**
> **-Because it would offer the best protection to wildlife.**
> **-Because it would provide for wildlife and economic benefits.**
> **-Because it would prohibit cross-country AVT travel.**
> **-Because it would result in similar vegetation changes than E as well as resulting in more older forest, more long-lived species in riparian zones, and more sawtimber.**

Agency Response: The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing Forest Plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

The Regional Forester considered the EIS analysis that used RNV as well as public comments on RNV when selecting an alternative to implement. See also the responses to PC# s 1.0.0-7 and 2.7.5-3.

The Regional Forester also took into account the trade offs of ecological and economic benefits in his decision. See also the responses to PC# s 1.0.1-33, 5.3-1, and 5.3-4.

The Forest Service will manage the two National Forests in a way that will provide for an array of wildlife species and will protect threatened, endangered, and sensitive species. Also refer to the responses for PC# s 2.6.4-1, 2.6.5-1, and 2.6.5-5.

The Forest Service will manage the Chippewa and Superior NFs in a sustainable way. The Regional Forester determined the appropriate amount of prescribed fire for fuel reduction and the appropriate amount of clearcutting in his decision.

The Regional Forester determined the policy for ATV cross-country use in his decision. In doing so, he considered the enforcement required to implement the policy. Also see the response to PC# 3.4.3-35.

In his decision, the Regional Forester determined how much older forest, long-lived species in riparian zones, and sawtimber sold on the two NFs. In doing so, he looked at the trade offs of providing these benefits. See also the responses to PC# s 2.7.1-1, 2.7.1-18, 2.4.7-17, and 4.1-34.

PC# 1.11.6-2
Public Concern: The Chippewa and Superior NFs should modify Alternative F to designate Experimental Forest, designate potential RNAs, recommend new wilderness areas, offer a mixture of non-motorized recreational opportunities and then select Alternative F because vegetation management would be more sustainable than the other alternatives

Agency Response: The EIS includes seven alternatives with different special designations, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for special designations. Therefore, it is not necessary to modify Alternative F to address these interests. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing the special designations.

The Regional Forester determined the appropriate amount of experimental forest, potential RNAs and wilderness study areas in his decision (see also the responses to PC# s 4.0.6-52, 4.0.4-1, 4.0.4-3, 4.0.2-19, and 4.0.2-7).

Motorized and non-motorized recreation will be managed according to relevant laws, regulations, and Forest Plan standards and guidelines (see also the response to PC# s 3.3-4, 3.3-5, 3.3-6, and 3.4.1-4).

PC# 1.11.6-3
Public Concern: The Chippewa and Superior NFs should modify Alternative F to increasing the sawtimber:pulpwood ratio to mitigate the slightly lower harvest level compared to Alternative E

Agency Response: The EIS includes seven alternatives with different approaches to producing sawtimber and pulpwood, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for sawtimber and pulpwood. Therefore, it is not necessary to modify Alternative F to address these interests. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing the sawtimber to pulpwood ratio.

Also refer to the response for PC# 4.1-34.

Alternative G (1.11.7)

PC# 1.11.7-1
Public Concern: The Regional Forester should select Alternative G.

-Because it proposes additional wilderness areas and Research Natural Areas.

-Because it would provide the best balance among all interests.
-Because it would limit the miles of new ATV trails to 60.
-Because it would have slightly less emphasis on timber harvest while still allowing a lot of harvest.
-To provide for old growth forest and reduce clear cutting while minimally impacting timber jobs.
-To emphasize semi-primitive recreation.
-Because this alternative uses longer rotation lengths.
-Because this alternative transitions the Forests from pulpwood to sawtimber management.
-Because the alternative moves the Forests towards the pine forest of 30+ years ago.

Agency Response: The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing Forest Plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

In his decision, the Regional Forester determined the appropriate amount of wilderness study areas for the Chippewa and Superior NFs (see the responses to PC# 4.0.2-19 and 4.0.2-7).

The Regional Forester also determined the appropriate amount of potential RNAs in his decision (see also the responses to PC# s 4.0.4-1 and 4.0.4-3).

See also the responses for PC# s 2.9-2 and 3.4.3-3, which deal with prohibiting or restricting ATV use.

Also refer to PC# s 2.7.1-1 and 2.7.1-18, which address older forest.

Part of the purpose and need for Forest Plan revision is to emphasize both even-aged and uneven aged timber management. Also refer to the response to PC# 4.2.2-9.

It is the intent to provide an appropriate range of recreational opportunities, and non-motorized recreational opportunities were increased in modified Alternative E between Draft and Final EIS (see also the responses for PC# s 4.0.6-38 and 4.0.6-39).

Alternatives E and F would also increase the amount of longer rotations used (see also the response to PC# 4.1-52).

The Regional Forester determined how much sawtimber sold on the two NFs. In doing so, he will look at the trade offs of providing sawtimber. See also the response to PC# 4.1-34.

The Regional Forester determined the vegetation objectives for pine forest types and age classes in his decision. He considered social, economic, as well as ecological issues in his decision. See also the responses to PC# s 2.6.7-26, 2.6.4-78, 2.7.1-1, and 2.7.1-18.

Law and Policy (2.0)

PC# 2.0-2
Public Concern: The Forest Service should seek, comply with, and enforce laws and regulations that promote natural and environmental values.

Agency Response:
The Forest Service must comply with and enforce all applicable laws and regulations. Advocacy is not a role of the Forest Service and promoting or advocating for passage of certain laws over others is not within the purvue of the agency.

PC# 2.0-3
Public Concern: The Forest Service should be less accommodating to lawsuits filed on decisions that are the product of environmental analyses.

Agency Response:
The Forest Service does not have the ability to control litigation of decisions based upon environmental analyses. Access to the federal court system for review of decisions is provided by law.

PC# 2.0-4
Public Concern: The Chippewa and Superior NFs should halt all timber harvest, road construction and road reconstruction until the revised Plans are finalized, because failure to do so violates NEPA regulations.

Agency Response:
We disagree. During the time of the Plan Revision, the legal management direction for both Forests was the 1986 Forest Plans. They remained in effect until the Record of Decision was signed for the Revised Forest Plans. We took care in planning projects to implement to maintain options that might be considered in the alternatives for the Revised Plans. The implementation of valid, existing Forest Plans is consistent with the language in the National Environmental Policy Act.

PC# 2.0-5
Public Concern: The Plans and Final EIS should reflect full compliance with all applicable federal laws, regulations and policies, particularly those addressing species viability.

Agency Response:
We believe the Final EIS and Revised Plans do so. The Records of Decision document the finding of consistency with applicable federal laws.

PC# 2.0-6
Public Concern: The Regional Forester should select Alternative C to provide economic activity in local communities and complying with federal law

Agency Response: The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant

laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

PC# 2.0-7
Public Concern: The Regional Forester should not select Alternative E.

-Because it is contrary to the National Forest Management Act
-Because it is contrary to the Organic Administration Act and Multiple Use Sustained Yield Act.
-Because it is contrary to the Boundary Waters Canoe Area Wilderness Act.

Agency Response: We disagree. The selected alternative (Modified Alternative E) is consistent with each of the above mentioned laws. The Records of Decision speak specifically to how the Revised Plan is consistent with these laws. The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

PC# 5.5-2
Public Concern: The Regional Forester should select an alternative that meets regulatory requirements to maximize net public benefits..

Agency Response:
We agree. The Record of Decision outlines the rationale for selection of the Revised Plan and why this choice maximizes the net public benefit.

Tribal Concerns

Tribal Rights and Interests – General (2.1)

PC# 2.1-1
Public Concern: The Chippewa final Forest Plan should identify areas of concern and heavily used areas to the Leech Lake Band of Ojibwe and manage these areas to fulfill treaty responsibility.

Agency Response:

Thank you for providing comments regarding inclusion of the map titled, "Leech Lake Band of Ojibwe Areas of High Interest", into the Forest Plan. This map indicates areas that are important to and heavily utilized by tribal members and is now officially part of the Final Forest Plan, please see CNF Forest Plan Chapter 2. This map was developed in consultation with the LLBO, individual Tribal members, USDA FS North Central Research, and the Chippewa National Forest. This will be an important map for site-specific projects to utilize with tribal members during project development, and will assist us with consultation of tribal concerns or desires in these areas.

To ensure the rights of sovereign Tribal governments are fully respected, the President has directed agencies to operate within a government-to-government relationship; to consult with Tribal governments prior to taking actions affecting resources in which Tribal governments may have an interest; to assess the impact of plans, projects, and programs to assure that Tribal governments' rights and interests are considered; and, to remove any procedural impediments to working directly and effectively with Tribal governments.

General trust responsibility obligations are in large part met by National Forests through compliance with laws and regulations relevant to federal land management. Examples of such laws include the National Forest Management Act, the National Environmental Policy Act, the Endangered species Act, the Clean Water Act, and the National Heritage Preservation Act. All of these laws are intended to protect important natural and cultural resources upon which the nation and all of its citizens depend.

Treaty and trust responsibilities will be fulfilled as the Forest Plan is implemented under existing treaties, laws, regulations by coordination of management activities with the appropriate local, State, or tribal governments, as well as with other federal agencies, organizations, groups, and individuals.

Additional standards and guidelines to direct management of tribal areas of concern are not specified since existing standards and guidelines provide adequate direction for managing these areas. In addition, consultation prior to project development should identify new issues and concerns in specific areas.

For additional information/discussion on Tribal rights and Interests, please see Chapter 3.1, Final EIS.

PC# 2.1-2
Public Concern: The Forest Service (Chippewa NF) should include a liaison from the Leech Lake Band of Ojibwe in all project planning work.

Agency Response:
The Forest Plan is a strategic forest management document that guides all natural resource management activity and establishes management standards and guidelines for a National Forest, embodying the provisions of the National Forest Management Act of 1976. Defining an organizational structure is not within the purview of the Final Plan. However, the forest wide goals, desired conditions and objectives, standards and guides all emphasize an active and effective site-specific project consultation with the Band and NF representatives.

PC# 2.1-3
Public Concern: The Final EIS and Chippewa Forest Plan should include explicit direction on tribal issues of interest and detail the implementation of the memorandum of understanding between the Chippewa NF and the Leech Lake Band of Ojibwe.

Agency Response:
The Forest Plan is a strategic forest management document that guides all natural resource management activity and establishes management standards and guidelines for a National Forest, embodying the provisions of the National Forest Management Act of 1976. It reflects treaties, laws, regulations, and executive orders within the

selected alternative management direction. Please see PC 2.1-1 response that discusses trust and treaty responsibilities. The Final Forest Plan also incorporates National Forest trust and treaty responsibilities while providing for strategic natural resource management direction for ecosystem viability and to provide for economic and social sustainability. Monitoring the success of the Final Forest Plan implementation results are also outlined in Chapter 4 of the Final Forest Plan.

A Memorandum of Understanding (MOU) is a written plan between the Forest Service and other parties for carrying out their separate activities in a coordinated and mutually beneficial manner and for documenting a framework for cooperation. The Leech Lake Band of Ojibwe and the Chippewa National Forest have a MOU dated August 9, 1993.

The MOU speaks to cooperation and forming management partnerships between the Forest and Band. The Forest Plan directs implementation of this MOU by providing goals, objectives, standards and guidelines on consultation and interaction between the Forest and the Band. (also see Section X)

Desired conditions, goals, objectives, standards and guidelines contained with the Final Forest Plan further emphasize the working relationship foundation that the MOU describes. The actual consultation and coordination are done during the design and implementation of a site-specific project, so that flexibility and adaptations can be incorporated to best meet the scope of the issues.

PC# 2.1-4
Public Concern: The Final EIS should track recommendations of the Leech Lake Band of Ojibwe through the Final EIS analysis.

Agency Response:
The development of the draft Forest Plans and EIS has been a deliberative process that included many working meetings, public involvement meetings, and reiterations of document content. The Forest Service worked closely with four Bands throughout the development of the draft Forest Plan and EIS and incorporated many of the recommendations into the forest desired conditions, goals, objectives, standards, guidelines, and management areas delineations. Documents and meeting notes related to recommendations made by the Leech Lake Band of Ojibwe and how they may have been incorporated into the development of alternatives are available in the planning record and open for review.

PC# 2.1-5
Public Concern: The Final EIS should re-evaluate the effects on the Tribes associated with the Superior NF in terms of the 1854 Authority.

Agency Response:
A Memorandum of Understanding (MOU) is the instrument used for a written plan between the Forest Service and other parties for carrying out their separate activities in a coordinated and mutually beneficial manner and for documenting a framework for cooperation. There is a Memorandum of Understanding that is very close to completion involving Bois Forte, Fond du Lac, and Grand Portage bands and the Superior National Forest. This MOU establishes criteria for interested and affected parties to meet regularly for consultation as a variety of site-specific activities and programs are proposed.

The Final EIS discusses species of interest to bands and the exercise of traditional rights, as applied to each alternative. The Forest Plans also include desired conditions, objectives, goals, standards and guidelines to apply to NF management over the next ten to 15 years related to the obligations of the Forest Service to treaty and trust responsibilities.

Treaty and trust responsibilities will be fulfilled as the Final Forest Plans are implemented under existing treaties, laws, regulations by coordination of management activities with the appropriate local, State, and tribal governments, as well as with other federal agencies.

For additional information/discussion/maps on Tribal rights and Interests, please see Chapter 3.1, Final EIS.

PC# 2.1-6
Public Concern: The Final EIS should state that the Chippewa NF is a part of the Leech Lake Indian Reservation.

Agency Response:
We have added wording to the executive summary, EIS (Chapter 3.1) and, Forest Plan (Chapter 1) that provides additional historical information and highlights the overlap between the Leech Lake Indian Reservation and the Chippewa National Forest. The Executive Summary also emphasizes our trust responsibility.

PC# 2.1-7
Public Concern: The Final EIS should include the Leech Lake Band of Ojibwe's sensitive species list for project analysis direction.

Agency Response:
The US Fish and Wildlife Service, the State of Minnesota and the Leech Lake Band of Ojibwe have responsibilities for specific wildlife species management. Except for federally listed species and migratory birds, the State of Minnesota solely, and also in co-management of some species with the LLBO, have responsibility on National Forest lands for species populations, while the National Forests have responsibility for habitat management on forest system lands. Management Indicator Habitats (MIH) and Management Indicator Species (MIS) have been identified as the tool to analyze alternative forest management and it's subsequent effect on associated species within the Final EIS.

Appendix B of the Final Plan describes sensitive Federal, State and Tribal species in terms of MIH and the analysis of the effects of modified Alternative E. Appendix D (FEIS) shows the listed tribal sensitive species andlinks them to their other status categories and to the management indicator habitats.

PC# 2.1-8
Public Concern: The final Superior NF Plan should support the continued exercise of treaty rights under the 1854 Treaty.

Agency Response:
Strategic expectations, and specific objectives for consultation between Tribal governments and the Forest Service are outlined in the EIS within Chapter 3 and in the Forest Plan, Chapter 2 to insure integration of tribal interests and concerns into the decision-making process. Chapter 3 of the Final EIS recognizes that band members use and rely upon a wide array of plant and animal resources in treaty areas. " Both National Forests have a role of maintaining ecosystem health… so as to have the overall effect of allowing for continued resource use through Ojibwe hunting, fishing, and gathering activities as reserved by treaty". (Chapter 3, Final EIS).

PC# 2.1-9
Public Concern: The Final EIS/Plans should define treaty rights and trust responsibilities to the Leech Lake Band of Ojibwe.

Agency Response:

The citation referencing the Forest Service Manual (FSM) actually refers to the 1997 publication "Forest Service National Resource Book on American Indian and Alaska Native Relations". This important publication is intended as an internal resource guide and has been utilized during the substantial consultation completed with LLBO throughout the plan revision process. We have included a map of the ceded territories into the Final EIS (3.1, Fig. INT-12), as suggested by the Leech Lake Band of Ojibwe.

Tribal rights and interests are referenced in several parts of the Forest Plan and Final EIS. The most detailed information is provided in Chapter 3.1 of the Final EIS and Chapter 2 within the Final Forest Plan. These chapters include discussion of the desired conditions, goals, objectives, standards and guidelines in terms of consultation with Tribes, and general treaty information. The Final EIS, for example, recognizes that band members use and rely upon a wide array of plant and animal resources in treaty areas. " Both National Forests have a role of maintaining ecosystem health… so as to have the overall effect of allowing for continued resource use through Ojibwe hunting, fishing, and gathering activities as reserved by treaty"(Chapter 3, FEIS). These sections state the Forest Service's obligation to honor treaties.

General trust responsibilities are in large part met by National Forests through compliance with laws and regulations relevant to federal land management. Examples of such laws include the National Forest Management Act, National Environmental Policy Act, Endangered Species Act, and Clean Water Act, and the National Heritage Preservation Act. All of these laws are intended to protect important natural and cultural resources upon which the nation and all of its citizens depend. Many of these laws and regulations include specific provisions for consulting with native Indian Tribes.

The treaties are not specific regarding the nature and extent of hunting, fishing and gathering rights. The courts have established that those rights can be exercised without regulation by State government, but also recognize that those rights are not unlimited. There is no direction established as to how those rights are maintained in the context of National Forest management within the 1855 treaty area. Details regarding maintenance of treaty rights can be established through ongoing discussions with LLBO and project specific consultations. We look forward to continuing our work with LLBO during implementation of the new Forest Plan to ensure good hunting, fishing, and gathering opportunities for tribal members.

PC# 2.1-10
Public Concern: The Final EIS/Plans maps should include the Leech Lake Indian Reservation boundary.

Agency Response:
Thank you for the suggestion to improve the map legend and clearly display reservation boundaries, the Leech Lake Indian Reservation boundary has been included within Figure INT-1 and 3.

PC# 2.1-11
Public Concern: The Final EIS should include narrative describing the creation of the Chippewa NF.

Agency Response:
In response to your comment regarding the formation of the CNF, we have included additional historical information to the FEIS, Chapter 3.

PC# 2.1-12
Public Concern: The Final EIS, (economic section), should discuss the economies of tribal communities, prior to European settlement.

Agency Response:
In response to your comment the narrative in the EIS, Chapter 3 has been changed to include additional information on the CNF economic history.

PC# 2.1-13
Public Concern: The Final EIS/Plan should highlight Tribal rights and interests.

Agency Response:
As a result of your comments, references to tribal rights and interests have been included in several parts of the Final Plan and EIS. The principal narrative, however, remains in Chapter 3 of the FEIS.

PC# 2.1-14
Public Concern: The Final EIS/Plan should redefine "sovereign status" to match FS manual and Federal statutes.

Agency Response:
As a result of your comment we have changed the wording of the DEIS you cited and have included a definition of sovereignty in the EIS and Forest Plan glossaries: The inherent governmental power from which all specific political powers are derived. Indian governmental powers, with some exceptions, are not powers granted by Congress, but are inherent powers of a limited sovereignty that have never been extinguished. Congress has the authority to limit or abolish tribal powers. However, without congressional action, a tribe retains the inherent right to self-government and no state may impose its laws on a reservation. (Forest Service National Resource Book on American Indian and Alaska Native Relations) This guiding document is considered an appropriate source for a definition.

PC# 2.1-15
Public Concern: The Final EIS should re-define traditional resources gathering in the social section.

Agency Response:
Each issue discussed within the Final EIS has one or more indicators that measure existing conditions and potential effects of management activities. These indicators are used to analyze the differences between Alternatives within the Final EIS. The CNF recognizes that traditional resources are not used solely for recreation. The indicators cited at 3.9.2 in the Final EIS state that traditional cultural areas are "crucial to Ojibwe tribal culture" and a related to "cultural, spiritual and traditional practices". Additional information specific to the tribal interest in traditional resources has been added to the Final EIS, Chapter 3.

PC# 2.1-17
Public Concern: The Forest Service should develop another alternative that recognizes trust responsibilities, including sustainable harvest expectations.

Agency Response:
The Chippewa and Superior NF recognize that the federal government has the responsibility to maintain rights retained by treaty. The Forests are committed to the continuation of hunting, fishing, and gathering rights by tribal members on NF lands. What is in question, however, is exactly how that is to be implemented regarding a

specific resource or activity. Short of specific directions from the executive, legislative, or judicial branches, the forests attempt to honor treaty rights through consultation with the bands. The primary purpose of the desired conditions, objectives, standards and guidelines covering tribal interests (Forest Plan, Chapter 2) is to ensure that this will take place. Note, for example, Standard S TR-3 "Forest management activities will be conducted in a manner to minimize impacts to the ability of Tribal members to hunt, fish, and gather plants and animals on Forest Service administered lands".

The Forest Service must manage National Forest lands for the people of the United States, following the applicable laws, treaties, regulations, executive orders, and Forest Service manual. We believe Modified Alternative E provides the best combination of resource management opportunities to meet the social, economic and natural resource desired conditions of the local, regional, tribal and national expectations. We look forward to continuing our work with LLBO during implementation of the new Forest Plan to ensure good hunting, fishing, and gathering opportunities for tribal members.

PC# 2.1-18
Public Concern: The Forest Plan should list applicable treaties, executive orders, etc. to the Chippewa NF and Leech Lake Band of Ojibwe.

Agency Response:
References to relevant 19th century treaties with the Ojibwe are present in several sections of the Forest Plan and FEIS, [see especially Final EIS, Chapter 3 and the Final Forest Plan, Chapter 1.] Although the Forest Plan Revision documents do not systematically discuss legal authorities in hierarchical order, there is no implication that treaties are viewed as having any less importance than as stated in the United States Constitution wherein they are referred to as the "supreme law of the land".

PC# 2.1-19
Public Concern: The Forest Service should encourage a reduction in coal burning energy production.

Agency Response:
Encouraging power generating companies to reduce their coal burning is outside the scope of the Chippewa and Superior National Forests Plan revision.

PC# 2.1-20
Public Concern: The Forest Service should consult with first peoples to better represent first peoples' eras within the Final EIS.

AND

PC# 2.1-21
Public Concern: The Final Plan should require consultation with Tribes.

-To consult with Tribes prior to developing interpretive programs about and involving heritage sites.
-To consult as early in the planning process for specific projects as possible.
-To consult with other Tribes historically associated with this area.

AND

PC# 2.1-22
Public Concern: The Chippewa and Superior NF should consult bands when activities may impact heritage resources or traditional cultural practices and avoid or limit impacts to these resources to preserve heritage resources.

Agency Response:
Thank you for the suggestions for including a possible interested Tribe regarding management of Minnesota's National Forests. With this knowledge, more inclusive consultation can occur.

Numerous laws, executive orders, and regulations govern the relationship and collaboration between American Indian tribes and the federal government. These legally binding requirements along with Forest Service Manual and Regional Guides, memorandum of understandings, programmatic agreements and dialogue within the NEPA process lay the groundwork for the desired condition, goals, objectives and standards and guidelines in the Forest Plan for consultation with Native American Tribes. For example, Objective O-TR-4 states in the Forest Plans, "Consult, as provided for by law, with Tribes in order to address tribal issues of interest and National Forest management activities and site-specific proposals." The process of consultation is also addressed in S-TR-1, "Affected Tribes will be consulted early in the planning process regarding proposed Forest land management activities in order to identify and address tribal interests." These examples, plus other desired conditions, objectives, goals, standards and guidelines, in the Forest Plans, address in general who to consult with, the timing of consultation, and the purpose of consultation.

Generally, consultation and scoping occurs with the Bands of Ojibwe located within or in close proximity to the Chippewa and Superior National Forests. For example, out of respect for the sovereignty of the Leech Lake Band of Ojibwe primary consultation occurs with their representatives on the Chippewa NF, while proposed projects within the Superior NF are discussed with the Grand Portage, Fond du Lac, and Bois Forte bands.

The Chippewa NF has a memorandum of understanding (MOU) with the Leech Lake Band of Ojibwe and the Superior NF has memorandums of understanding with the Grand Portage, Boise Forte and Fond du Lac Bands. These MOUs create the expectation that the National Forests and Bands carry out their separate activities in a coordinated and mutually beneficial manner and for documenting a framework for cooperation.

Heritage resource protection is also a part of the consultation process with the appropriate State and Tribal Historic Preservation Offices, the advisory Council on Historic Preservation, and other interested parties; and in accordance with the Secretary of Interior's standards and guidelines for Historic preservation, including National Park Service Technical Bulletins. Protection is provided for as determined by a variety of laws including the Archeological Resources protection Act, National Historic Preservation Act, as determined appropriate through the NEPA process.

PC# 2.1-23
Public Concern: The Final EIS and Forest Plan for the Superior NF should consider effects to plants of interest to the bands within the 1854 Ceded Territory.

-In the context of forest vegetation management in the Final EIS.
-In desired conditions and objectives in the Forest Plan.

Agency Response:
The Chippewa and Superior NF recognize that the federal government has the responsibility to maintain rights retained by treaty, such as subsistence use. The existence of these rights is not in question and the Forests are committed to the continuation of hunting, fishing, and gathering by tribal members on NF lands. The forests attempt to honor treaty rights through consultation with the bands. The primary purpose of the standards and guidelines covering tribal interests is to ensure that this will take place. In addition, the Forest Plan addresses

sustainable populations of game species by managing for appropriate habitat types and amounts. The final EIS and Appendix B have considered the tribal species of interest, while Appendix D lists the tribal species of interest, linking them to their other status categories and to the management indicator habitats.

PC# 2.1-24
Public Concern: The EIS/Plan should include the original points of interest and solutions the Tribe and Forest Service discussed.

Agency Response:
The Forest Service feels the majority of LLBO desires and concerns expressed in discussions among CNF and LLBO planning and resource staffs regarding "minimal tribal standards" have been captured within the revised forest plan package, including the Final EIS, appendices, and the Forest Plan's goals, desired conditions, objectives, standards, and guidelines. As one example, refer to Forest Plan, Chapter 2, Objective O-TR-3: "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 sustainable limits of the resources." Although the language of this objective may be viewed by LLBO as restrictive, it is a sincere indication of our desire to work with you as a partner regarding free-use of forest products in support of implementing 1855 Treaty rights. We worked hard with LLBO in developing numerous objectives, standards, and guidelines to better protect important resources to LLBO during Forest Plan implementationand look forward to continuing these efforts with LLBO during implementation of the new Plan.

PC# 2.1-25
Public Concern: The Superior NF should adopt an alternative that would maintain or increase populations of game species for subsistence hunting.

Agency Response:
The Chippewa and Superior NF recognize that the federal government has the responsibility to maintain rights retained by treaty, such as subsistence use. The existence of these rights is not in question and the Forests are committed to the continuation of hunting, fishing, and gathering by tribal members on NF lands. What is in question, however, is exactly how that is to be implemented regarding a specific resource or activity. Short of specific directions from the executive, legislative, or judicial branches, the forests attempt to honor treaty rights through consultation with the bands. The primary purpose of the standards and guidelines covering tribal interests is to ensure that this will take place. In addition, the Forest Plan addresses sustainable populations of game species by managing for appropriate habitat types and amounts.

PC# 1.1-6
Public Concern: The Chippewa Plan should include the specific methods and conditions of project level consultation with the Leech Lake Band, including a requirement that consultations occur as early as possible in the planning process and at the same time as consultations with federal and state agencies.

Agency Response:
The Forest Plan is a strategic forest management document that guides all natural resource management activity and establishes management standards and guidelines for a National Forest, embodying the provisions of the National Forest Management Act of 1976.

The Chippewa and Superior National Forests also have Memorandums of Understandings in place with the Leech Lake Band of Ojibwe, Fond du Lac, Bois Forte, and Grand Portage which specify project level consultation

procedures. These memorandums and along with numerous laws, executive orders, and regulations, lay the ground work for the desired conditions, goals, objectives, standards and guidelines related to consultation in the Final EIS and Forest Plans. Standard S TR-1 reads, "Affected Tribes will be consulted early in the planning process regarding proposed Forest land management activities in order to identify and address tribal interests" (Forest Plan, Chapter 2)

American Indian Use of Public Lands (2.2)

PC# 2.2-1
Public Concern: The Final Superior NF Plan should include objectives regarding tribal rights and interests that were listed in the Draft EIS.

Agency Response:
The two objectives referenced above in Millard Myers comment are located within the FS Manual, which is the policy direction for each Forest. These two objectives have been added to the Final Forest Plan. The Final Forest Plan also contains many desired conditions, goals, objectives, standard and guides that directly and indirectly address the additions. For example, in Chapter 2, Final Forest Plan, there is a forest-wide goal that states: "Develop and use the best scientific information available to deliver technical and community assistance and to support ecological, economic, and social sustainability. Another example of a specific standard addressing administration of programs and activities in a manner sensitive to traditional beliefs and practices is, "Decisions for environmental documents will demonstrate how tribal interests as identified in the environmental analysis were addressed and interpretive programs may be designed to inform the public about American Indians, following consultation with the respective tribal government's staff". (Final Forest Plans, Chapter 2).

PC# 2.2-3
Public Concern: The Forest Plan should emphasize protection of ancient sites and traditional areas.

Agency Response:
Regardless of the Alternative implemented, known heritage sites must be considered and protected during site-specific project analysis and project implementation. The Final Forest Plans include many specific goals, objectives, standards and guidelines that further support the laws, regulations and executive orders that pertain to heritage resource protection.

PC# 2.2-4
Public Concern: The Final EIS/Plan should define archeological resources to include landforms and surface features.

Agency Response:
Culturally significant landforms and landscapes are included among the types of heritage resources that federal agencies are responsible to manage appropriately. The Final EIS, Chapter 3.9 has been revised to include the concept of landforms and surface features as archeological resources. To date no such properties on National Forest lands in Minnesota and very few elsewhere in the state have been evaluated as to significance relative to the National Register of Historic Places.

PC# 2.2-5
Public Concern: The Forest Service should allow band members to collect plant species of interest without permit requirements.

Agency Response:
Final Forest Plans O-TR-3 addresses collection of plant species by tribal members by stating: "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". Specifics of any potential requirements are best left to be developed outside of the framework of the strategically directed forest plan, as indicated in O-TR-3 and O-TR-4. Both the Chippewa and Superior National Forests have on-going policies in place that do not require fees for band members gathering items such as balsam boughs, maple syrup, and firewood personal use collection. The Leech Lake Band of Ojibwe currently issues permits for balsam bough collection on National Forest land and land owned by the Tribe. There are currently no permit requirements for berry picking.

PC# 2.2-6
Public Concern: The Superior Plan should have clear direction on protecting fisheries and wild rice to benefit sustained subsistence use and the exercise of treaty rights.

Agency Response:
In response to these requests we have revised the final Forest Plan language for both the Chippewa and Superior NFs in the following ways:

Desired condition D-WS-2, which in the draft Plan directly recognized subsistence use, has been supplemented for the final Plans by citing "opportunities and access for fishing and wild rice harvesting" as specific examples of how subsistence use can be provided for.

Standard S-WS-7 has been modified to require that removal of beaver dams or other stream channel obstructions be done in a way that minimizes impacts on "habitat including wild rice beds".

We also call the respondent's attention to guidelines G-WL-29 in the draft Superior Plan and G-WL-28 in the draft Chippewa Plan which specifically cite protection of wild rice areas as one of several potential reasons for making a site-specific decision to remove beaver dams.

PC# 2.2-7
Public Concern: The Chippewa and Superior NFs should allow Tribal use of temporary roads until the roads are permanently closed.

Agency Response:
Temporary roads are constructed to accommodate access for necessary forest resource management activities, such as timber harvesting and fire fighting. These roads are of very low quality, generally two-track, non-surfaced; and are not constructed to be accessible by a passenger vehicle. Temporary roads are decommissioned after the management activity is complete. The National Forests intent is not to allow general public use to become established on temporary roads. Generally, prior to decommissioning, access by the public is not encouraged due to concerns for public safety and possible Forest Service liability issues. However, there is no legal restriction on using temporary roads, and people can and do use the temporary roads until decommissioned. (Final EIS, Appendix F)

PC# 2.9-5

Public Concern: The Superior NF should find a balance between closing unnecessary roads and repairing environmental damage cause by existing roads.

Agency Response:
Over the next decade, the Superior National Forest miles of high standard roads (OML 3, 4, and 5 - roads safe for passenger vehicle travel) and the OML 2 roads are expected to remain constant over time. Low standard roads, OML 1, that are generally not accessible by passenger vehicles, will be closed to vehicle travel. In the preferred alternative, there are no additional acres allocated to management areas that limit road construction and use on the Superior NF. (Final EIS, Chapter 3 and Appendix F). Site-specific decisions on road closures will be made using an evaluation process, which includes consideration of existing use. In general, access within the Superior National Forest is anticipated to remain approximately the same in terms of miles of road accessing a variety of areas within the forest landscape. For further details, please see the Final EIS, Chapter 3 and Appendix C.

Soils and Geology (2.4.2)

PC# 2.4.2-1
Public Concern: The Final EIS should provide detailed information on baseline soil conditions in the planning area.

> **-Including current amounts of detrimental soil disturbance resulting from all human disturbances**
> **-Including soil inventory information from terrestrial ecological unit inventory**
> **-To serve as a basis for developing appropriate management objectives and standards and guidelines for soils**

Agency Response:
The concern is expressed that site specific information about current and past soil disturbance was not adequately portrayed in the DEIS. In the DEIS and the final EIS, we attempted to address this in Section 3.6 for each alternative by analyzing model-chosen treatment areas in the context of soil compaction classes. Information tables to demonstrate this information have been added to Section 3.6 of the final EIS. Regarding soil disturbance, the final EIS describes compaction and how compaction conditions typically return to pre-harvest levels within 2-8 years following harvest (Mace 1971, Thorud and Frissell 1969). This information points out that the typical time period between harvest treatments is adequate for compacted soil to "rejuvenate" as a result of freeze/thaw cycles and other factors. By the time of the 2nd harvest on any given site, compaction should have returned to pre-disturbance conditions. Ongoing local studies, such as the Long Term Soil Productivity study on the Chippewa NF, have been designed to verify and further quantify these assumptions about site rejuvenation (Alban et al. 1994). Each Forest also routinely conducts stocking surveys to assess whether harvested stands are adequately regenerated after harvest (see standard S-TM-4, and associated Table S-TM-4, in the revised Plans of both Forests). These surveys represent another means of checking to assure soil productivity has not been significantly impacted by harvest activity.

The analysis in the DEIS has been revised for the final EIS by including results of strategic level (programmatic) monitoring such as "Monitoring the Implementation of the Timber Harvesting and Forest Management Guidelines

on Public and Private Forest Land in Minnesota: Report 21 by the Minnesota DNR. The final Plan for the Superior includes revised guidance (see Table G-WS-8) to address the issue of having more than one rotation on sites susceptible to nutrient loss. This guidance recommends options such as slash retention, use of longer rotations, or vegetation type change to a conifer overstory on susceptible sites. Similar guidance has been added to the final Chippewa Plan (see Table G-WS-8 and guideline G-WS-10).

We agree that the DEIS and draft Plans (SNF in particular) lacked information about the soil component of ecological land units (e.g. Land Types (LTs)/Ecological Land Types (ELTs)). To remedy this we have revised Table G-WS-8 in the final Superior Plan and the "Overview of Mapping Systems" discussion in Section 3.6 of the FEIS to include more information regarding the status of the Terrestrial Ecological Unit Inventory. Baseline ecological unit inventory originating in the 1960's (SNF) and 1970's (CNF) provides a valuable information source that is routinely used to guide the protection of soil quality during the implementation of many forest management activities.

Identifying the appropriate indicators to use for monitoring changes in soil productivity is a national concern. Each USDA-FS Region has developed indicators and standards to address this concern. Lines of communication between state, county, federal, and research entities and practitioners will be maintained in continuing to seek the best techniques and indicators for soil productivity. We refer to Powers et al. 1998, which discusses operational ways of survey following management activities.

PC# 2.4.2-2
Public Concern: The Plans and Final EIS should indicate how nutrient loss is mitigated on sites subject to repeated timber harvest.

Agency Response:
The concern is expressed that despite DEIS analysis conclusions that nutrient loss is likely to occur with repeated timber harvest treatments, particularly harvest of aspen on certain sites with sensitive soils, the draft Plans failed to provide adequate direction to either mitigate or eliminate these impacts. In the draft Superior Plan guidelines G-WS-7 and G-WS-8, and accompanying Table G-WS-8, in combination, are intended to provide direction to mitigate nutrient loss impacts on these sites. We agree that G-WS-7 lacks the specificity needed to effectively direct project-level actions. We have revised the pertinent direction in the final Plan for the Superior (see Table G-WS-8) to list a number of options for treating sites susceptible to nutrient drain. These options include use of slash retention, use of longer rotations, or overstory conversions to pine. Similar guidelines (see Table G-WS-8 and guideline G-WS-10) have been added to the final Chippewa Plan.

PC# 2.6.4-57
Public Concern: The Final EIS should address the adverse impacts of logging aspen on availability of soil nutrients for longer-lived trees such as red and white pine.

Agency Response:
Indicator #6 in Section 3.6.1 (Watershed Management) of the EIS is used to evaluate each alternative in terms of potential for long term loss of nutrients associated with repeated timber harvest. The fact that repeated harvesting of aspen, in particular, can lead to depletion of some nutrients on sites susceptible to nutrient drain is recognized in the EIS analysis and is discussed in the description of indicator #6 in Section 3.6.1. A guideline in the form of an entry in Table G-WS-8 in the Superior's Plan addresses this situation by recommending options such as slash retention, use of longer rotations, or conversion of overstories to pine, on susceptible sites. A similar guideline (G-WS-10) has been added to the final Chippewa Plan.

PC# 2.4.2-3
Public Concern: The Chippewa NF Plan should not allow NFS lands to be used for treatment of contaminated soil.

Agency Response:
The opinion is expressed that Chippewa Plan standard S-PH-2 (we assume the commenter really meant S-PH-3) is overly permissive in allowing treatment of contaminated soil to occur on specified soil types (Ecological Land Type Groups and Land Type Phase Groups), and that treatment of contaminated soils should not be allowed anywhere on NFS land. Forest Service Policy (FSM 2723.44) clearly states that the use of NFS land by others for this purpose is inappropriate. However, subject to relevant federal and state disposal and treatment guidelines, and appropriate site level NEPA decision-making and documentation, we believe the option should remain open for the Forest Service to use NFS land to treat soils contaminated from spills or other accidents in those rare instances where the Forest Service is the responsible party. In those instances, we think it's important to use our amassed knowledge of soils and other biophysical features to help select sites where soil remediation can done effectively and with minimal risk to groundwater. Standard S-PH-3, which clearly lists the Terrestrial Ecological Unit Inventory mapping units that meet these criteria on each Forest, is retained as management direction in each of the two Forest Plans.

PC# 2.4.5-8
Public Concern: The Chippewa NF should further analyze the effects of proposed standard S PH-3.

Agency Response:
The concern is expressed that standard S-PH-3 (we assume the commenter really meant G-PH-1) is too restrictive, to the degree that it would totally preclude the use of NFS land for the siting of septic systems. We think the direction in G-PH-1 is appropriate, and we've retained this direction in the final Plans of both Forests. This direction is consistent with Forest Service Policy (FSM 2723.42) which says nonfederal uses of NFS lands for liquid sewage collection and disposal are rarely compatible with National Forest purposes. The fact that this Plan direction is stated as a guideline rather than a standard keeps the option open for issuing a special use permit, subject to appropriate project-level analysis and documentation, in those rare instances when non-Federal sites for sewage disposal are not reasonably available (per FSM 2723.42). Guideline G-PH-1 also does not preclude Forest Service use of NFS lands for siting septic systems or other sewage disposal systems to serve National Forest facilities, an action that would also be subject to project-level analysis and documentation.

PC# 2.4.2-4
Public Concern: The Chippewa and Superior NFs should implement the MN Forest Resources Council Integrated Site Level Guidelines for soil productivity.

Agency Response:
Consistency of National Forest management with the MFRC guidelines for soil productivity is discussed in detail in the "Forest Soil Productivity" portion of guideline G-FW-1 in the Forestwide Standards and Guidelines section in Chapter 2 of both Forest Plans. In summary, that discussion points out that both National Forests will be fully consistent with the MFRC soil productivity guidelines by using the best (most detailed and site-specific) available National Forest information on ecological land units (Land Types (LTs)/Ecological Land Types (ELTs)) to guide management decisions and actions on NFS lands. Soils information is a key component in the mapping and interpretation of these units. Some of this ecological land unit information for NFS lands actually pre-dates the MFRC guidelines and much of it is more detailed and tailored to the specific land units that occur on the Chippewa and Superior National Forests.

PC# 2.4.2-5
Public Concern: The Plan soil productivity tables (G WS-7a through G WS-7b for the Chippewa, and G WS-8 for the Superior) should be evaluated to assure all necessary information is included.

Agency Response:
Tables G-WS-7a through G-WS-7d from the draft Chippewa NF Plan and Table G-WS-8 from the draft Superior NF Plan have been reviewed and re-evaluated to assure that necessary information is included, clearly presented, and where appropriate, consistent between the two Forests.
Resulting changes and improvements are reflected in the final Plans of both Forests. The final tables for both Forests (numbered as Table G-WS-8 and 8a in the Chippewa Plan and Tables G-WS-8, 8a, and 8b in the Superior Plan) include more explanatory information about the ecological land units (LTs and ELTs) that are used as the basis for the activity limitations described in these tables.

PC# 2.4.2-6
Public Concern: The Chippewa and Superior NF should protect soils when logging.

AND

PC# 2.9-6
Public Concern: The Chippewa and Superior NFs should ban new roads, trails, and logging on areas with sensitive soils to encourage mature diverse and native tree species.

Agency Response:
We have included direction in the Plans of both forests to guide timber harvest, and road/trail construction and maintenance, in ways that assure most affected lands, including those with sensitive soils, can continue to be productive and meet their full potential in terms of vegetative composition. Examples of Forestwide direction from Chapter 2 of the Plans that focuses on protecting or improving the productive capacity of sensitive soils include desired conditions D-WS-3 and D-WS-12; objectives O-WS-10 and O-TS-5, and guidelines G-FW-1, G-WS-8, G-WS-9, G-WS-10 (SNF), G-WS-11 (SNF), G-WS-12 (CNF) and G-WS-13 (SNF). The way this forestwide direction is applied in making decisions about project-level actions, may in fact result in the total exclusion or seasonal limitations of these activities on specific microsites where site level ecological land unit (e.g. LT/ELT) information suggests productive potential cannot be maintained.

On other sites, guideline G-WS-9 in the final Plans of both Forests provides for soil productivity protection by placing a cap of 15% on the amount of any treatment area that can be placed in a detrimentally compacted, eroded, rutted, displaced or severely burned condition. We believe the 15% cap provides for adequate protection of soil quality because it involves the use of measurable indicators such as compaction, soil displacement, and presence of an organic layer. The 15% value is judged to be the smallest change detectable with operational monitoring. Although this cap is used as a disturbance threshold, being at or above this threshold on any given treatment area does not imply that absolute productivity on that area has declined 15% (USDA-FS 2002n, Powers et al. 1990).

Direction in the form of the standards and guidelines listed above also protect soil productivity through the use of seasonal limitations on some activities. Limiting activities to periods of frozen or dry soil on some sites provides for the use of heavy equipment only under conditions when soil strength is maintained and soil has low susceptibility to rutting, compaction or puddling (Jaakko Poyry 1992a). Observation of sites that have been winter harvested vs. summer harvested indicate major differences in overall levels of soil disturbance. This has been documented by Mace who reported that medium and heavy disturbance occurred on an average of 47 percent of summer logged sites vs. 9 percent of winter logged sites (Mace, 1971).

In addition, regularly scheduled timber harvest is planned only on lands classified as “suitable timber lands” or to a very minor extent on “tentatively suitable timber lands”. These are lands where, among other things, “existing technology and knowledge is available to ensure timber production without irreversible damage to soil productivity or watershed conditions”. (See Glossary section in EIS). Specifically on the Superior NF, lands mapped in Ecological Land Types (ELTs) 5, 12, 18, and portions of ELT 6, have been removed from the suitable timber lands category.

References cited in this response but not included in the FEIS list of references cited:

Powers, R.F., Alban, D.H., Ruark, G.A., and Tiarks, A.E. 1990. A soils research approach to evaluating management impacts on long-term soil productivity. Pp 127-145 *In:* W.J. Dyck and C.A. Mees (Ed.) Impact of Intensive Harvesting on Forest Site Productivity. Proceedings, IEA/BE A3 Workshop, South Island, New Zealand, March 1989. IEA/BE T;6A6 Report No. 2, Forest Research Institute, Rotorus, New Zealand, FRI Bulletin No. 159.

PC# 2.4.2-7
Public Concern: The Chippewa and Superior NF Plan direction should be to require, rather than simply encourage, managers to evaluate soil conditions on the sites they manage.

Agency Response:
The wording commented on here is the short synopsis, in guideline G-FW-1 of each Forest Plan, of soil-productivity-related requirements of the MFRC Voluntary Site-level Management Guidelines. Our synopsis in the draft Plans says that the MFRC Guidelines “encourage” managers to evaluate soil conditions on the sites they manage. The commenter points out that, for application on the National Forests, such evaluations should be “required”, rather than “encouraged”. In response, we re-evaluated and revised our description of MFRCs soil productivity guidelines in G-FW-1 to more accurately reflect the actual wording of the MFRC guidelines. The actual wording is: “it is very important that individuals making forest management decisions evaluate soil conditions on the sites they are considering”. More directly related to the concern about how soil condition information is applied to decision-making on the Chippewa and Superior NFs, the NFs routinely use the best available ecological land unit information in determining the appropriateness of management activity on specific sites. Doing this is required by the Forest Plans, in particular the assemblage of soils and wetland-related standards and guidelines in the Forestwide Management Direction in Chapter 2 of both Plans.

PC# 2.4.2-8
Public Concern: The Final EIS and Plans should emphasize the role of soils in relation to the health of the forests.

Agency Response: The respondent is concerned that consideration of soils, and the role soils play in the overall health of the Forests, is not prominently enough displayed in the EIS or Superior NF Plan. Regardless of how the EIS or Plans are formatted, we clearly recognize, and base our Plan revision and implementation decisions upon, the important and controlling role that soils play in the production potentials and bounds of forest management. It was not our intent to anyway diminish the analysis of soils effects by placing it under the heading of Watershed Health in the EIS. Placing it under that heading was a purposeful attempt to demonstrate the key role of soils in setting the template for vegetative composition and distribution, and controlling water flow through and off the land. Three distinct soil-based indicators were used in the EIS to evaluate and compare the effects of each alternative.

Both Forest's Plans provide a full complement of specific management direction for soils in the form of desired conditions (D-WS-3 and D-WS-12), objectives (O-WS-1, O-WS-9 and O-WS-10), and guidelines (G-WS-8, G-WS-9, G-WS-10, and G-WS-11 (SNF)). The site-specific effects to soils are also addressed in project level Environmental Assessments and Environmental Impact Statements for projects implemented under the Forest Plan. Project planning that recognizes the importance of maintaining soil productivity, as well as site-specific mitigation measures, further protect the soil resource. This is facilitated at the project level, by ecological land units which are mapped and interpreted across both Forests, and include soils as a key information component. To make this information more apparent in the Forest Plan direction on the Superior NF, Table G-WS-8 has been revised to include explanatory information about Ecological Land Types (which are the ecological land units used as a basis for most of the Plan direction related to soils).

Soils, as the primary determinant in mandated (36 CFR 219.12(k)[2]) monitoring to assess whether applied management prescriptions are causing significant changes in productivity of the land, will also play a prominent role in the monitoring of Plan implementation.

Air Quality and Smoke Management (2.4.3)

PC# 2.4.3-1
Public Concern: The Chippewa and Superior NF should limit the impacts of smoke from prescribed burns on air quality.

By adhering to the requirements of the MN Smoke Management Plan and assessing the benefits of prescribed fire

Agency Response:
Support is expressed, for both Forest Plans, for standard S-AQ-1, which requires that prescribed burning only be done if in compliance with requirements of the most recent version of the Minnesota Smoke Management Plan and for the use of prescribed fire as a way to reduce the potential long term impacts from smoke resulting from wildfire. We have retained standard S-AQ-1 in the final Plans of both Forests as direction for complying with the Minnesota Smoke Management Plan. Recognition of the potential for prescribed fire to be used as tool to limit air quality impacts from wildfire is addressed in the Direct and Indirect Effects discussion for Indicator #6 (Air Quality) in Section 3.5 (The Role of Fire) in the FEIS.

By harvesting or salvaging timber instead of using prescribed fire

Agency Response:
We agree with the respondent that forest burning reduces air quality, most noticeably from reduction of visibility caused by smoke. However, we also recognize that fire and smoke are part or products of natural processes that largely shaped our Forests as we know them today. Fire creates ecosystem benefits that cannot be obtained solely by harvest, including the creation of conditions that facilitate sprouting or seeded for plant species that are largely fire-dependant.

The description of the selected alternative in Section 2.4 of the EIS clarifies that management ignited fire will be used mainly for reducing fuels and preparing sites for reforestation. Use of prescribed fire expressly for reinstating ecological processes will be done "on a small spatial scale", and only "where feasible based on values at risk". Where prescribed fire is used, the Plans of both Forests include direction, most notably objective O-AQ-1 and standard S-AQ-1, designed to limit its impacts on air quality. To comply with standard S-AQ-1, fire plans

tailored to individual prescribed burns will address smoke and air quality and will provide site-specific guidance for limiting adverse impacts to visibility and human health.

Watershed and Riparian

Watershed, General (2.4.5)

PC# 2.4.5-1
Public Concern: The Final EIS cumulative effects analysis should incorporate the Minnesota's Clean Water Act Section 303(d) list of impaired waters, and the 305(b) list of assessed waters on the Superior.

-To assist in improving water quality and setting water quality standards and guidelines
-To adequately assess the environmental impacts of the Forest Plans

AND

PC# 2.4.5-3
Public Concern: The Chippewa and Superior NFs should re-examine specific management prescriptions for the watersheds of 303(d) listed water bodies to determine incompatibilities with resource protection objectives of these water bodies.

Agency Response:
Commenters correctly point out that the DEIS did not address waters on either Forest that are declared by the State of Minnesota as "impaired" under the formal process and listing required by Section 303(d) of the federal Clean Water Act. They contend that this omission leads to inadequate assessment of environmental impacts of the Plans and hampers efforts to develop watershed management direction (e.g. standards and guidelines) needed to improve overall water quality. We have addressed this shortcoming by adding to the FEIS a narrative discussing impaired (303(d)-listed) waters, and the status of the process for developing Total Maximum Daily Loads for these waters. This narrative can be found in the description of the Affected Environment in Section 3.6.1 (Watershed Management). This discussion includes a summary of the number and types of impaired water bodies on each Forest and the pollutants causing the impairments. A listing of the 303(d)-listed (impaired) waters is also included in the FEIS, by reference to a web site maintained by the Minnesota Pollution Control Agency.

In recognition that both Forests include a small number of waters that are impaired due to conventional pollutants (such as excess nutrients, pH, turbidity, or low dissolved oxygen), and that NF activities in affected watersheds can potentially contribute to levels of those pollutants, objective O-WS-7 is included in the final Plans of both Forests to decrease the contribution of nonpoint pollutants from NFS lands in areas where TMDLs have been developed. Because sediment transport appears to be an important factor in impairments caused by both mercury (the pollutant causing impairment in the vast majority of 303(d)-listed waters on both Forests) and conventional pollutants, prudent management dictates that water quality Best Management Practices (BMPs) be used to minimize sediment transport from all sites of forest management activity. Direction to employ BMPs is included in the Plans of both Forests in the form of the Chapter 2 standards and guidelines, particularly guideline G-FW-1 and standard S-WS-4. In addition, we have added guideline G-WS-2 to the Plans of both Forests to assure that

NFS activities in the watersheds of waters that are impaired due to conventional pollutants are not contributing to the impairment.

We also call the commenters attention to direction for riparian management in the revised Plans of both Forests. We feel confident that the desired conditions, objectives, standards and guidelines for riparian management will foster increased recognition of the importance of riparian areas in regulating the quality of water entering lakes and streams**.** This direction also provides improved tools for protecting and, where possible, improving, this fundamental function of riparian areas.

PC# 2.4.5-2
Public Concern: The Chippewa and Superior NFs should partner with State and local agencies to assist in restoration of 303(d) listed waters.

Agency Response:
Direction for cooperative management is provided by forestwide desired condition D-CM-1. In line with this direction, as funding allows, the Chippewa and Superior NFs will actively partner with the State of Minnesota, local agencies and other landowners, in TMDL studies to assess culpability in the impairment of 303(d) listed waters where NFS activities may contribute to impairment or NFS lands comprise a significant portion of the affected watershed. We will also work cooperatively with these same agencies and landowners in the restoration of waters where NFS management actions have been shown, through those studies, to contribute to impairment by conventional pollutants (such as excess nutrients, pH, turbidity, or low dissolved oxygen).

PC# 2.4.5-4
Public Concern: The Plans should increase attention given to open water wetlands because these wetlands provide significant benefit to migratory waterfowl.

Agency Response:
With the exception of man-made impoundments, we believe amount of open water wetland will not change as a result of our land management activities. Compared to terrestrial systems, open water wetlands will be much less affected by land management strategies in the Plans of both Forests. We believe future conditions for waterfowl species will be similar to existing conditions. Water levels and other wetland conditions will continue to be subject to local effects of beaver or landscape effects such as drought or higher-than-average precipitation, but the wetland context of the Chippewa and Superior Forests will most likely be similar to existing conditions. In addition, the revised Plans of both Forests apply the 2-tier riparian management approach to the perimeter of open water wetlands. This approach includes provisions for proactively managing these riparian areas expressly to enhance how they function ecologically.

PC# 2.4.5-5
Public Concern: The Plans should take a cautious approach to eliminating any impoundments.

> **-Because impoundments provide significant benefit to wildlife and associated hunting and fishing opportunities**
> **-Because this may disenfranchise donors who contributed to impoundment creation or maintenance**
> **-Because the Draft EIS analysis does not support such action**

AND

PC# 2.6.2-1
Public Concern: The Chippewa and Superior NF Plans should not abandon traditional riparian habitat management of 1986 Plan.

Agency Response:
Respondents are reacting to direction (most notably desired condition D-WS-8) in the revised Plans of both Forests which, compared to the 1986 Plans, appears to de-emphasize construction and maintenance of man-made impoundments. Although we are retaining this direction in the revised Plans of both Forests, we do not intend to totally abandon the impoundment program that was supported by the 1986 Plans. As respondents mention, several impoundments have been constructed under the 1986 Plans with funds from partners, particularly on the Chippewa NF. Impoundments that have or had partner involvement tend to involve larger structures and most of these remain fully functioning (for waterfowl). These larger structures that continue to achieve their design purpose with minimal maintenance will most likely remain in place under the revised Plan.

However, especially on the Chippewa NF, there are numerous older (and generally smaller) impoundment structures that are failing, or where recent inspections predict failure will occur without significant expenditures for repairs. Some impoundments never met their potential benefits for waterfowl, and are now creating resource conflicts (such as beaver plugging the control structure, resulting in flooding of the adjacent forest or improvements such as roads). Some of these impoundments are disrupting stream and wetland systems that could better achieve a wider range of aquatic and riparian habitat functions by returning to a free-flowing condition. Faced with the challenge of small budgets for wildlife programs, we believe maintenance of these impoundments that are ineffective, or perhaps even causing more harm than good, represents poor use of limited funds.

Regarding the potential for future new impoundments, desired condition D-WS-8 does not preclude new impoundments. But this direction does convey the idea that placing dams on stream/wetland systems for the purpose of flooding one wetland type to create a “wetter” wetland type is no longer a practice we want to emphasize, or perhaps even encourage. We believe this is in concert with our basic premise for riparian (or for that matter all ecosystem) management under the revised Plans, namely the desire to maintain and promote fully functioning ecosystems wherever possible. The benefits of impounding waters to enhance habitat for waterfowl can be offset by the potential negative impacts it can cause to other species we’re charged with protecting, including a number of Regional Forester Sensitive Species (MN Species of Special Concern) of fish and aquatic invertebrates. De-emphasis on future potential impoundments is also in keeping with emerging national regulatory (U.S. Army Corp of Engineer) criteria used to judge successful stream and wetland mitigation or improvement. (Verry, Elon S. 2004. Wetland and Stream Banking in Perspective: Considerations for Minnesota Unpublished Draft prepared for the Arrowhead Regional Stream Team. 83pp.)

PC# 2.4.5-7
Public Concern: The Final EIS should address the cumulative timber harvest effects of nutrient loading on lakes and streams.

Agency Response:
The Generic Environmental Impact Statement on Timber Harvesting and Forest Management in Minnesota (GEIS) involved study of cumulative impacts from timber harvest on all ownerships. The GEIS concluded that concentrations of nutrients (nitrogen and phosphorus) in streams in the portion of MN represented by the Chippewa and Superior National Forests is not likely to increase as a result of the levels of timber harvest addressed in the study (Jaakko Poyry Consulting. 1992. “Water Quality and Fisheries: A Technical Paper for a Generic Environmental Impact Statement on Timber Harvesting and Forest Management in Minnesota”.

Minnesota Environmental Quality Board, St. Paul, Minnesota, Pp iii-iv and 82-84). Levels of harvest activity under the revised Plans of both Forests are well within the levels addressed in the GEIS.

The GEIS also discusses the potential for cumulative timber harvest activity to influence the concentration of phosphorus in lakes. Phosphorus is the nutrient of most concern for lakes in or near the Chippewa and Superior National Forests because it exerts the greatest influence on rates of eutrophication. Phosphorus inputs to lakes are usually associated with sediment and surface runoff, As the respondent suggests, it's important to assure that the amount of timber harvest (in combination with the amount of upland that is in a permanently open condition) on a watershed scale does not exceed thresholds know to cause excessive in-channel sediment generation. The FEIS (Section 3.6.1 Watershed Management) directly addresses this question in the form of watershed indicator #8 (the cumulative effects indicator). The revised Plans also include direction (e.g. objective O-WS-8 and standard S-WS-1) to manage NFS land in ways that minimize the risk that the key upland young forest + upland open land threshold will be exceeded on individual watersheds.

In addition, monitoring of water quality since 1986 on the Chippewa National Forest has shown no significant decrease in water quality as a result of forest management (USDA-FS 2000i).

The source of the erosion and sediment discussion in Appendix H of the Forest Plan Revision EIS is the Minnesota GEIS. This is stated in the introductory discussion of Appendix H in the final EIS.

Watershed Health (2.4.6)

PC# 2.4.6-2
Public Concern: The Chippewa and Superior NFs should identify specific methods that they will use to comply with the Clean Water Act and to protect watershed health.

AND

PC# 1.0.1-10
Public Concern: The Chippewa and Superior Plans should continue the sound management policies that ensure high quality water leaves the forests.

Agency Response:
The final EIS and Plans contain the following specific discussion/direction which we believe adequately address the Forest's compliance with the Clean Water Act (CWA), the protection of watershed health, and the quality of water that leaves the forest:

EIS:

- Discussion has been added to the Affected Environment portion of section 3.6.1 (Watershed Management) about the status of Impaired Waters/TMDLs on the Chippewa and Superior NFs. (This discussion was added between draft and final.)
- Indicators 1, 2 and 7 used in section 3.6.1 to evaluate the alternatives were specifically chosen to address key sources of nonpoint pollutants that can be generated from common forest management activities.
- Indicator 8 in section 3.6.1 (e.g. the 60% watershed-scale threshold for combined open and young forest) is used as an indicator to specifically address overall watershed health on a cumulative basis.

Plans:
We've included in both Plans several desired conditions, objectives, standards and guidelines, developed through our Forest Plan revision process, that are designed to safeguard water quality. Key examples include desired

conditions D-WS-4, 5, 6, 9, and 11; objectives O-WS-1, 2, 6, and 7; standards S-WS-5, 6, 9, and 10; and guidelines G-WS-1, 2, 3, 4, 6, 7, 14 (CNF) and 15 (SNF). This direction includes the provision for proactive management of riparian management zones which should contribute to water quality protection by restricting activities in the near-bank zone to those that improve or maintain key riparian functions. In addition, we have committed, through guideline G-FW-1 and standard S-WS-4 in both Plans, to using Minnesota Forest Resources Council guidelines as base level for water resource protection. These guidelines include the USEPA-sanctioned Best Management Practices which were developed for forest practice compliance with the federal CWA in the State of MN. Plans for both Forests also include management direction (see S-WS-1) to use the 60% threshold as a cap on management actions which result in the young forest or permanently open condition, for purposes of protecting overall watershed health at the scale of 6th level watersheds.

PC# 2.4.6-3
Public Concern: The Chippewa and Superior NFs should select an alternative that addresses all aspects of forest management at a watershed scale.

Agency Response:
For both Forests, we have selected an alternative that includes management direction for addressing project-level forest management at a watershed scale. Specific direction that addresses this includes desired conditions D-WS-8 and D-WS-14, objectives O-WS-2 and O-WS-8, and standard S-WS-1.

PC# 2.4.6-4
Public Concern: The Chippewa NF should address transportation systems in the watershed health desired condition section of its Plan.

Agency Response:
In the Plans for both the Chippewa and Superior NFs, we provide direction for protecting or improving watershed health as part of the direction for planning and managing transportation systems. Most (but not all) of that direction is found in the Transportation System sections, rather than the Watershed Health sections, of the final Plans. We feel that arranging the direction that way (e.g. by placing most of the transportation system direction together in one location in the document) would make the final plan most useful to transportation system project planning. Regardless of location in either Forest Plan, we believe the following direction in the final Plans will be adequate to assure that watershed health is provided for in the planning and management of transportation systems: desired conditions D-WS-8, D-WS-13, D-TS-2, and D-TS-3; objectives O-WS-2 (bullet 2), O-TS-4, O-TS-6, O-TS-7, O-WS-10; standards S-WS-2, S-WS-3, S-WS-5, S-WS-6, S-TS-1, S-TS-2, S-TS-3 and S-TS-4; and guidelines G-WS-11 (CNF), G-WS-12, G-WS-13 (SNF), G-TS-1, G-TS-2, G-TS-4, G-TS-5, G-TS-6, G-TS-7, G-TS-8, G-TS-9, G-TS-10, G-TS-13, and G-TS-16.

PC# 2.4.6-5a
Public Concern: The Plan's guideline to place a cap on the amount of open and young forest in individual watersheds should be modified to include a clear statement of the watershed scale this guideline applies to.

Agency Response:
In the Plans of both Forests, we amended item 2 of guideline G-FW-1 to specify the 6th level (12-digit Hydrologic Unit Code) watershed scale as the scale we intend to use in applying the 60% cap on the amount of combined upland open plus upland young forest. Making this change complements standard S-WS-1 which also includes a clear statement that the 6th level watershed (landscape) scale is the one we intend to use. An overview and

explanation of the cataloging/mapping system for watersheds is provided in the introduction to section 3.6 (the Watershed Health section) of the FEIS.

PC# 2.4.6-5b
Public Concern: The Final EIS and Plans should include a map of where the young forest limit in O-WS-8 applies.

Agency Response:
The direction provided by objective O-WS-8 in both Forest Plans, promoting an increase in acres of forest of age 16 or older will apply to all 6th level (12-digit Hydrologic Unit Code) watersheds that contain NFS land. Maps showing the boundaries of all 6th level watersheds in or very near the Chippewa and Superior NFs are included in Section 3.1.2 (Physical and Biological Setting) of the FEIS. An overview and explanation of the cataloging/mapping system for watersheds is provided in the introduction to section 3.6 (the Watershed Health section) of the FEIS. The Plan Revision EIS (Section 3.6.1) points out that nine 6th level watersheds on the Chippewa NF, and none on the Superior NF, are directly affected by O-WS-8 under current conditions. A list of those watersheds and a map showing their location is included the Plan Revision record, which can be accessed by the public. The list of watersheds directly affected by O-WS-8 is likely to change throughout the period of plan implementation as a result of natural and human-caused vegetation changes on both NFS and non-NFS lands.

PC# 2.4.6-6
Public Concern: The Chippewa National Forest should control water levels to benefit wild rice, and provide for larger fish in forest waters, by retaining an intact old growth forest.

Agency Response:
The final Forest Plan for the Chippewa NF includes specific percentage objectives for attaining or maintaining older vegetation growth stages specific to the various landscape ecosystems (LEs) on the Forest. (Forestwide management direction, Landscape Ecosystem Objectives, Chapter 2, of the final Chippewa Plan). In each LE, objectives are clearly spelled out for age classes that are associated with old growth or multi-aged old growth. To provide for a diversity of tree species in each LE, the Plan also sets objectives for both forest type and individual tree species. The final Chippewa Plan also contains forestwide management direction in the form of desired conditions, objectives, standards and guidelines (such as desired condition D-VG-6 and objective O-VG-16) for vegetation composition, structure, age and spatial patterns. This direction was developed to assure that forest with intact old growth characteristics is either maintained or increased through time
.
The respondent's concern about rapid runoff and fluctuating water levels is at least partially addressed by standard S-WS-1 in the final Plan which calls for 60% cap on the amount of any given watershed that is in a young (less than age 16) forest or permanently open condition at any point in time. Studies in Minnesota and elsewhere have shown that when this cap is exceeded, levels of peak streamflow begin to reshape stream channels, increase in-channel erosion and sedimentation; and decrease physical and biological diversity within steams.

Also of possible interest to the respondent is the specific recognition of the importance of wild rice and fishing that's been added to water-related forestwide desired conditions (see desired condition D-WS-2) and standards (see standard S-WS-7) in the final Chippewa NF Plan.

Riparian and Fish Management (2.4.7)

PC# 2.4.7-1
Public Concern: The Chippewa and Superior NFs should protect or enhance riparian areas along lakes, streams, or wetlands.

-To provide corridors for wildlife travel between large patches.
-To provide for high quality water
-By excluding, or effectively controlling, timber harvest, new roads, trails and stream crossings
-By rerouting wetland trails onto established roads or trails
-By prohibiting, rather than simply discouraging, new facilities (such as roads, trails, campsites, and buildings) within riparian or floodprone areas.
-By managing vegetation along streams to reduce the impact of beavers on spawning habitat.

Agency Response:
We agree with the respondents who say riparian areas should be managed to protect or enhance their inherent ecological functions, which include the specifically mentioned functions of habitat (e.g. travel corridors) and water quality regulation, as well as many other functions such as bank stability, woody debris recruitment, and temperature regulation. See the Agency Response: to PC# 2.4.7-2 which discusses how riparian management direction in the Forest Plans has been expressly developed to protect or enhance these functions and lists the key direction (e.g. desired conditions, objectives, standards and guidelines) that's included in the Plans.

We also agree that typical forest management activities or developments such as timber harvest, road and trail construction, stream crossings, dispersed campsites, and motorized access, need to be controlled in ways that assure riparian movement toward, rather than away from, the desired riparian conditions (D-WS-10 and D-WS-11 in the revised Plans). In the revised Plans of both Forests, forestwide objectives, standards and guidelines, and a few of the standards and guidelines for specific management areas, are designed to provide these assurances. Key examples of management direction intended to provide protection when the above-mentioned management activities are conducted in riparian areas include:

Activity	Key Management Direction in Revised Plans
Timber Harvest	O-WS-3, O-WS-4, O-WS-5, S-WS-4, S-WS-9, S-WS-10 (CNF), S-WS-11, G-WS-4, G-WS-6, G-WS-13 (CNF), and G-WS-14 (SNF)
Roads or Trails	S-WS-4, S-WS-5, S-WS-10, S-WS-11, G-WS-6, G-WS-11 (CNF), G-WS-12 , G-WS-13 (SNF), G-WS-14 (CNF), G-WS-15 (SNF), S-TS-2, G-TS-7, G-TS-8, G-TS-10, and G-TS-16
Stream or Wetland Crossings	O-TS-4, O-TS-5, S-WS-4, S-WS-5, S-WS-6, S-WS-11, G-WS-11 (CNF), G-WS-12, G-WS-13 (SNF), G-WS-14 (CNF), G-WS-15 (SNF), S-TS-1, S-TS-2, G-TS-4, G-TS-5, G-TS-6, and G-TS-9
Campsites, Buildings	S-WS-5, S-WS-12, G-WS-6, and G-WS-7

We do not agree with respondents who say some or all of these typical forest management activities should be prohibited or totally excluded from riparian or floodprone areas. That's why the draft Plan wording of standard S-WS-5 which "discourages" (rather than "prohibits") new facilities in riparian or floodprone areas is retained in the revised Plans. This flexibility needs to be retained to meet the occasional demand for developments such as water access sites and some dispersed campsites, whose functional purpose is dependant on being located in riparian areas. We also believe that timber harvest should be retained as a tool for riparian management, because in many situations it's likely to be the only economically viable tool for restoring or improving vegetative conditions in

riparian areas. The revised Plans do limit timber harvest in the area immediately adjacent to streams, lakes and open water wetlands (what we call the "near-bank" zone in our Plans) to only those situations where its purposely used to maintain or restore the ecological function of that riparian area. (See forestwide standard S-WS-9 in the Plans of both Forests).

One respondent comments that we should reduce the impact of beaver on riparian areas by reducing the amount of aspen along streams. We believe that decisions about vegetative composition in riparian areas should be made at the project (site-specific) level, guided by direction in the revised Plans. One key element of guidance in the Forest Plans is objective O-WS-3 which states that long-lived species (such as white pine, red pine, black spruce or tamarack) will generally be favored over short-lived species (such as aspen) in the nearbank riparian management zone. The Plans also set vegetation composition and age class objectives by Landscape Ecosystem. In most Landscape Ecosystems, objectives for decades 1, 2 and 10 call for less aspen than currently exists as well as less young (age 0-9 years) forest than currently exits. Reducing the aspen component along streams is a viable way to enhance riparian function on some sites. But on a much smaller scale, in order to provide for beaver in areas where they've historically had a major influence on riparian function, maintaining or perhaps even enhancing the aspen component may be an equally viable option.

PC# 2.4.7-2
Public Concern: The Chippewa and Superior NFs should use riparian area buffers that are generally wider than those proposed in Alternative E.

Agency Response:
(Also see the response to PC# 2.4.7-24) We recognize that the width of riparian management zones (RMZs) or buffers, have been, and continue to be, a subject of varying opinions and debate at the scale of both the nation[1] and the State of Minnesota (MFRC riparian guideline development process). For use in the revised Forest Plans, and as part of the public process we used to develop alternatives, we reviewed and considered a number of possible approaches including: the recommended specific RMZ widths for various classes of waters that were included in the Citizen's Conservation Alternative and the references that the respondent says were used as a basis for that Alternative (e.g. Chippewa National Forest's Riparian Management Team CNF, 1995), the GEIS (1993), and the MNDNR's Region 2 riparian guidelines (MN DNR 1994). Consideration of these references was documented in the full text of the Riparian Management Reference Paper which is part of the Plan revision record. This list was narrowed to two for the Draft and Final EIS—each alternative in the EIS is assigned one of the following approaches to riparian management: (1) the MFRC green book riparian guidelines or (2) the MFRC riparian guidelines modified to reflect the functionally based riparian area delineation recommendations of Verry et al., 2000, Chapter 2[2]. Approach #2 is one we have incorporated as direction in the revised Plans. We felt that approach #2 better accounted for the strongest functional land/water interactions and would be easier to implement on the ground than the approaches represented by the Citizen's Alternative or any of the other references we looked at.

Riparian management in the revised Plans is based upon two basic premises: (1) the strength of the interaction between land and water is inversely proportional to the distance from the water's edge and (2) field delineation of a functional riparian area as the first course of action. The extent (distance) to which the functional areas extend landward from the water varies with the strength of the functional interaction between the land and the water, rather than a fixed distance. We have adapted the Verry Chapter 2[2] simplified methodology and keys for determining on-the-ground extent of this functional area. We adapted this in ways that maximize its compatibility with the MFRC guidelines.

Additionally, for purposes of management application, based on the Riparian Task Team Report (USDA-FS 1997b), we have subdivided the functional area into two RMZ components—nearbank zone and remainder zone. The nearbank RMZ includes the zone immediately adjacent to the stream, lake or open water wetland, and

generally corresponds to the area that's within one tree length (or 100 feet) of the stream, lake or open water wetland. The nearbank RMZ is the portion of the riparian area where the functional interaction is the strongest for all functions (including bank stability, organic matter input, shading, and habitat). Management in the nearbank zone is guided by the specific direction in the Plans of both Forests, including objectives O-WS-3 and O-WS-4; standards S-WS-9 and S-WS-10; and guidelines G-WS-5, G-WS-6 and G-WS-7.

The remainder RMZ represents the area that lies between the nearbank zone and the landward boundary of the functional riparian area. In comparison to the nearbank zone, the remainder zone provides for functional interactions that are fewer in number and not as strong. But the remainder zone is still quite important for functions such as the filtration of runoff and wildlife habitat. Management in the remainder zone is guided by the specific direction in the Plans of both Forests, including objective O-WS-5 and guideline G-WS-4.

The total width of the functional riparian area (e.g. the combined width of the nearbank and remainder zones) can vary from a low of 50 ft on each side of small (< 5 feet wide) perennial streams, to a potential high of several thousand feet (in the case of a wide floodplain along large rivers such as the Mississippi).

References cited in this response but not included in the FEIS list of references cited:

[1]Crow, Thomas R, M.E. Baker, and B.V. Barnes. 2000. "Diversity in Riparian Landscapes" Chapter 3 In *Riparian Management in Forests of the Continental Eastern United States*, ed. Verry, Elon S., James W. Hornbeck, and C. Andrew Doloff, Lewis Publishers, Washington, D.C., p. 63.

[2]Ilhardt, Bonnie L,, E.S. Verry, and B.J. Palik. 2000. "Defining Riparian Areas" Chapter 2 In *Riparian Management in Forests of the Continental Eastern United States*, ed. Verry, Elon S., James W. Hornbeck, and C. Andrew Doloff, Lewis Publishers, Washington, D.C., Pp. 23-42.

PC# 2.4.7-6
Public Concern: The Chippewa Plan should clarify why the Riparian Management Zone classification is not applied to some of the smaller lakes.

Agency Response:
In implementing the Plans of both the Chippewa NF and Superior NF we intend to apply the functional riparian area concept to all lakes and open water wetlands, regardless of size, that are shown on maps or otherwise identified at the project level. (See the glossary definition of "functional riparian area" in both Forest Plans). The portion of the functional riparian area that's immediately adjacent to the lake or open water wetland is called the "near bank" riparian management zone (RMZ). The "near bank" zone is identified as that area that is within 100 feet of lakes or open water wetlands. (See the glossary definition of "near-bank zone" in both Forest Plans). Taken together, this direction means that for management on National Forest land, RMZs are to be employed along all lakes and open water wetlands, regardless of size, that are shown on maps or otherwise identified at the project level. Thus, there is no direction in either Forest Plan that excludes small lakes from the management emphasis afforded by RMZs. This direction for defining the types of lakes and open water wetlands to which the riparian management zone applies was developed to closely parallel similar guidance provided in the Minnesota Forest Resources Council site level guidelines (specifically, see Minnesota Forest Resources Council. 1999. *Sustaining Minnesota Forest Resources: Voluntary Site-Level Forest Management Guidelines for Landowners, Loggers and Resource Managers*, Tables GG-2, GG-4, and GG-6.)

PC# 2.4.7-8
Public Concern: The Chippewa and Superior NFs should admit that adverse impacts to wetlands will occur from activities such as logging and ATV use, and that these impacts will occasionally be severe.

Agency Response:
The respondent asks the Forest Service to acknowledge that timber harvesting and ATV or off-road vehicle use on the Chippewa and Superior NFs will result in adverse impacts to wetlands. We agree with the respondent's basic premise that, despite the draft Plan wetland avoidance and impact minimization guidance of G-WS-12 (CNF) and G-WS-13 (SNF), timber harvest and RMV use to the degree represented by the Plans of both Forests is unlikely to occur without causing some adverse impact to wetlands. (Likelihood of wetland impacts from RMV use should be considerably lessened, though not completely eliminated, by the post-draft Plan decision to prohibit cross county OHV use on both the Chippewa and Superior NFs). The Plans provide a number of more specific standards and guidelines designed to limit the magnitude of these impacts by maintaining fundamental wetland function (such as hydrological function) on sites affected by timber harvest and RMV trails. Standards S-WS-4, S-WS-11, and S-TS-2; and guidelines G-WS-11 (CNF) and G-WS-12 (SNF), are key examples of Plan direction designed to maintain functional attributes of wetlands.

We also agree with the respondent that impacts of timber harvest and RMV use on wetlands should be acknowledged. The appropriate place to provide this acknowledgement is in the Plan Revision EIS, specifically in the discussion of effects common to all alternatives. Although this discussion in the DEIS did acknowledge some wetland effects, it failed to consistently point out which of the discussed effects from timber harvest or trails are relevant to wetlands. In the Final EIS we have remedied this shortcoming through minor rewording to clarify which of the discussed effects are wetland-related.

PC# 2.4.5-9
Public Concern: The revised Plans should direct that no motorized trails be constructed across, or near, wetlands.

Agency Response:
The respondent requests that we identify how effects of timber harvest and motorized trails on erosion-sensitive areas will be mitigated, require new motorized trails be subject to pre-construction environmental impact statements, and locate motorized trails so that they do not cross or come near wetlands.

The following are key examples of forestwide direction in the Plans of both Forests that is intended to mitigate the effects of timber harvest and motorized trails on erosion-sensitive areas: S-WS-2, S-WS-3, S-WS-4, S-WS-6, G-WS-4, G-WS-6, G-WS-8, G-WS-13 (CNF) and G-WS-14 (SNF).

All proposals for new motorized trails will be subject to the project-specific analysis, public review, and decision requirements of NEPA. Project-specific factors, such as the size and sensitivity of the affected forest area, will be used to determine the appropriate analysis process and documentation (e.g., whether the decision will be obtained through an Environmental Impact Statement, or other forms of NEPA documentation such as Environmental Assessments or Categorical Exclusion).

Despite our best efforts to locate new motorized trails outside or away from wetlands (per CNF guideline G-WS-12 and SNF guideline G-WS-13), the sheer abundance and distribution of wetlands on both Forests, almost surely means that some newly constructed trails will be placed across or near wetlands. The following key direction is intended to minimize impacts in those situations: desired conditions D-WS-8, 9, and 10; objective O-WS-2, standards S-WS-4, 5, 6, 9, 10, 11, and 13; and guidelines G-WS-6, 7, 11(CNF), 12 (SNF), 13 (CNF), 14 and 15 (SNF).

Placement of fill in wetlands for trail construction also requires a permit from the U.S. Army Corps of Engineers and is subject to review by Minnesota DNR and local and tribal governments. The goal of both the Chippewa and Superior National Forests is to manage recreational motor vehicle use, in part, by maintaining a trail system that provides for motorized access that consolidates use in the least environmentally sensitive areas with the least amount of environmental impact.

PC# 2.4.7-9
Public Concern: The Chippewa NF should avoid the logging of wetlands in the Jessie Lake Watershed and monitor timber harvest and prescribed burning operations near lakes, streams or wetlands.

Agency Response:
We share the respondent's concern about impacts of future forest management activities on water quality and quantity on all waters in or near both Forests, not just those within the watershed of Jessie Lake. Many items of direction (several of the desired conditions, objectives, standards and guidelines labeled "WS") in the Forest Plans are designed to either limit adverse effects or promote use of forest practices which could actually improve conditions of lakes, streams, wetlands and other riparian areas.

We recognize that focus on the Jessie Lake watershed has recently been drawn due to the addition of Jessie Lake to the State of Minnesota 2004 (federal Clean Water Act Section 303(d)) list of Impaired Waters. We understand that the basis for "listing" Jessie Lake is nutrient enrichment of the lake. We also recognize that forest management activities such as timber harvest and prescribed burning, without adequate site- or watershed-scale controls, can contribute to levels of nutrients and other conventional pollutants in lakes, streams and wetlands. The revised Chippewa Forest Plan does not result in decisions to conduct forest management activities on any particular site in the Jessie Lake (or any other) watershed. Such decisions, will be the product of project level, site-specific decision making as needed to meet requirements of NEPA. But the Forest Plan does establish the strategy for assuring that project level impacts of forest management are minimized. With this in mind, we have added specific direction to the revised Plans to guide planning for any proposed projects which have the potential to increase non-point source pollution within watersheds of Impaired Waters. This added direction is guideline G-WS-2 in the Plans of both Forests.

PC# 2.4.7-10
Public Concern: The Plans should provide direction to mimic the natural range of water flow on streams where the Forest Service has control of flows.

Agency Response:
We agree that it's important to not only assure some minimum level of flow is maintained in streams below Forest Service-controlled dams (as provided for in S WS-8) but to also strive to achieve seasonally-appropriate ranges of low through high flows in these streams. Direction encouraging the maintenance of seasonal flows and natural lake levels associated with Forest Service-controlled dams is expressed in desired condition D-WS-8 in the Plans of both Forests. This direction on flow range is stated as a desired condition rather than a standard because, on occasion, the reason the dam is in place may preclude mimicking seasonally-appropriate downstream flow levels. Flow patterns may also be largely influenced by dams located outside of the Forest boundaries (e.g. upstream or downstream of the Forest). For these reasons, we've decided to retain both S-WS-8 and D-WS-8 as originally worded in the draft Plans of both Forests, and we feel this direction clearly portrays our desire to mimic the natural range of water flow within the sideboards established by the operational goals of the dam.

PC# 2.4.7-11
Public Concern: The Chippewa and Superior NFs should use the Minnesota Forest Resource Council riparian management guidelines in managing vegetation near seasonal ponds.

Agency Response:
Both the Chippewa and Superior NFs intend to use relevant MFRC site level guidelines as a base level of protection for seasonal ponds. One of the MFRC guidelines for seasonal ponds (General Guidelines, page 71) specifies that "the desired amount of leave trees and other vegetation left on a site following forest management activity will depend on site characteristics and landowner objectives". In the spirit of that MFRC guideline, and because none of the MFRC guidelines specifically address how to protect seasonal ponds in forest stands commonly subject to uneven-aged harvest treatments, the NFs have developed guideline G-TM-6 as a means of assuring high quality habitat is maintained around seasonal ponds in northern hardwood forest types. The MFRC guidelines (Wildlife Habitat, page 37) clearly point out that quality habitats in such areas are required by at least one amphibian species, the blue-spotted salamander. We have decided to retain guideline G-TM-6 in the final Plans of both Forests because we think it's fully in concert with the MFRC guidelines for seasonal ponds, provides direction for maintaining an important habitat need not directly addressed by the MFRC guidelines, yet still allows some level of selective harvest (provided 70% or more closed canopy is maintained) around the perimeter of the pond.

PC# 2.4.7-12
Public Concern: The Chippewa and Superior NFs should manage riparian areas in a proactive way.

AND

PC# 2.4.7-13
Public Concern: The Chippewa and Superior NFs should manage riparian areas in a mitigative way.

AND

PC# 2.4.7-15
Public Concern: The Chippewa and Superior NFs should actively manage for healthy riparian areas.

Agency Response:
Respondents offer a range of views about whether management of riparian areas should be active (vs. passive or "hands off") or proactive (vs. mitigative). In the final Plans of both Forests we have opted for riparian management that is both active and proactive. Our use of the word "active" reflects our intent to actively conduct projects in riparian areas, as appropriate, to help meet the full range of Plan desired conditions and objectives. Our use of the word "proactive" reflects that, unlike our 1986 Plans, revised Plans include statements of desired conditions (such as D-WS-10 and D-WS-11) specific to riparian areas, and objectives (such as O-WS-3, O-WS-4 and O-WS-5) to guide our progress toward those riparian conditions. "Proactive" also implies our intent to initiate projects for the expressed purpose of moving toward those desired conditions. In recognition that some riparian areas are not currently at optimum health, we felt our revised Plans should contain clear direction for projects specifically designed to improve the ecological functioning of those areas. Although site-level mitigation of effects from non-riparian focused projects will continue to play a role (guided by the MFRC guidelines) in our riparian management, we strongly feel we need to go beyond that in order to effectively restore or improve riparian areas that are currently in a state of diminished health. Revised Plans also recognize that riparian areas are important contributors to overall watershed health, and to address that, the Plans provide direction appropriate to both the watershed and site (e.g. project)-level scales.

PC# 2.4.7-14
Public Concern: The Final EIS should include a cumulative effects analysis that considers impacts of non-federal actions on riparian areas.

Agency Response:
The FEIS does contain a cumulative effects analysis that considers the watershed health impacts of actions on non-federal lands for both Forests. This analysis can be found in section 3.6.1 (Watershed Management) of the FEIS in the description of effects for Indicator #8. The cumulative effects analysis from the DEIS has been bolstered for the FEIS by explaining the rationale for using Watershed Indicator #8 as an integrator of cumulative effects at both the watershed and riparian area scale and adding a more thorough discussion of the limitations and other facets of Indicator #8. We have no basis for projecting any difference between alternatives, or between past, current or future conditions, in the degree to which riparian guidelines are applied on non-federal land. We also see no basis for assuming that future compliance with MFRC guidelines on non-federal land will be unacceptably bad, or when coupled with projected future riparian area conditions on NFS land, will result in exceeding any meaningful known threshold of impact for riparian condition.

PC# 2.4.7-18
Public Concern: The Plans should provide a range of management options for riparian areas to assure continued habitat for wildlife that require late and early successional, as well as old and young, forests.

Agency Response:
We agree that direction in the Plans of both Forests should provide a range of management options, providing for a mix of late and early successional habitat, in riparian areas. We believe the final Plans provide this flexibility in two ways.

The first way is through the riparian-specific management direction (desired conditions, objectives, standards and guidelines) set out in the Plans. Desired condition D-WS-10 sets the tone for flexibility by specifying riparian areas with “vegetative communities that are diverse in composition and structure”, with plants “present at a variety of ages and sizes”, and multi-layered forest canopies “where suitable to the site”. Other management direction in the Plans allows a range of vegetative management practices or silvicultural treatments to be used in riparian areas, including treatments needed to maintain early successional forests, provided such use is appropriate on a site-specific basis. Per standard S-WS-9, the near-bank riparian management zone adjacent to lakes, streams or open water wetlands is not a “no cut” zone. Rather it is a zone where active management, including timber harvest geared to even-aged management, can be used, provided it’s used to help maintain or restore riparian ecological function. On a site specific basis the use of timber harvest to promote early successional or young-age forest to benefit species such as woodcock or beaver is entirely in keeping with this direction. Likewise, direction (objective O-WS-5) for the remainder (e.g. outer) riparian management zone allows even-aged timber harvest practices for any site-appropriate early or late successional tree species, while favoring harvest at extended rotations.

The second way the Plans provide flexibility in riparian area management is through the ecological template provided by landscape ecosystems. Our knowledge of landscape ecosystems should provide insights about how riparian areas functioned under natural conditions and to help us make project level decisions with this in mind. Specifically, our understanding of the natural ranges and amounts of the various vegetative growth stages in individual landscape ecosystems will help us determine which treatments are appropriate to specific riparian areas. Landscape ecosystems with historically or naturally high relative proportions of vegetation in the seedling/sapling stage, should, through time, have those proportions generally reflected in their riparian area composition.

PC# 2.4.7-19
Public Concern: The Chippewa and Superior NFs should manage riparian areas to mimic the affects of natural disturbances to provide for the protection, restoration or enhancement of riparian ecosystem function.

Agency Response:
We agree with the respondent. Riparian management direction in our Plans is designed to move riparian areas toward types, magnitudes and frequencies of disturbance thought to be more in line with natural processes. This direction provides for proactive management, restricting management activities to only those which maintain or improve/restore natural processes and ecological functions.

We fully recognize our knowledge of how natural processes historically affected specific riparian areas is incomplete. So we've developed management direction which attempts to address some of the more obvious examples of where current disturbance processes are out of sync with our understanding of natural patterns. A few key examples of this type of direction include:

- desired condition D-WS-8, to minimize the number of artificially impounded waters and manage dams as much as possible to mimic natural lake levels and seasonal flows
- desired condition D-WS-11, to provide for woody debris in aquatic and riparian ecosystems
- objective O-WS-2, to conduct projects specifically to enhance or re-establish natural riparian ecological processes and diversity and to improve road and trail crossings for fish passage, stream stability and unimpeded flow
- objective O-WS-6, to reconstruct disrupted stream channels, based on knowledge of stream geomorphology
- standard S-WS-8. to maintain minimum downstream flows below Forest-operated dams, and
- guideline G-WS-3, to restrict the removal of coarse woody debris from streams and lakes.

We also intend to use our understanding of Landscape Ecosystems to guide vegetative composition, and the types and frequencies of disturbances in riparian areas. Though focused primarily on terrestrial (vs. aquatic or riparian) conditions, Landscape Ecosystems do establish a template for the natural ranges and amounts of the various vegetative growth stages and should at least provide a clue about treatments that are appropriate to specific riparian areas.

PC# 2.4.7-20
Public Concern: The Chippewa and Superior NFs should maintain a 50 foot wide upland forested buffer between upland clearcuts and wetlands and other lowland types to protect the high level of habitat diversity and the rare species associated with these edges and the Final EIS should analyze the effects of clearcutting

Agency Response:
The respondent suggests, to protect rare species that occupy water edge environments, a 50 foot wide upland buffer be left untreated between wetlands and upland clearcuts. We have opted to not impose a "one-size-fits-all" buffer width, of 50 ft or any other size, as a means of protecting such species. Such a minimum buffer may or may not be adequate to provide protections for rare water-edge species at any given site. Applicable direction we are providing in the Plans of both Forests includes objectives O-WL-17 (CNF) and O-WL-18 (SNF) which direct the maintenance, protection or improvement of habitat for all sensitive species. This objective includes a provision for the development of site level or fine filter strategies for high quality potential habitat or known locations of sensitive species. We feel this objective compels site level evaluation and promotes development of

protections that are tailored to conditions at individual sites. Standards S-WL-5 and guidelines G-WL-11 and G-WL-12 also provide protection to sensitive species. Additionally, riparian management zones in the revised Plans, as influenced by direction such as standard S-WS-9, provide a tool for maintaining or improving important wetland/upland transition habitats along open water wetlands.

Specifically for the boreal owl and great gray owl, direction is provided in the form of fine filter objectives O-WL-20 and O-WL-21 (SNF); standard S-WL-6 (SNF); and guidelines G-WL-15 (CNF) and 16 (CNF) and G-WL-13 through 15 (SNF).

PC# 2.4.7-21
Public Concern: The Chippewa and Superior NFs should provide an uncut buffer between timber harvest areas and stream banks.

Agency Response:
Respondents object to timber harvest, or use of clearcut harvests, in the riparian management zones along streams. One of the respondents suggests that timber harvest should be capped at the watershed scale for hydrological reasons.

We do not agree that riparian areas along streams should be "off limits" to timber harvest, including clearcut harvests. Timber harvest represents a valuable tool, and often times will be the only economically viable tool, for restoring or improving vegetative conditions in riparian areas. We do, however, agree that the use of timber harvest of any type in the area immediately adjacent to streams (what we call the "near-bank" zone in our Plans) should be limited to only those situations where it contributes to maintaining or restoring the ecological function of that riparian area. (See forestwide standard S-WS-9 in the Plans of both Forests) This Plan direction provides for the exception which appears to be supported by the second respondent, in that it allows timber harvest in the near bank zone if the harvest is for the expressed purpose of improving ecological function, which includes fish habitat, but also includes other functions such as water quality, wildlife habitat, and botanical conservation.

The Plans of both Forests do include direction which limits timber harvest on National Forest System lands based upon the amount of young (<age 16) forest that is present, or reasonably foreseeable, on a whole watershed basis. See standard S-WS-1 in the Plans of both Forests. As suggested by the second respondent, the reason this standard has been included as Plan direction is to limit negative effects (primarily excessive in-channel sediment generation) on stream hydrology resulting from increases in peak flows.

PC# 2.4.7-22
Public Concern: The Chippewa NF should further analyze the effects of proposed standard S WS-7.

Agency Response:
This comment expresses concern that the Chippewa NF will not realistically be able to comply with a standard directing that discharge be controlled to minimize downstream impacts arising from the removal of beaver dams or other channel obstructions. We recognize that it is nearly impossible to eliminate all downstream impacts (such as flooding, sedimentation, changes in the shape or dimension of channels, etc.) of dam removal. We do, however, feel that it's sometimes possible to control the dam removal process (such as by gradual lowering of head as opposed to instantaneous removal of the entire dam) in ways that help to minimize these impacts. We think that this standard is a reasonable means of assuring that the safeguarding of downstream resources is consistently factored into the plans and processes used for removing dams and other obstructions from stream channels. For these reasons, standard S-WS-7 is left unchanged in the final Plans for both Forests.

PC# 2.4.7-23
Public Concern: The Chippewa NF should further analyze the effects of proposed desired condition D WS-10.

Agency Response:
This comment expresses concern that the Chippewa Plan desired forestwide condition of having riparian areas with ecological function unaltered by roads and ditches is unachievable. We agree that it's impossible to construct or maintain roads or road ditches in riparian areas without altering, at least to some degree, the ecological (hydrological, biological, physical, etc.) function of these areas. We also recognize that there will be continuing need to have some roads and road ditches located in riparian areas, for example those roads needed to access existing or new boat ramps. For these reasons we have removed the sentence quoted by the respondent from desired condition D-WS-10 in final Plans of both Forests. Because we believe minimal road and ditch impact to riparian ecological function is a condition that is both achievable and worthy of striving for, we have revised the new last sentence in D-WS-10 to say that openings in riparian areas from roads, trails, and other purposes will occur infrequently and result in minimal alteration of riparian ecological function.

PC# 2.4.7-24
Public Concern: The Chippewa and Superior NFs should implement riparian management zones along all streams, lakes and wetlands.

> **-Because these zones are critical for the protection of riparian functions and features**
> **-Because National Forest riparian management should be held to a high standard and build on forest riparian work developed by the forestry community in MN.**

Agency Response:
(Also see the response to PC# 2.4.7-2). In implementing the Plans of both the Chippewa NF and Superior NF we intend to apply the functional riparian area concept to all lakes and open water wetlands, and all streams (except for intermittent streams that are 3 feet or less in width) that are shown on maps or otherwise identified at the project level. (See the glossary definition of "functional riparian area" in both Forest Plans). The portion of the functional riparian area that's immediately adjacent to the lake, stream or open water wetland is called the "near bank" riparian management zone (RMZ). The "near bank" zone is identified as that area that is within 100 feet of lakes, open water wetlands or streams five feet or more in width; or within 50 feet or any perennial stream less than 5 feet wide or any intermittent stream less than 5 feet wide but more than 3 feet wide. (See the glossary definition of "near-bank zone" in both Forest Plans). Habitat features of the near bank zone are provided through a number of desired conditions, objectives, standards and guidelines.

We agree the MFRC's riparian guidelines provide a good starting point for riparian protection. That's why we adopted those guidelines as a base level for riparian protection. That also why our direction for defining the types of lakes, streams and open water wetlands to which the riparian management zone applies closely parallels similar guidance provided in the Minnesota Forest Resources Council site level guidelines (specifically, see Minnesota Forest Resources Council. 1999. *Sustaining Minnesota Forest Resources: Voluntary Site-Level Forest Management Guidelines for Landowners, Loggers and Resource Managers*, Tables GG-2, GG-4, and GG-6.). We also agree that Forest Service Policy dictates a somewhat narrower set of objectives for riparian management on the NFs than what is accommodated by the MFRC site-level guidelines. That's why the Plans establish objectives which favor management designed to maintain or restore the ecological composition, structure and function of riparian areas, particularly in the near-bank zone where the functional linkage between land and water is the strongest. Providing habitat for fish and wildlife is a key facet of riparian composition, structure and function. Management direction in both Forest Plans includes a number of desired conditions, objectives, standards and guidelines intended to promote this emphasis. Direction promoting and favoring the presence of

red and white pine and other long-lived species in the near-bank zone (objective O-WS-3) is included in the Plans of both Forests.

PC# 2.4.7-17
The plans should emphasize restoration and protection of pines in riparian areas.

AND

PC# 2.4.7-25
Public Concern: The Chippewa and Superior NFs should use riparian management zones that are two-tiered.

Agency Response:
Riparian management direction in the Plans of both Forests is fashioned around the use of a two-tiered riparian management zone (RMZ). In both Forest Plans, direction for management of the inner zone (or "near-bank" zone as it's called in the Plans) is driven by the desire to maintain or restore riparian ecological composition, structure and function. Timber harvesting, including clearcutting, can be conducted in the near-bank zone, but only in site-specific locations where harvesting will contribute to the maintenance or restoration of riparian ecological function (see S-WS-9). We believe clearcutting can be a useful near-bank riparian management tool on some sites, particularly where long term improvement of ecological function can be best served by converting stands of principally short-lived tree species (such as aspen or jack pine) to principally long-lived tree species (such as white pine, red pine, black spruce or tamarack). See objective O-WS-3, which directs that management for long-lived tree species be favored in near-bank RMZs. Direction for the outer riparian zone (called the "remainder" zone in the Plans) is provided in objective O-WS-5 in both Forest Plans. This objective promotes consistency with maintenance of the near-bank zone by favoring management for extended rotation of site-suitable tree species (either short- or long-lived) in the remainder zone.

PC# 2.4.7-26
Public Concern: The Chippewa and Superior NFs should adopt Alternative E's watershed scale direction and direction for maintaining and restoring riparian functions.

Agency Response:
In the final Forest Plans for each Forest we are adopting essentially the same watershed scale direction, and the same direction for maintaining and restoring riparian ecological functions, that was described in the draft Forest Plans (e.g. the direction associated with Alternative E as described in the DEIS). Direction in the draft Plans specifically related to timber harvest in near-bank riparian zones (standard S-WS-9) has been retained in the final Plans for both Forests.

PC# 2.4.7-27
Public Concern: The Chippewa and Superior NFs should improve protection of riparian areas by placing all lake shoreland area into the Longer Rotation MA under the preferred alternative (Alternative E).

Agency Response:
Refer to the Agency Response: to PC# s 2.4.7-1 and 2.4.7-2. The riparian management zones and associated management direction described in these responses provides for forestwide protection and enhancement of lake shorelands. Because these protections will apply Forestwide on both Forests, riparian area protection is not dependant on land allocation to the Longer Rotation MA, or any other particular MA. Forestwide management

direction for riparian areas is highly compatible with the concept of managing for longer rotations in shoreland areas of lakes, as evidenced in particular by:

- Objective O-WS-3, which calls for favoring long-lived species that are suitable to the site, in near bank riparian management zones (RMZs), and
- Objective O-WS-5, which calls for favoring extended rotations of site-suitable tree species in the remainder RMZ.

PC# 2.4.7-28
Public Concern: The Chippewa and Superior NF should explain why there are no Riparian Emphasis Areas in Alternative D.

Agency Response:
Under Alternative D, riparian areas would not be in the suitable timber base, therefore no special management area designation would be necessary to protect those areas. Based on the Forestwide management direction for riparian management zones (reference the Agency Response: to PCs #2.4.7-1 and #2.4.7-2), which would have applied to Alternative D had it been selected, any management in riparian areas would have to protect or enhance ecosystem function. (Also see EIS section 2.4.4). We believe that Alternative D responded to the issues that the Sierra Club raised.

PC# 2.4.7-29
Public Concern: The Chippewa and Superior National Forest, and the Regional Forester, should provide a more improved level of watershed health and riparian management than what is called for in Alternative E.

-By selecting Alternative B or D as the basis for management in the final Plans
-By selecting Alternative D as the basis for management in the final Plans
-By adding the proactive riparian management approach to Alternative F and then selecting Alternative F as the basis for management in the final Plans
-By selecting Alternative G as the basis for management in the final Plans

Agency Response:
The EIS addresses seven alternatives and each has been assigned an approach to riparian management that best matches the theme of the alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the seven alternatives analyzed in the EIS provide for a reasonable number of examples covering the range of management options for all forest, including riparian, resources. Therefore, in response to the second respondent, it is not necessary to modify Alternative F to include the proactive riparian management approach, recognizing that the proactive approach is already built into the range of alternatives via it's inclusion in Alternatives B, D, Modified E and G.. The Regional Forester clearly has/had the option of modifying the alternative he selected for implementation in his decision, including changing any given alternatives' approach to managing riparian areas.

The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Section 3.6 of the EIS describes projected relative impacts of the alternatives to indicators for condition of watershed and riparian resources. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the

issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

PC# 2.4.7-30
Public Concern: The Chippewa National Forest should modify Alternative E by allocating the proposed Wilderness near the Leech Lake River (identified in Alternatives B and G only) to proposed Wilderness rather than to Riparian Emphasis Area.

Agency Response:
The EIS includes seven alternatives, with different approaches to identifying proposed Wilderness areas, each approach reflecting the theme of the alternative it was applied to. The alternatives were built around a range of themes, and the components of each alternative, including any proposed allocations to proposed Wilderness, were constructed around those themes. The Regional Forester has determined that the seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full range of options for proposed Wilderness. Therefore, in response to this respondents' comment, it is not necessary to modify Alternative E to include the suggested addition of the proposed Wilderness area near Leech Lake River, recognizing that this proposed Wilderness area is already built into the range of alternatives via it's inclusion in Alternatives B and G.. The Regional Forester clearly has/had the option of modifying the alternative he selected for implementation in his decision, including changing any given alternatives' approach to allocating proposed Wilderness. This includes the option of applying proposed Wilderness MA allocations from non-selected alternatives to the selected alternative.

Climate, Weather, and Atmospheric Processes (2.4.8)

PC# 2.4.8-1
Public Concern: The Plans and Final EIS need to address the subject of climate change.

-To assure that Plan goals for wildlife and trees will be possible to achieve.
-To serve as the basis for protecting sensitive habitats as "seed" areas for the time when conditions return to normal
-To assure that the Forests' role in carbon storage is provided for
-By retaining intact old growth forests.
-By rebuilding intact forest.
-To reflect new scientific information.
-By minimizing over-mature trees in order to contribute more to atmospheric oxygen and to lock up more atmospheric carbon.
-By including or expanding SMCs and RNAs
-By selecting Alternative D as the course of action in the final Plans

AND

PC# 2.7.7-13
Public Concern: The Forest Service should consider managing for tree species that would benefit from conditions of a warming climate.

-Such as white pine.
-Such as jack pine.

-Such as aspen.
-But not red pine, white spruce, or balsam fir.

Agency Response:
The FEIS (Sections 3.1.2, 3.3.1, and 3.3.4) mentions climate change as part of the overall biological setting of the Forests and briefly speaks of climate change as one of many likely factors influencing types and amounts of indicator habitats for wildlife. Unquestionably, we know there's an abundance of recent scientific discourse on the interplay of forests and climate change. The publications specifically referenced by respondents (Newell and Stevens, 1999 and Papadopol, 2000) are just two examples of a multitude of documented work on this topic. We believe the level of uncertainty about possible climate change effects on Minnesota forests, or the overall role of our forests in influencing climate change (e.g. via carbon sequestration, etc.), is still too great to provide a firm foundation for proposing broad-scale changes to vegetation or forest practices. That's the reason more thorough analysis of climate change, or specific Plan direction to address climate change, was not developed in our Plan revision process.

As science advances to a level of greater clarity about the interrelationships between Minnesota forests and climate change, and measures we can take to effectively intercede, numerous legal provisions for plan amendments and revisions provide the means for making responsive changes to Plan direction. We believe the rates of change are likely to be slow enough that our ability (if any) to exert influence will not be significantly compromised by the direction of management our Plans establish for the next 10-15 years.

We also are hopeful that revised Forest Plan direction for moving toward increased diversity in amounts, conditions and patterns of vegetation (see desired conditions D-VG-3, D-VG-5, D-VG-6, D-VG-7, and D-VG-8 in both Forest Plans) will result in forests that are more resilient in the face of potential climate change.

Biological Elements - General

Multiple Biological Resources (2.5.1)

PC# 2.5.1-1
Public Concern: The Chippewa National Forest should emphasize protecting primary significant natural resources on the Forest in order to maintain viable populations of significant aquatic and terrestrial species.

Agency Response:
We agree that both the Chippewa and Superior NFs' undeveloped lakeshores, stream (riparian) corridors, old-growth forests, and remaining natural plant communities are significant natural resources. The Revised Plans were developed to address management of these resources together with the many other important resources of the Forests to provide for forest health and biological diversity and meet social needs. We believe that the strategic framework exists in the Forest Plans to address these resources. Key management direction in the Plans for resources above is provided by (but not limited to) the following:

Undeveloped lakeshores, stream (riparian) corridors: D-WS-1, 10, 11, O-WS-1-10, and all standards and guidelines. Riparian management not only reflects the intent of guidance in Minnesota Forest Resources Council's *Voluntary Site-level Forest Management Guidelines* (MNFRC 1999c), but goes beyond that to enhance or restore ecological functions in all riparian areas. The Revised Plans do not propose the development of

undeveloped shoreline, but does not prohibit it. If proposed, project level planning through the public National Environmental Policy Act process would address this issue.

Old-growth forests and natural plant communities: Plans provide direction to ensure that over time there would be an adequate or greater representation of all vegetation growth stages and age classes that would have been found under the range of natural variability of our forests. This includes an increase in the amount of old growth forests. Key objectives are: Landscape Ecosystem objectives for vegetation composition and age and management indicator habitats and all other VG management direction.

Viable populations of terrestrial and aquatic species: D-WL-1-10, O-WL-1-3, O-WL-4, O-WL-17 (Chippewa), O-WL-18 (Superior), S-WL-5, G-WL-11, 12, and management indicator habitat objectives by Landscape Ecosystem. Also, as stated in the introductory paragraphs to the Wildlife objectives, standards, and guidelines section, desired conditions (including species viability) is also addressed through management direction for other resources.

Ecosystem/Habitat Composition and Function (2.5.2)

PC# 2.5.2-1
Public Concern: The Chippewa and Superior NFs should revise the application of plant community concepts and designations in the Final EIS analysis.

Agency Response:
You correctly recognize the diversity of lowland plant communities we encounter on the Chippewa and Superior. Your perception of the apparent resolution at which we conducted planning for disturbances in lowland forest and predicting outputs through timber harvest is not entirely correct. Lowland white cedar stands are not scheduled for timber harvest because, as you correctly state, regeneration can not be assured. Other lowland forest stands are listed as “not suitable” for timber production because of low site productivity, low stocking, or regeneration can not be assured. These forest stands are not scheduled for harvest. While inventory data are not entirely accurate and unproductive or fragile lowland stands could be considered for timber harvest, managers are still bound by law to guarantee adequate restocking of forested stands following harvest. Standards and guidelines to prevent rutting in wetlands and maintain site productivity must also be followed. We recognize that our Landscape Ecosystems for lowland forests are somewhat coarse for detecting the differences in a heterogeneous landscape. We believe that the additional safeguards already described and project level evaluations will result in sustainable lowland forest communities.

PC# 2.5.2-2
Public Concern: The Chippewa and Superior National Forests should address effects of logging on deer populations and subsequent impacts on cedar ecosystems in the Final EIS analysis.

Agency Response:
Revised Plans do not propose harvest of cedar forest communities. They provide direction to restore cedar (O-VG-6 [Superior], O-VG-7 [Chippewa], Landscape Ecosystem tree diversity objectives) and to generally harvest white cedar trees only if regrowth is likely (G-TM-4).

The Biological Evaluation (BE) (USDA Forest Service 2004e, Guild 7: northern mesic hardwood forest and Guild 8: dry-mesic upland forest) Chapter 3.3.6.4 of the EIS and address impacts of logging on deer populations and deer impacts on other resources, including *Calypso bulbosa* and *Cypripedium arientinum* and other sensitive

species. In addition we collected information on deer and their potential negative impacts, including: a review of deer ecology is provided in the planning record (Species Data Collection Form: White-tailed Deer 2/07/02; Eastern Hemlock, Yellow Birch, and White Cedar Status and Threats (USDA Forest Service 2002d, planning record); and, during two species expert panels information was collected on risks from deer to sensitive species (USDA Forest Service 2002d, planning record). Included in these reviews and panel information is information regarding herbivory issues. It is widely recognized that some negative effects of high deer populations include reforestation and other herbivory issues.

Section 3.3.6.4 of the Final and Draft EISs state that "concern exists that landscapes which are particularly favorable for deer, a common species, do not necessarily provide adequately for the long-term sustainability of some other species, including some which are considerably rarer. There is also concern that at high population levels, white-tailed deer can cause major changes in the composition and structure of forest communities by browsing shrubs and tree seedlings, and grazing understory forbs…a variety of herbaceous plants may decline under sustained deer foraging…Canada yew, listed as a sensitive species on the two national forests, is an uncommon coniferous shrub across most of the northwoods because it is a preferred food of deer and doesn't recover well after browsing…Regenerating forest stands can be damaged by high population levels of deer. Deer browsing can alter species composition. Regeneration of northern white cedar and eastern white pine can be very difficult due to deer depredation." Additionally, the Species Data Collection Form indicates that…"Deer browsing in remnant upland white cedar stands along Lake Superior in northeast Minnesota has the potential to alter future composition of canopy tree species through the sustained prevention of cedar recruitment…"

Section 3.3.6.4.a and 3.3.6.4.b provide analysis of a range of alternatives which would result in deer habitat conditions which would range from lower to higher than current conditions, and which would include conditions far in excess of the RNV to below RNV.

During development of Revised Plans, we considered information on impacts of logging and road building on rare and sensitive species, including the potential for microclimate or other habitat changes that would negatively impact rare and sensitive species (USDA Forest Service 2002e, planning record). We believe that the strategic framework exists in the Forest Plans in direction for timber, wildlife, vegetation, and road management to address these potential impacts and therefore it is not necessary to add more specific management direction. Key management direction that provides this strategic framework includes, but is not limited to: : D-TS-2, D-TS-3, O-TS-3, 4, 5, 7, G-TS-1, 12, S-TS-3, G-TS-13, G-TS-14, D-WL-1-9, O-WL-7, O-WL-1-3, O-WL-17 (Chippewa), O-WL-18 (Superior), G-WL-11-12, S-WL-5, O-WL-30 (Superior), O-WL-31 (Chippewa), and Landscape Ecosytem vegetation and management indicator habitat objectives. In addition the Superior Plan provides direction specific to *Cetrarius aurescens, Menegazzia terebrata, Sticta fuliginosa, Ramalina thrausta* (G-WL-21) and Taiga alpine (O-WL-26, S-WL-7). Project-level planning through the National Environmental Policy Act would address the need for inventories or site level protections.

PC# 2.5.2-3
Public Concern: The Chippewa and Superior National Forests should include more specific direction for restoring and maintaining ecological functions and diversity.

-With numerical objectives and a measurable baseline.
-With site-level standards and guidelines.
-With standards prohibiting use of transgenic trees in reforestation.
-To provide a more accurate analysis of present net value.

Agency Response:
The words "where socially, economically, and ecologically suited and needed" were not needed in O-VG-1 and have been removed. The newly worded introductory paragraph that precedes O-VG-1 directs managers to

consider current and future applicable ecological and social information. Although this concept is applicable to all resource management direction, we have included it here to highlight to managers that implementation of the broad and strategic vegetation direction requires continual scientific inquiry to appropriately develop project level management alternatives.

We acknowledge that the Forest Plans do not provide measurable objectives for ecological processes. This choice was made for two key reasons. First, the Regional Forester envisioned these Plans as broad strategic, not wholly prescriptive, documents. Final Forest Plan Forest-wide goals, desired conditions and objectives, standards and guides all emphasize an active and effective proposed site-specific project analysis within the National Environmental Policy Act framework that includes public involvement. Site specific decisions are made at that time. Secondly, the types, extent, timing, location, and of natural ecological processes are difficult to predict and thus their effects are difficult to understand in advance. Revised Plan direction ensures that ecological processes will be addressed during project planning when site level information and needs assessment can best be considered. This direction is provided by (but not limited to) D-VG-1-8, O-VG-6-12 (Chippewa), O-VG-5-11(Superior) D-WL-1-9, O-WL-23-24 (Superior), O-WL-25-26 (Chippewa), D-ID-3, D-ID-5, AND D-ID-6. Monitoring and evaluation will provide the framework within which achievement of objectives can be both quantitatively and qualitatively addressed.

Both papers cited (Vora, R.S., Leech, C., and Evers, A. 2003. *Songbirds in upland openings and recent clearcuts in Northern Minnesota [It includes a good bibliography]* and The Loon 75:69-75. Lenarz, M.S. 1987. E*conomics of forest openings for white-tailed deer.* Wildlife Society Bulletin 15:568-573.) were considered during plan revision when formulating management direction concerned with permanent opening construction and maintenance. These, together with other information and analysis documented in the planning record, provided part of what we felt was a sound rationale for reducing the 1986 emphasis on investments in permanent opening construction and maintenance.

The commenter is correct that Revised Plans do not define specific intra-stand complexity, or identify quality standards for LE restoration or quality standards for artificially creating multi-aged growth stages through logging. Nor do the Plans identify how these are to be assessed, inventoried, restored, or monitored. As noted above, Forest Plan Forest-wide goals, desired conditions and objectives, standards and guides all emphasize an active and effective proposed site-specific project analysis within the National Environmental Policy Act framework that includes public involvement. Site specific decisions are made at that time. In addition, management direction in the Plans and from policy and law directs the National Forests to consider and apply applicable science. The Regional Forester feels that this approach provides the flexibility to ensure that project level planning considers most applicable science when planning projects, conducting inventory, and monitoring and evaluating progress toward desired conditions and objectives. Therefore, it is not necessary to provide additional site-level direction.

The Revised Plans do not specifically prohibit use of transgenic trees in restoration. However, the Forests do not propose such use, and it is unlikely that there would be any widescale use during implementation. This is because desired conditions and objectives for Vegetation Management emphasize maintenance or restoration of native plant communities in conditions representative of native ecosystems.

Both priced and non-priced market effects are treated in the present net value analysis of economic efficiency in the DEIS. There is nothing in 16 U.S.C 529, 1602, 1604; 42 U.S.C 4332 that indicates the USDA FS must analyze existence values, nor is there any case indicating so. There is no firm policy that indicates how ecosystem services should be analyzed by the USDA FS. Methodologies to estimate “standing value” of trees and “existence value” of forests are at times controversial and questionable to some points of view. Further, reliable independent information on these values was not available in Minnesota at the time of the analysis. We chose to consider these values through the public participation on the National Forest planning process and without assigning specific numbers.

PC# 2.5.2-5
Public Concern: The Chippewa and Superior National Forests should address the legal requirement to conserve plant and animal communities.

Agency Response:
We acknowledge that Revised Plans do not directly state how to identify or protect rare and unique communities. Existing inventories of rare natural communities were considered and are available in the planning record. We believe that the strategic framework exists in the Forest Plans to address these communities and their role in the diversity of plant and animal communities. Therefore it is not necessary to add more specific management direction. While some Research Natural Areas and Potential Research Natural Areas provide for rare and unique communities, the majority of these communities would be outside these Management Areas. They would be addressed through a variety of ways, including during project-level planning or, as happened in the past with rare natural communities and upland old-growth communities during the previous planning period, through community-specific inventories. With site specific information collected through a flexible adaptive management approach, we believe more informed proposals or decisions for management can be made than through prescriptive approaches set in the Plans. Key management direction that encompasses direction for rare and unique communities includes, but is not limited to: D-VG-1-3, 5-8, O-VG-1-16 (Superior) and O-VG-1-17 (Chippewa), Landscape Ecosystem objectives (especially the increase in old, old-growth, and multi-aged old forest)

The revision of Forest Plans is rooted in, among other laws, policy, and public issues, in the principles of conservation biology. The rationale for the use of these principles is laid out in the Notice of Intent (USDA Forest Service 1997a, p. 22-25). Based on analysis in the EIS (for each area, including both biophysical and socio-economic resources and values), the Regional Forester has selected the Revised Plans (Modified Alternative E) because he feels they balance the range of multiple uses while protecting plant and animal biological diversity.

PC# 2.5.2-6
Public Concern: The Chippewa and Superior National Forests should include more discussion and analysis of the shrub and herb layers of the LEs and LTAs in the Final EIS.

Agency Response:
Working towards the composition, age, and spatial objectives for each forest is expected to improve conditions in relation to RNV, however the selected alternative does not move either forest to within RNV. Some aspects of plant communities may be within RNV as a result of the Forest Plans, while others will remain outside RNV. A difficulty in determining if shrubs and ground plants are outside of RNV is that quantitative historical data does not exist for plant species other than trees at a landscape level. Hence, descriptions of growth stages and percentage representation within Landscape Ecosystems relate to dominant tree species. While quantitative data may be lacking, we recognize the relationship of shrubs and ground plants to growth stages and to Native Plant Communities. Improving representation of growth stages in relation to RNV will likely improve conditions for all plant species.

The planning team for the Chippewa and Superior National Forests utilized the work of Dave Shadis (1997) and John Almendinger and Dan Hanson (1998), and other scientists (Rusterholtz 2002, Minnesota Forest Resources Council 1998, 1999a, 1999b, 2003a, Host et al. 2001, Frelich 1998a, 1998b, Heinselman 1996) in formulating strategies for managing the National Forests. These and other references are also cited in EIS Chapter 3.2, 3.3, and 3.5 and other resources used are found in the Planning Record (available to the public). The specifics of their work may not be entirely evident in the strategic and coarse filter management strategies for Landscape Ecosystems, however objectives such as D-VG-1-8, O-VG-6 (Superior), O-VG-7, O-VG-8 (Chippewa), O-VG-11 (Chippewa), O-VG-10 (Superior), O-WL-17 (Chippewa) and O-WL-18 (Superior) compel the us to consider and

work towards restoration of rare species, shrubs and ground plants. This approach requires that we consider the conditions of the whole community, not just the trees, and work toward representative native plant communities.

The newly published field guide to plant communities (MN DNR 2003) is expected to be of key importance in implementing the Plan objectives in helping field staff understand and strive to improve conditions for non-tree species. We acknowledge that the Plans do not specify how restoration should occur or what shrubs and ground plants are outside their RNV occur, but believe that these decisions and information are best addressed for the site level during project planning. However it is likely that restoration will be promoted using the full suite of management tools available for vegetation management (such as various timber harvest prescriptions, prescribed burning, leaving disturbed areas, and seeding or planting). Monitoring and evaluation of plan implementation will provide information to also address how management guidance for shrubs and ground plants is implemented

PC# 2.5.2-7
Public Concern: The Chippewa and Superior National Forests should protect butterfly habitat

Agency Response:
The Forest Plan provides desired conditions and management direction that recognize the importance of wildlife watching, inclusive of butterflies, and the importance of providing habitat for all native species (this includes, but is not limited to, D-WL-1-9, O-WL-1-3, Landscape Ecosystem Objectives for vegetation composition, age, and management indicator habitats). Suitable and secure habitat for butterflies and insects on both the Chippewa and Superior NFs is provided through an overall coarse filter management approach that promotes maintenance, restoration, and protection of a wide variety of habitats. This approach is described in Final EIS Appendix B: Wildlife Section. In addition, the Superior National Forest specifically provides direction for four of five listed sensitive species: Jutta arctic, Freija's grizzled skipper, taiga alpine, and Nabokov's blue (O-WL-26, -27, and S-WL-7). The fifth sensitive species red-disked alpine is provided for by O-WL-18. The planning record (available to the public) contains information collected on a number of rare butterflies and other insects through the Species Viability Evaluation (SVE) process. Information to contribute to conservation strategies for these species were considered or incorporated into the Forest Plans.

Biodiversity (2.5.3)

PC# 2.5.3-1
Public Concern: The Chippewa and Superior National Forests should expand the analysis of biodiversity issues in the Final EIS.

Agency Response:
We believe that we have adequately assessed biodiversity issues in the Final EIS to inform the decision maker, the Regional Forester. The planning record contains a large volume of detailed information and assessments of biodiversity issues that were considered. This information is available to the public.

PC# 2.5.3-2
Public Concern: The Chippewa and Superior National Forests should include the Great Lakes Assessment in the Final EIS analysis of biodiversity effects.

Agency Response
Information from the Great Lakes Ecological Assessment was used in the Forest Plan revision process and

assisted in determining the need for changing from the 1986 Forest Plans (planning record). In the Final EIS, we believed the relevant cumulative effects analysis should concentrate on northern Minnesota. Therefore we used an ecological section, subsection and Landscape Ecosystem perspective, rather than looking across a three-state area, where the actions of two national forests would be much less significant when compared to the whole. The Minnesota Generic Environmental Impact Statement (Jaako Poyry 1994) and the Minnesota Forest Resources Council's Northeast and North Central landscape goals and strategies (MN FRC 2003a, 2003b) and resource conditions (North Central Regional Landscape Monitoring and Assessment Working Group 2000, Northeast Regional Landscape Monitoring and Assessment Working Group 1999) were considered more relevant to the effects analysis of the Chippewa and Superior National Forest and provided the appropriate scales at which to analyze effects.

PC# 2.5.3-3
Public Concern: The Chippewa and Superior National Forests should emphasize protecting biodiversity in their Forest Plans.

-To provide for future generations.
-To address the Need for Change.
-To maintain the economic strength of the regions around the Forests.

Agency Response:
The goals of Revised Plans (Chapter 2) include providing for the variety of life by managing biologically diverse ecosystems and providing forest settings and natural resources that enhance social and economic benefits at local, regional, and national levels. Forest Plan management direction provides the strategic framework within which to address biological diversity. Based on analysis in the EIS, including both biophysical and socio-economic resources and values, the Regional Forester has selected the Revised Plans because he feels they balance the range of multiple uses while incorporating approaches for addressing and protecting biological diversity at both site and landscape scales.

Wildlife

Wildlife General (2.6.0)

PC# 2.6.0-1
Public Concern: The Chippewa and Superior NF Plans should protect wildlife and forests from ATV, logging, and road building

Agency Response:
The goals of Revised Plans (Chapter 2) include providing for the variety of life by managing biologically diverse ecosystems and providing forest settings and natural resources that enhance social and economic benefits at local, regional, and national levels. Forest Plan management direction provides the strategic framework within which to address biological diversity, including the management to ensure viability of all native and desired-nonnative species (D-WL-1-9, O-WL-1-3). Based on analysis in the EIS, including both biophysical and socio-economic resources and values, the Regional Forester has selected the Revised Plans because he feels they balance the range of multiple uses while incorporating approaches for addressing and protecting biological diversity including wildlife at both site and landscape scales.

The Final EIS has added a section (3.3.8) to further address the impacts of roads and trails on wildlife. RMV trails and use are also analyzed in Chapter 3.8.2. Appendix F of the EIS provides information on roads and road management. Based on potential impacts to wildlife, as well as impacts to other biophysical and social-economic resources and values, Revised Plans also provide management direction to reduce or eliminate the potential negative impacts of roads and trails. These include, but are not limited to: D-RMV-1, O-RMV-2 [Chippewa], O-RMV-1 [Superior], S-RMV-3 [Superior], S-RMV-4 [Chippewa], G-RMV-4, D-TS-2, 3, O-TS-2, 3, 7, S-TS-3, 4, G-TS-12, 13, 14) D-WL-1-9 and O-WL-7. Potential impacts would also be addressed at the project and site-level and use the best information to reduce negative impacts.

PC# 2.6.0-2
Public Concern: The Chippewa and Superior NF should provide a cumulative effects analysis for wildlife similar to the analysis for economics

Agency Response:
The economic analysis in the EIS (Chapter 3.9) used only assigned values for comparing among alternatives. In this model wildlife impacts were not quantified, in part because they were assumed to not differ among alternatives. This is because each alternative provided for a wide array of wildlife use and enjoyment opportunities and associated economic values. All alternatives provide ample fishing opportunities. Differentiating among alternatives would have required more specific data than was readily available or practical since species hunted and species enjoyed through wildlife watching use the full spectrum of young and old, deciduous and conifer forest habitat. Thus we assumed that economic values of hunting and wildlife viewing were similar and both were very economically important, (even though the balance of available habitat for game species and other watchable wildlife differed by alternative), basing this assumption on information in the 2001 National Survey of Fishing, Hunting and Wildlife-Associated Recreation (USDI Fish and Wildlife Service and US Department of Commerce, Census Bureau. 2001. *2001 National Survey of Fishing, Hunting and Wildlife-Associated Recreation*. Washington DC. 170 p. [http://fa.r9.fws.gov/surveys/surveys.html]). According to the 2001 National Survey in the United States 34.1 million people fished (spending $36 billion), 13.0 million hunted (spending $21 billion), and 66.1 million participated in at least one type of wildlife-watching activity including observing, feeding, or photographing wildlife (spending $38 billion). In Minnesota, this included 1.7 million anglers (spending $1.3 billion), 0.6 million hunters (spending $483 million), and 2.2 million wildlife watchers (spending $531 million) (http://www.census.gov/prod/2003pubs/01fhw/fhw01-mn.pdf).

The Revised Plans were developed to provide for all the uses and enjoyment of native and desired non-native species. The Regional Forester selected Modified Alternative E, in part, because it provided what he considered was the best mix of habitats to provide for both game and other wildlife species. This contributes to helping address the Plans' economic and social stability desired conditions and objectives.

PC# 2.6.0-3
Public Concern: The Chippewa and Superior NF should provide an independent assessment of wildlife impacts

Agency Response:
The goal of the second round of expert panels was not to take a hard look at preliminary draft alternatives because, as suggested in the comment above, there was not enough time or pre-preparation to fully understand the impacts of preliminary draft alternatives. Our goals were to: document consideration of species viability in revision; collect information, knowledge, experiences, assumptions and opinions from experts; consider effects of predominant risk factors pertinent to the species or communities of interest, and try to clearly understand the uncertainty surrounding the assessment, including uncertainty due to gaps in knowledge. We believe that we achieved these goals and then were able to fulfill our Foreset Service responsibilities and requirements to evaluate

the environmental effects of the Plans on wildlife., as defined by National Environmental Policy Act, National Forest Management, and other Forest Service directives. The Draft and Final EISs provide the public, including independent scientists, with the opportunity to assess impacts.

PC# 2.6.0-4
Public Concern: The Chippewa and Superior NF should complete necessary surveys and inventories of species and their habitats necessary for [assuring] viability.

Agency Response:
The Revised Plans are considered "programmatic" in that they allow, but generally do not require, specific actions on the ground. They are permissive and generally do not mandate projects in a specific location at a specific time. Thus assessment of impacts is more difficult than for actual site level projects. Nevertheless, the scope of actions contemplated by the Revised Plans can be evaluated by the likely impacts of proposed programs, activities, and practices, and how well they address potential negative impacts or contain measures that might mitigate adverse effects. It is therefore, important to keep in mind that a second determination of effects to species at the project level, when much more specific information is available and is combined with objectives, standards and guidelines that promote management of sensitive species, may modify the determinations at the programmatic level. In summary, the evaluations, determinations of effects, and newly added cumulative effects in the Final EIS Chapter 3.3.5.d and Biological Evaluation (USDA Forest Service 2004e) are based on the expected impacts if the proposed actions of the Revised Plans are carried out.

Our analysis and determinations do not rely solely on ecological conditions as an index of population occurrence, size, density or other demographic characteristics. This information helps us assess coarse filter forest conditions within the National Forests. Occurrence information, nest area or colony persistence, research findings, or other demographic indicators contained in the planning record provide more specific coarse or fine filter management guidance or recommendations from analysis to guide project level decisions. We attempted to incorporate the best and applicable available information on T&E species and RFSS through literature reviews, interagency reviews, and internal and external expert opinion. We have conducted public comment processes at several points during the revision process to allow feedback on points that may have been missed.

We have conducted surveys for Regional Forester Sensitive Species (RFSS) during the last 18 years on both the Chippewa and Superior. In addition, the County Biological Survey, MN DNR, has also conducted inventories within both National Forests. Leech Lake Band of Ojibwe Department of Resource Management has conducted inventories within the Chippewa National Forest. Known occurrences of RFSS are documented in the planning record and were considered in SVE panels and process. Inventory and monitoring of the forests will continue and new occurrences of T&E species and RFSS will be discovered. We will follow Forest Service Manual direction on when, where, and how inventory will be conducted for these species.

You are correct in that we do not know exactly how many individuals of T&E species or RFSS exist on each National Forest. For many, like bald eagles, we have long term data sets that have high reliability. Other species, like the four-toed salamander, have few known occurrences that can not be relied on for trends or to track distribution. Ongoing inventory and monitoring at the project level during implementation of the Forest Plans is thought to help us determine if all species are being maintained.

PC# 2.6.0-6
Public Concern: The Chippewa and Superior NF Plans should include standards and guidelines that were originally developed.

Agency Response:
The Forest Plan is a strategic forest management document that embodies the provisions of the National Forest Management

Act of 1976. Final Forest Plan forest wide goals, desired conditions and objectives, standards and guides reflect a strategic emphasis and recognize existing expectations per laws, treaties, regulations, policies already in place that should be applied to site specific proposals as appropriate. There are many changes between developing the draft documents and final documents and the ability to make those changes to reflect new information, public and employee comment, and new regulations, is within the purview of the Forest Service. Public comments about those changes have been taken into consideration within the development of the Final EIS and Plans, and the Record of Decision.

PC# 2.6.0-7
The Chippewa and Superior NF Plans should manage deer and invasive species to avoid or minimize damage in the context of RNV.

Agency Response:
The State of Minnesota holds the responsibility for management of the deer herd. Nevetheless, the Forest Service is a partner by managing forest habitat suitable for deer.

During the development of alternatives, we designed alternatives that would address the widely divergent public opinion on quantity, quality, and distribution of deer habitat. Because of the deer's high social and economic value as a hunted and "watchable wildlife" species, many of the public value maintaining high amounts of habitat. Because high populations of deer can also have a wide range of negative environmental and social-economic impacts, many of the public prefer to greatly decrease the amount of suitable habitat. The Regional Forester believes the Selected Alternative strikes the best balance in providing habitat conditions for game species like deer (and ruffed grouse) while providing management direction that maintains viability of all species.

It is widely recognized that some negative effects of high deer populations include reforestation and other herbivory issues. Section 3.3.6.4 of the Draft and Final EIS states that "concern exists that landscapes which are particularly favorable for deer, a common species, do not necessarily provide adequately for the long-term sustainability of some other species, including some which are considerably more rare. There is also concern that at high population levels, white-tailed deer can cause major changes in the composition and structure of forest communities by browsing shrubs and tree seedlings, and grazing understory forbs…a variety of herbaceous plants may decline under sustained deer foraging…Canada yew, listed as a sensitive species on the two national forests, is an uncommon coniferous shrub across most of the northwoods because it is a preferred food of deer and doesn't recover well after browsing…Regenerating forest stands can be damaged by high population levels of deer. Deer browsing can alter species composition. Regeneration of northern white cedar and eastern white pine can be very difficult due to deer depredation."

Section 3.3.6.4.a and 3.3.6.4.b provide analysis of a range of alternatives which would result in deer habitat conditions which would range from lower to higher than current conditions, and which would include conditions far in excess of the RNV to below RNV.

Chapter 2 of Revised Plans provide management direction for reducing non-native invasive species (NNIS) spread and determining which species to concentrate on: Superior: O-WL-37, O-WL-38, O-ID-1; Chippewa: O-WL-38, O-WL-39, O-ID-1). These provide a strategic framework within which to address the spread of NNIS. In addition Chapter 3.3.7.b of the Final EIS describes the numerous sources of additional strategic guidance available for meeting the objectives described in the Plans. We believe that the Plans meet the intent of Executive Order 13112, which deals with invasive species. Please also refer to PC#2.6.8-1 for further discussion on NNIS.

PC# 2.6.0-8
Public Concern: The Chippewa and Superior NF Plans should maintain or enhance the aspen ecotype beyond RNV to maintain quality game habitat.

Agency Response:
Analysis of the Selected Alternative shows that for many native plant communities (including aspen) and conditions that provide quality game habitat, the Revised Plans would move toward the range of natural variability. However, restoring the forested landscapes on the Chippewa or Superior National Forests to those conditions which occurred within RNV is not the expressed goal of future management. For aspen, objectives reduce acres, but also would provide for up to twice as much aspen as would have occurred under the range of natural variability. We believe that analysis in the Final EIS in Chapter 3.2, 3.3.6.4, 3.3.6.5 shows that a relatively high amount of aspen would be maintained and there would be ample suitable conditions to meet objectives for providing for quality game habitat: D-WL-2, 3g, O-WL-39 (Superior), O-WL-40 (Chippewa), D-REC-10, 11.

PC# 2.6.0-11
Public Concern: The Final EIS should correct error in Table WLD-15.

Agency Response:
Draft EIS Table WLD-15 has been renumbered in Final EIS WTE-1. We have corrected the error in this table, as well as in Table Lynx-3 in the Biological Assessment (USDA Forest Service 2004b, p. 121), and have also added updated information.

PC# 2.6.0-12
Public Concern: The Final EIS should explain a statement on page 3.2-54.

Agency Response:
We will add additional language explaining this statement. Modeling rules were established specifically for forest type succession of early successional forest types (e.g. aspen, paper birch) to mid or late successional forest types (e.g. spruce-fir, white/red pine, northern hardwoods). These modeling rules took effect at a specific age, such as age 90 for aspen. These rules had an immediate effect on harvest volume that could be expected from that stand in the next decade in the model and on the acreage in old aspen forest. The age of stands affected by succession rules were set back, in some cases to as young as 20 years old as in those stands succeeding to spruce-fir. Those stands are not counted as mature/older forest habitat for species such as black-throated blue warbler or northern goshawk. Succession rules may help to accurately reflect a change in harvestable timber volume, however old stands of early successional tree species such as aspen continue to provide many of the attributes of mature or older forest habitat for one to two decades. Successional transitions are not immediate as the model might indicate. In this way the loss of mature/older forest habitat or patches that contain this habitat is over-estimated. The planning record contains analysis that demonstrates these differences between amounts of mature/older habitat and large patches of mature/older habitat with and without succession rules.

PC# 1.4.1-7
Public Concern: The Final Biological Evaluation, Biological Assessment, and EIS should meet minimum standards of the National Environmental Policy Act for use of sound scientific information and consideration of cumulative effects.

Agency Response
The Final Biological Evaluation (USDA Forest Service 2004e), Biological Assessment (USDA Forest Service 2004b), and EIS meet minimum standards of the National Environmental Policy Act. Please refer to the Final EIS Chapter 3, and Appendix D and I.

Wildlife Population Management (2.6.1)

PC# 2.6.1-1
Public Concern: The Chippewa and Superior NFs should provide additional analysis of habitat effects on wildlife populations.

-To address current/proposed amount of native species depending on multi-aged stands.
-To address cumulative impacts on fish populations.
-To include citations for assessments in cumulative effects.
-To address "foreseeable impacts".
-To address impacts on R9 Sensitive species that are habitat specialists.
-To address effects on neotropical migratory birds.

Agency Response:
Table APP-C2 in Appendix C of the Forest Plan identifies by forest type when a stand becomes mature or is in an old, old growth, or multi-aged condition. Since different forest types develop conditions that characterize older forest stands at different ages, we make this distinction by forest type. While every forest stand that fits within these age categories may not contain all of the characteristics we desire, forest stands that are mature or older will contain larger trees and contain more woody debris than younger forest stands. These stands often have closed canopies and may begin to show multiple age cohorts of later successional forest species. Forest stand dynamics, including the development of multi-age conditions, are discussed in the Draft EIS in sections 3.2.1 and 3.2.2. Spatial indicators and affected environment discussions on p. 3.2-50 through 3.2-52 in the Draft EIS provide more detailed information and literature citations. Appendix G of the Final EIS contains descriptions of growth stages by Landscape Ecosystem (LE).

Increasing amounts of older aged forest, shown for most Landscape Ecosystems by Decade 1, will in itself increase the opportunity for multi-aged conditions to develop. These objectives are quantified within Chapter 2, Landscape Ecosystem Objectives.

Under the selected alternative clearcutting along streams will be prohibited on FS lands unless specifically designed to improve riparian habitat or conditions. These "improvement" cases will be very specific. This direction applies to the nearbank zone, which is within:

- 100' of lakes, open water wetlands, and streams >5' in width
- 50' of streams <5' wide, and
- 50' of intermittent streams <5' and >3'wide

In the 100' remainder zone, vegetation management will favor extended rotation of all tree species (both short & long-lived), in order to preserve the integrity of the nearbank zone & to maintain riparian function. One of the main reasons for setting forth this direction is to counter the increase in shoreland development and management possible under BMPs on other lands to stem the "non-linear" increase in effects.

Appendix H, Volume II of the Draft EIS, was meant to encapsulate MFRC and GEIS likely general effects across all ownerships in Minnesota if certain land management scenarios were followed. For cumulative effects more specific to fish and aquatic resources for the selected or other alternative please refer to the cumulative effects that were written for these resources (Final EIS chapters 3.3 and 3.6).

Neotropical migratory birds of the National Forests were considered during the development of alternatives (EIS Appendix B Wildlife Section; Draft EIS Appendix B-26). The migratory status of birds is also documented in the planning record. Impacts to neotropical migratory birds were analyzed largely under the coarse filter approach

described in EIS Appendix B, although several sensitive species (olive-sided flycatcher, black-throated blue warbler, bay-breasted warbler, and Connecticut warbler) were also analyzed individually in the Biological Evaluation (USDA Forest Service 2004e) with summary of effects in the EIS Chapter 3.3.5. To better document the link between species and management indicator habitats and vegetation conditions, we added information to Appendix D of the EIS. This includes: Table DEIS-8. Status of Animal Species Considered in Forest Plan Revision; Table DEIS-9. Crosswalk to Animal Species Association with Management Indicator Habitats (MIH); and Table DEIS-10. Crosswalk to Animal Species Association with other Habitats of Concern. We believe that analysis adequately addressed neotropical migratory birds. Although outcomes for the olive-sided flycatcher, black-throated blue warbler, and bay breasted warbler included relatively low index outcomes of C, D, or E in both the short- and long-term under the Selected Alternative, implementation is not expected to diminish habitat outcomes from present outcomes, and does not lead to a loss of viability or trend toward federal listing. At the project planning level, Forest Plan provides desired conditions and objectives to promote maintenance or restoration of habitat for wildlife (including, but not limited to, D-VG-1-8, D-WL-1-9, Landscape Ecosystem objectives, O-WL-1-3, O-WL-17 (Chippewa), O-WL-18 (Superior), G-WL-11, G-WL-12, S-WL-5, O-WL-25 (Superior), and O-WL-27 (Chippewa).

Emerging issues and impacts, such as West Nile virus, are very difficult to incorporate into an analysis when it is not clear what the impacts have been or will be to forest birds or other wildlife. We believe that the strategic framework exists in the Forest Plans to address these potential impacts.

More in-depth analysis for sensitive species habitat specialists is found in the Biological Evaluation. The Regional Forester recognized that the Selected Alternative generally did not provide as favorable outcomes for many of the sensitive species as Alternative F or some others. However, because implementation is not expected to lead to loss of viability or well-distributed habitats or cause a trend toward federal listing, he feels the Revised Plans strike an appropriate balance of species habitats to other range of demands from the National Forests. Project level analysis and planning require and provide the opportunity to address site level special habitat needs of these species. Further, though the Plan generally does not provide species-specific management direction for habitat specialists, it provides a management emphasis on restoring, maintaining or protecting sensitive species habitat: O-WL-17-31 (Chippewa), O-WL-18-30 (Superior). This strategic and broad approach allows managers to use current and emerging information and public input, to promote sensitive species management.

The rationale for giving explicit analysis to game species is documented in EIS Chapter 3.0, with further rationale in Appendix B: Wildlife Section. The Forests are required by CFR 219.19 to ensure viability and well-distributed habitat in the planning area and the Plans provide strong direction in WL desired conditions and objectives to comply with this regulation. It was not our intention to infer that bay-breasted warbler habitat should not be provided on the National Forest.

LE based vegetation objectives in the Forest Plans show that the Forests are planning to provide consistent amounts of young forest in a variety of forest types, including aspen, each decade. We believe that this adequately addresses the needs of those species that require or prefer young forest habitat. In this light, some prey species for the northern goshawk are adequately addressed through these young forest objectives. The northern goshawk is a forest dwelling raptor that is best adapted to hunt within mature forest sub-canopy conditions.

PC# 2.6.1-2
Public Concern: The Superior NF should address effects on fur-bearing species.

Agency Response:
American marten is represented by Management Indicator Habitats 1b-Mature/Older Upland, 2b-Mature/Older Upland Deciduous and 4b-Mature/Older Aspen/Birch and Aspen /Birch/Conifer. The effects of the alternatives on

those habitats as a result of implementation is detailed in Sections 3.3.1.b through 3.3.1d. We recognize that other alternatives may provide more or better quality habitat for species such as the fisher. The selected alternative does provide closed canopy conditions, though not in the same amounts as other alternatives considered. The Regional Forester considered the range of conditions likely to be provided by each alternative and felt that the selected alternative provides the right balance of multiple uses on each National Forest.

PC# 2.6.1-3
Public Concern: The Chippewa NF should recognize breeding populations of common loon, bald eagle, osprey, common tern, sandhill crane, and gray wolf in Cass and Crow Wing counties are significant at the national level.

Agency Response:
The Forest Plan for the Chippewa National Forest contains management direction (objectives, standards, or guidelines) for all of these species by name except the sandhill crane. In this way, we believe that we do recognize the national significance of these breeding populations. Open marsh and wetland habitat or other similar habitats for the sandhill crane are unlikely to change under any alternative on federal ownership. We believe that conditions for this species on the Chippewa National Forest would at least be maintained.

PC# 2.6.1-4
Public Concern: The Chippewa and Superior NF Plans should not emphasize game wildlife species over non-game wildlife species.

AND

PC# 2.6.4-36
Public Concern: The Plans should shift emphasis from early successional game species, and protect the habitat of species requiring large areas of older growth.

AND

PC# 2.6.4-49
Public Concern: The Chippewa and Superior NFs should increase the amount of forest that achieves late successional stages and mixed age condition, not emphasize management for high populations of deer and grouse or other early successional species.

Agency Response:
A range of alternatives were developed to address the full spectrum of public issues, including the public's widely divergent concerns about what wildlife habitat should be emphasized (summarized in EIS Section 1.5 and 1.5.3). The impact of each of the alternatives on game species and the variety of other species, including and those associated with mature and older forests is analyzed in EIS Chapter 3.3 and, for sensitive species, in the Biological Evaluation (USDA Forest Service 2004e). Although the Selected Alternative does not provide the highest amount of old forest or substantially decrease the amounts of habitat for popular game species such as deer, moose, or ruffed grouse, the Revised Plans provide direction to ensure that all species receive are managed to maintain species viability and provide for the wide variety of their values, uses, and contributions to ecosystem health including, but not limited to: D-WL-1-9, O-WL-1-7, O-WL-17 (Chippewa), O-WL-18 (Superior), G-WL-11-12, S-WL-5, and Landscape Ecosystem vegetation and management indicator habitat objectives). Revised Plans also include objectives for providing habitat to support quality hunting opportunities: D-WL-3g, O-WL-39 (Superior), O-WL-40 (Chippewa), and D-REC-10. However, analysis in the EIS shows that Revised Plans does shift the emphasis in current plans to from game species to nongame species through a decrease the emphasis from current plans on managing for young aspen game habitats: see Final EIS Section 3.3.1.c MIHs 1a and 4a, Figures WLD-1a and -4a and Section 3.3.6.4 (deer) and 3.3.6.5 (ruffed grouse). The Revised Plans also increase the emphasis on providing habitat for species associated with older forests, including old growth forests: see Final

EIS Section 3.3.1.c MIHs 1b-9b, and 10. Figures WLD-1b-9b, and -10 and Section 3.3.6.1 northern goshawk Tables WNG-1-4.

When multiple use objectives are examined as a whole for the Chippewa and Superior, the Regional Forester believes that the selected alternative strikes the right balance of wildlife habitats and amounts of old forest for each forest.

PC# 2.6.1-5
Public Concern: The Chippewa and Superior NFs should address effects on populations of game species.

Agency Response:
Because of the very large number of species of management interest – both game and non-game – it was not practical to analyze all legal game species. The approach we took is explained in Chapter 3.3.0 and Appendix B: Wildlife Section. Most of the terrestrial game species are analyzed through management indicator habitats (MIHs) in Chapter 3.3.1 and aquatic species through aquatic indicators in Chapter 3.3.3. However, three game animals are also addressed specifically: Chapter 3.3.6.3 addresses woodcock; Chapter 3.3.6.4 addresses white-tailed deer; and Chapter 3.3.6.5 addresses ruffed grouse. We have added tables to Appendix D of the EIS to show the status, and habitat links between the EIS indicators and species of management interest: all terrestrial game and major fish game species are found in Table DEIS-8. Status of Animal Species Considered in Forest Plan Revision; Table DEIS-9. Crosswalk to Animal Species Association with Management Indicator Habitats (MIH); and Table DEIS-10. Crosswalk to Animal Species Association with other Habitats of Concern.

Hunter success rates and satisfaction predictions are not readily analyzed based upon model predictions or prior population trends. Though success and satisfaction are may often be connected to population numbers, there are many other factors that affect success and satisfaction, including, significantly, administration of game regulation by Minnesota Department of Natural Resources (outside Forest Service control).

In part to address “hunter satisfaction” and in part to clarify that Revised Plans promote management to provide quality hunting opportunities, we added: D-WL-3g, O-WL-39 (Superior), O-WL-40 (Chippewa), and D-REC-10.

PC# 2.6.1-6
Public Concern: The Regional Forester should select A because it best provides for wildlife and the Forest Service should not be involved with determining how game species are managed.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs.

Revised Plans provide direction for the management of wildlife habitat in order to support desired wildlife populations (as generally stated in D-WL-1-9, O-WL-1-3, and more specifically stated in all other WL and VG objectives, standards, and guidelines). For game habitat management, timber harvest (together with natural vegetation succession) is the primary tool that would be used to achieve habitat objectives. The Revised Plans do not provide direction for management of game species themselves. However, the Revised Plans (including other

Forest Service directives and law as described in Chapter 1) promote cooperative management with the State and Tribes to move toward wildlife objectives (D-CM-1).

PC# 2.6.1-7
Public Concern: The Chippewa and Superior NF Plans should provide management to control beaver populations.

Agency Response:
We believe that the strategic framework exists in the Forest Plans to address these potential impacts. The Revised Forest Plan includes management guidance that addresses dam removal for protection of ecologically sensitive areas which would include areas that harbor sensitive species: G-WL-29 (Superior) and G-WL-32 (Chippewa). In addition, the Plans promote maintenance, enhancement, or protection of sensitive species including, but not limited to: D-WL-3d, O-WL-17 (Chippewa), O-WL-18 (Superior). Management to promote sensitive species may include beaver dam removal. The coarse filter vegetation management for the selected alternative is also expected to result in a lower percentage of aspen, both within stands and forest wide, and especially near riparian areas and wetlands and this is expected to reduce beaver food supply in riparian areas. See Final EIS Section 2.5.

PC# 2.6.1-9
Public Concern: The Chippewa and Superior NF Plans should maintain closed canopies to support fisher populations.

Agency Response:
We recognize that other alternatives may provide more or better quality habitat for species such as the fisher. The selected alternative does provide closed canopy conditions, though not in the same amounts as other alternatives considered. The Regional Forester considered the range of conditions likely to be provided by each alternative and felt that the selected alternative provides the right balance of multiple uses on each National Forest.

PC# 2.6.1-10
Public Concern: The Chippewa and Superior NFs should reconsider D-WL-5 because it will provide unintended consequences that will negatively impact all wildlife Desired Conditions.

Agency Response:
The Final Plan has revised D-WL-5 to incorporate suggestions received during the public comment period.

PC# 2.6.1-11
Public Concern: The Plans should provide detail on the types of wildlife habitat projects currently anticipated in Table App-D4.

Agency Response:
We expect a wide range of habitat restoration projects to be implemented. The purpose, need, and type of project will be determined at the project level, since site level information and priorities will heavily factor into the recommendations for projects. The projects may include: vegetation management activities such as planting, seeding, transplanting, manipulating within stand structure and composition, prescribed burning, flooding, shearing or mowing; habitat construction projects such as fencing, erecting nest structures, erosion control structures. Since project level planning will address the type, timing, location, cost, and impacts of habitat restoration projects and monitoring and evaluation will describe accomplishments, we chose not to predict the specific probable or proposed practices in Appendix D. However, we have added an explanatory footnote to Table App-4 to better explain this approach.

PC# 2.6.1-12
Public Concern: The Chippewa and Superior NFs should review the draft assessment on the golden-winged warbler (Partners in Flight no. 1 conservation priority in the Boreal Hardwood Transition Zone) and incorporate their management recommendations into the Plans.

AND

PC# 2.6.4-54
Public Concern: The Chippewa NF should create and maintain abundant quality breeding habitat for the highly imperiled golden-winged warbler.

Agency Response:
We have reviewed the draft assessment for the golden-winged warbler (Buehler et al. 2003). This will be available to managers and will provide a valuable resource where project level planning identifies a need and opportunity to manage for this warbler in early successional habitat or in natural brushy wetlands. However, because of the strategic nature of the Forest Plans, these management opportunities and recommendations can readily be incorporated into implementation without incorporating specific direction into the plan. This approach is commensurate with our approach for most of our species of viability concern, including other Fish and Wildlife Service Resource Conservation Priority species, Partner in Flight priority species, Regional Forester sensitive species, and State- and Tribal-listed special concern, threatened and endangered species.

Throughout Forest Plan revision we have recognized the special status of golden-winged warbler (Appendix D, Table DEIS-8), its range-wide and National Forest trends, and the benefits of providing habitat for the golden-winged warbler. Population trends for this species in northern Minnesota appear to be stable and differ than what is seen regionally (Hanowski 2002). Habitat needs and status of the golden-winged warbler were considered in the Final EIS through the coarse filter management approach and analysis. We assigned golden-winged warbler to management indicator habitat (MIH) 2a young upland deciduous forest (Chapter 3.3.1, Table WLD-2a), MIH 4a -young aspen-birch forest (Chapter 3.3.1, Table WLD-2a), as well as nonforest upland and lowland habitat (brushy open habitat) (Appendix D Table DEIS-10). Forest Plans propose to continue to produce young aspen/birch habitat in amounts over 20,000 acres per decade on the Chippewa and over 55,000 acres on the Superior during implementation of the Forest Plans. We believe that these amounts are sustainable and result in predictable, stable amounts of early successional habitat across each forest through time. In combination with the wetland habitat for this species, ample amounts of habitat are predicted for the golden-winged warbler across the Chippewa and Superior National Forests for the foreseeable future. When multiple use objectives are examined as a whole for the Chippewa and Superior, the Regional Forester believes that the selected alternative strikes the right balance for each forest.

Because of its status, we also asked species experts to provide information on the golden-winged warbler during the Species Viability Evaluation expert panels conducted by the National Forests of Minnesota and Wisconsin (USDA Forest Service 2002d, planning record). The expert panel considered habitat conditions projected for preliminary draft alternatives for the golden-winged warbler. The panel provided information suggesting that the amounts of young forest and other nonforest habitats within a range of conditions eventually provided by Revised Plans provided broadly distributed habitat with high abundance.

PC# 2.6.1-13
Public Concern: The Chippewa and Superior NFs should obliterate logging roads to maintain no net loss of forest when new recreation trails are developed.

Agency Response:
The Final EIS and Plan indicate the amount of existing and future roads associated with logging that will be

obliterated over the planning horizon. The Chippewa Final Plan specifies that the miles of road obliterated exceed the amount of potential ATV trails and the Superior Final Plan indicates that there will be a net gain of ten miles of ATV trail over the road miles identified for obliteration (as described in the Final EIS, Chapter 3 (Recreation) and Appendix F (Transportation). Roads are decommissioned for a variety of reasons, including but not limited to, wildlife, budgets, existing and future need for a road, and recreational opportunities. Overall there will be less ATV routes to ride on due to less low standard roads (Operation Maintenance Level 1) available for travel.

Fisheries and Aquatic Wildlife (2.6.2)

PC# 2.6.2-2
Public Concern: The Chippewa and Superior NFs should select an alternative that does not have higher impacts on aquatic species.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying Management Area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Selected Alternative represents what the Regional Forester believes to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The Regional Forester looked at all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The ROD also discusses how the issues are addressed by the Alternatives, including the Selected Alternative.

With regards to the aquatic species, we predict that the Selected Alternative will maintain the current habitat outcome for 8 of the 10 fish and aquatic invertebrates through the second decade of Plan implementation. Ecological conditions for two species, the fluted-shell mussel and the black sandshell mussel, are predicted to improve. The fluted-shell mussel is expected to improve slightly to Outcome D. No live specimens of this mussel have been collected within the Forest boundaries, despite numerous mussel surveys on both Forests. The current outcome rating of E is based on the assumption that habitat conditions are highly isolated or exist at a very low abundance. For the black sandshell mussel, conditions are expected to improve from Outcome D to Outcome C. Under the Selected Alternative, proactive riparian management and the designation of Riparian Emphasis Management Areas along the larger rivers should slightly improve ecological conditions for these species.

In future decades (5 and 10) under the Selected Alternative, increased temporary road construction due to an increase in the number of acres harvested and water access and trail construction, in combination with high levels of private development on waterbodies, are predicted to have a negative impact on habitat outcomes for some of the species.

Table WLD-16 in the Draft EIS that contains the habitat outcomes and outcomes in the Biological Evaluation (USDA Forest Service 2004e) are in error. The correct outcomes were in the BE in Table Fluted-shell mussel Table 1 and Table Black sandshell Table 1. We renumbered the table to WSS-1 and made corrections to the table in the Final EIS.

PC# 2.6.2-3
Public Concern: The Chippewa and Superior NFs should identify a management indicator species for riparian aquatic habitat, open water, impoundments, and other aquatic areas.

Agency Response:
The Forests have limited the selection of management indicator species to four indicator species, favoring instead, the selection of management indicator habitats because they better reflect the broad spectrum of wildlife issues than do individual species. The management indicator habitats represent the major biological communities on the National Forests that are affected by management, and represent "coarse filter" habitats that are associated with many species. For the aquatic systems (lakes, streams, open-water wetlands), there was no one species that could best represent the array of aquatic habitats and conditions and the effects of forest management actions on those habitats. We have instead chosen to make lakes and streams a Management Indicator Habitat, and called it Indicator 14 - Lake and Stream Health. Various techniques will be used to assess lake and stream health, especially those that integrate physical, chemical, and biological measures. Table WLD-14 in Chapter 3.3.3.a of the Final EIS lists species of management concern that are associated with Indicator 14 - Lake and Stream Health.

PC# 2.6.2-4
Public Concern: The Chippewa and Superior NFs should include cumulative effects in predicted species viability.

Agency Response:
Draft EIS Chapter 3.3.5 Table WLD-16 has been renumbered in the Final EIS to WSS-1. Table WSS-1 does show a slight improvement in the future outcome of the black sandshell (*Ligumia recta*) and fluted-shell (*Lasmigona costata*) mussels, and no change from the current outcome for creek heelsplitter (*Lasmigona compressa*) for the preferred Alternative (Alternative E) on both Forests. Fluted-shell mussels inhabit medium to large rivers. No live specimens have been collected within the Forest boundaries, despite numerous mussel surveys on both Forests. The current outcome rating of E is based on the assumption that habitat conditions are highly isolated or exist at a very low abundance. Similarly for the black sandshell mussel, conditions are expected to improve from Outcome D to Outcome C. Under the Selected Alternative, proactive riparian management and the designation of Riparian Emphasis Management Areas along the larger rivers are predicted to improve ecological conditions for these species. Increased roading for vegetation management should not directly impact these species, as we are unlikely to develop a temporary road and stream crossing across large rivers.

In contrast, creek heelsplitter inhabits smaller streams and rivers, which we will likely cross more often, given the predicted increase in road construction under Alternative E, and which are more likely to be crossed by RMVs during cross-country travel on the Superior and while traveling OML 1 and 2 roads on both Forests and on unclassified roads on the Superior.

The increase in the number of road/trail stream crossings due to a predicted increase in road construction may impact habitats associated with creek heelsplitter, but we have included direction in the Plans of both Forests to guide road/trail construction and maintenance to assure that the affected land and water, including those with sensitive species, will be minimally impacted. This direction includes Objectives to minimize road and trail crossings and to decommission unneeded roads and trails. It also includes a number of standards and guidelines relating to road and trail construction, reconstruction, and maintenance, which are designed to minimize the impacts of new and existing road and trail crossings.
A summary table of cumulative effects (Table WSS-5) from the Biological Evaluation (USDA Forest Service 2004e) has been added to the EIS Chapter 3.3.5.d.

Terrestrial Wildlife Habitat (2.6.3)

PC# 2.6.3-5
Public Concern: The Chippewa and Superior NF Plans should acknowledge prominence of wildlife watching as activity in Minnesota.

Agency Response:
We agree with Henderson cited above that "the needs of all wildlife - including non-game species associated with watchable wildlife activities - need to be considered in the management of natural resources, in the funding of state and federal wildlife conservation programs, and in the establishment of legislation that affects wildlife management policy and conservation initiatives." Providing habitat to support wildlife watching opportunities was a key consideration in the development of the Selected Alternative. We considered the information in federal survey cited by commenter (USDI Fish and Wildlife Service and US Department of Commerce, Census Bureau. 2001. *2001 National Survey of Fishing, Hunting and Wildlife-Associated Recreation*. Washington DC. 170 p. [http://fa.r9.fws.gov/surveys/surveys.html]). According to the 2001 National Survey in the United States 34.1 million people fished (spending $36 billion), 13.0 million hunted (spending $21 billion), and 66.1 million participated in at least one type of wildlife-watching activity including observing, feeding, or photographing wildlife (spending $38 billion). In Minnesota, this included 1.7 million anglers (spending $1.3 billion), 0.6 million hunters (spending $483 million), and 2.2 million wildlife watchers (spending $531 million) (http://www.census.gov/prod/2003pubs/01fhw/fhw01-mn.pdf).

We added management direction to the final Plans to more strongly acknowledge and provide desired conditions and objectives for providing wildlife watching opportunities: D-WL-3g and D-REC-11

PC# 2.6.3-6
Public Concern: The Chippewa and Superior NF Plans should place less emphasis on the importance of young aspen for wildlife species.

Agency Response:
We are aware of the information that you present on young aspen and wildlife species. The planning record for the Forest Plans reflects much of this information on species that you have mentioned. The Forest Plans for the Chippewa and Superior National Forests attempt to meet a range of habitat needs for wildlife that include those that prefer young forest and those that prefer mature or older forest conditions. Many of the objectives for vegetation strive to strike that balance of habitats while recognizing those habitats and species most at risk. At the same time the Plans propose to produce a consistent amount of early successional habitat each decade. Other planning alternatives produce more or less early successional habitat, however the Regional Forester felt that the selected alternative best met the range of multiple uses for the National Forests.

PC# 2.6.3-7
Public Concern: The Chippewa and Superior NF Plans should tier to the "Partners in Flight landbird conservation plan" that is being completed for the Boreal Hardwood Transition Bird Conservation Region.

Agency Response:
Because Forest Plans are strategic documents, we believe that the Forest Plans will be able to adapt to this regional conservation plan. Many of the species listed in your comment are already addressed in the Forest Plans with specific management direction. Others would be addressed by more general objectives, standards, or

guidelines. In the case that Forest Plans are either in conflict with this regional plan or fail to meet its objectives, an amendment to the Plans would be considered.

PC# 2.6.3-8
Public Concern: The Chippewa and Superior NF Plans should place a high priority on optimal habitat for bird species.

Agency Response:
The Regional Forester selected a strategic approach for managing the Chippewa NF and Superior NF. A key to this strategic approach is coarse filter management, an important part of which are the Landscape Ecosystem objectives. The coarse filter approach is one that maintains an array of environmental conditions that are representative of native ecosystems of the area in order to provide habitat to as many species as possible. The Regional Forester selected a preferred alternative that best meets multiple use objectives.

Some species habitat are maintained or become more or less abundant as a result of the selected alternative. Specific objectives and standards and guidelines are also provided for species that have been determined that the coarse filter management objectives are not adequate to provide the desired conditions. Together, the coarse filter objectives and fine filter direction for certain species are anticipated to provide for the desired population levels of all species. All species, including forest bird species, are expected to remain viable under the new forest plans.

Monitoring and evaluation is a key part of evaluating the Forest Plans effectiveness in meeting the objective of maintaining all species. We will continue to systematically monitor key species, guilds, or key habitats with the goal evaluating species viability.

The Forest Plans have adopted snag and reserve tree guidelines developed by the Minnesota Forest Resource Council and are outlined in the “green book” management guide lines (MNFRC 1999c, Part 2: Wildlife Habitat and Part 3: General Guidelines-Retaining Leave Trees and Timber Harvesting).. Forest Service managers believe that the guideline to reserve 6 to 15 trees per acre will help to mitigate the loss of standing dead habitat. Additionally, restoration activities resulting from meeting objectives O-VG-8 (Superior), O-VG-9 (Chippewa), O-VG-10 (Superior) O-VG-11, and O-VG-12 (Chippewa) will result in more than mitigative levels of standing dead trees.

PC# 2.6.3-13
Public Concern: The Chippewa and Superior NF Plans should include a management indicator species to represent species dependent upon standing dead, cavities and/or down course woody debris.

Agency Response:
Forest managers believe that monitoring and evaluation of effects of meeting management direction will serve to detect if snag dependent or cavity nesting species are being adequately maintained on the National Forests during implementation of the Forest Plans. To this end, the Forest Plans adopt snag and reserve tree guidelines developed by the Minnesota Forest Resource Council (MNFRC 1999c, Part 2: Wildlife Habitat and Part 3: General Guidelines-Retaining Leave Trees and Timber Harvesting). We believe that the guideline to reserve 6 to 15 trees per acre will help to mitigate the loss of standing dead habitat. Additionally, restoration activities resulting from meeting objectives O-VG-8 (Superior) O-VG-9 (Chippewa), O-VG-10 (Superior) O-VG-11, and O-VG-12 Chippewa) will result in more than mitigative levels of standing dead trees. Forest managers believe that an additional management indicator species is not necessary.

Wildlife Habitat (2.6.4)

Wildlife Habitat - General

PC# 2.6.4-1
Public Concern: The Chippewa and Superior NFs should protect and restore wildlife habitat.

AND

PC# 2.6.4-3
Public Concern: The Plans should provide mature forest habitat restoration for those species at highest risk starting now in Decade 1.

Agency Response:
National Forest management mandates reflect a number of laws including the Multiple-Use Sustained Yield Act of 1960 (MUSY), the National Forest Management Act of 1976, regulations, treaties, and policies. The MUSY requires considering wildlife resources equally with other renewable resources in managing forests. The Forest Service manages the natural resources of the forests within a multiple use framework that emphasizes a wide variety of tangible and intangible benefits, opportunities, and values. Goals of the Chippewa and Superior NF, as found in the Final Forest Plans include but are not limited to, promoting ecosystem health and conservation using a collaborative approach to sustain the nation's forests and wetlands, and providing forest settings and natural resources that enhance social and economic benefits at local, regional, and national levels, and provide for a variety of life by managing biologically diverse ecosystems.

Alternative forest management directions were developed in the forest plan revision process. Each alternative responded to the purpose and need for revising the Forest Plans and addresses issues, concerns, and needs identified during the Notice of Intent. (Final EIS, Appendix A) The selection of an alternative is dependant on many tangible and intangible indicators. Sustainability of the ecosystem, providing for a variety of forested settings and opportunities, providing for treaty rights, and contributing to the economic stability of communities are all some of the many considerations in the preferred alternative selection. Rational for a preferred Alternative selection is contained within the Record of Decision.

PC# 2.6.4-5
Public Concern: The Final EIS should address concerns about wide swings in Alternative E for mature/old aspen-birch, red and white pine, upland forest, and lowland black spruce habitat.

Agency Response:
In addition to what is provided in the analysis of MIHs (section 3.3.1), the analysis you are requesting is addressed in several other sections of the Final EIS. Section 3.2.1 Forest Composition and Structure addresses amounts of forest in age groups and the size, amount, and distribution of old growth. In addition, MIH 1b: Mature/older upland forest is analyzed in terms of northern goshawk habitat in section 3.3.6.1. Spatial analysis (sections 3.2.2 and 3.3.2) examines mature or older upland forest in terms of spatial configurations over time. The northern goshawk analysis also examines spatial patterns relating to this species and mature/older forest. In general, amounts of mature or older forest of several species groups or more generalized upland/lowland classifications were used as indicators in many species specific analysis in the Final EIS or the Biological Evaluation (USDA Forest Service 2004e). We recognize that the alternatives that were considered in the Final

EIS provide varying amounts over time of young or mature/older forest habitats. The Regional Forester selected an alternative that he believes best balances the range of multiple uses on each forest.

PC# 2.6.4-6
Public Concern: The Final EIS should use additional indicators to adequately analyze wildlife issues and specialized habitats such as cavity nesting habitat, unfragmented habitats, adjacent habitats, and predators and heavy deer browsing facilitated by habitat fragmentation.

Agency Response:
Alternative forest management directions were developed in the forest plan revision process. Each alternative responded to the purpose and need for revising the Forest Plans and addresses issues, concerns, and needs identified during the Notice of Intent (NOI). (Final EIS, Appendix A) Indicators were identified and analyzed within the Final EIS, Chapter 3 that were best able to address the NOI. Wildlife habitat is discussed in the Final EIS, Chapter 3, and includes goshawk, deer, selected birds, and plants. Desired conditions and habitat goals for most species are addressed through a coarse filter approach. The coarse filter approach is one that maintains an array of environmental conditions that are representative of native ecosystems of the area in order to provide habitat to as many species as possible.

The selection of an alternative is dependant on many tangible and intangible indicators. Sustainability of the ecosystem, providing for a variety of forested settings and opportunities, providing for treaty rights, and contributing to the economic stability of communities are all some of the many considerations in the preferred alternative selection. Rational for a preferred Alternative selection is contained within the Record of Decision.

PC# 2.6.4-8
Public Concern: The Chippewa and Superior NFs should not increase protection for the Dry Mesic Jack pine/Black Spruce and Lowland Conifer because they are neither rare nor unique.

Agency Response:
The EIS analyzed a range of vegetation objectives for all Landscape Ecosystems. These objectives were developed considering the contributions of other NFS land. The BWCAW comprises a high percentage of the Dry-mesic Jack Pine- Black Spruce Ecosystem (66%) and thus objectives do not propose increased protection of those communities that would be amply represented in the BWCAW. Management for the full range of vegetation communities outside the BWCAW, however, also ensures well-distributed habitats.

Lowland conifer communities that are sparsely forested or in very poor nutrient status are classified as unsuited for timber management, hence these types of communities are well-protected from most management. However, the communities that are productive and well-forested represent different types of native plant communities and the Revised Plans provides management to provide at least adequate ecological representation of these. The Lowland Conifer (LLC) Ecosystem A has a high representation in the BWCAW (42%) and this was considered when establishing objectives outside the wilderness. LLC-B has only 4% and LLC-C has 0% in the BWCAW and thus management objectives considered all suitable lowland conifer forest lands when establishing objectives.

PC# 2.6.4-9
Public Concern: The Final EIS should not include the BWCAW acres for management indicator habitats in Executive Summary Table 3.3 because there is no context to understand suitable timberland as a SNF total.

Agency Response:

The Executive Summary is meant to provide an overview of the Final EIS for revision of the Chippewa and Superior National Forest Plans and also provides background for reviewing the separate Final Forest plans. Please see the Final EIS and Appendices B, D, and G for additional information on the BWCA and the relationship to the management indicator habitats.

PC# 2.6.4-10
Public Concern: The Chippewa and Superior NFs should consider dropping Decade 10 analysis for Goshawk because it is too far in the future to be practical or valid.

Agency Response:
Because of the growth rate of trees, and the rate at which forest ecosystems develop, it is important to analyze effects out to a considerable time frame. Ten decades was determined to be a reasonably effective time period. To achieve forest management goals, you have to look out on to the horizon and project the goals to be able to direct more immediate actions. The 10-decade analysis is the projection to determine if the proposed goals would be met if the more immediate proposed actions were to take place. There is a need to look both short and long term. It would be impossible to achieve some of the forest management goals in one or two decades, but necessary to begin achievement.

The Draft EIS analyzed a wide variety of alternatives with different outcomes for a multitude of resources. The Regional Forester selected Alternative E because he felt this alternative struck the right balance between the many demands and uses of the Chippewa and Superior National Forests. In making his decision, forest resources and objectives needed to be considered in making this selection.

The commenter raises a valid concern that the decade 10 analysis projects conditions that may never happen. However, beginning to implement Alternative E now will move the Forests in the direction of ultimately achieving the decade 10 projections. Many things are likely to change. Political environment, societal needs and values, natural events, and improved knowledge and technology are all things that will certainly change in the next 100 years. As events unfold and things change, the Forest Plan will be adjusted, revised, updated and replaced to compensate for the inevitable changes.

PC# 1.11.5-11
Public Concern: The Chippewa and Superior NF should modify management direction to protect Northern Goshawk habitat

-By restoring more mature forest and patches of at least 100 acres
-So that habitat is increased before decade 5

Agency Response:
Goshawks are circumpolar in distribution, and as such, occur in many different habitats and landscape situations. In the Great Lakes Area, they require a combination of forest habitats, of varying ages, distributed across the landscape. Goshawks are generally considered to favor large expanses of mature and older forest, but intermixed with young and mid-aged forest that provides for prey production. The actual spatial arrangement of these habitat components to provide optimal habitat, or to provide minimally suitable habitat are difficult to determine. It is not known that a 100-acre patch size is required for goshawks. The draft EIS uses 100 acres as a minimum patch size for the mature and older forest component, primarily as an analysis parameter. We believe that using a patch size of 100 acres for analysis provides a reasonable measure of goshawk habitat fragmentation and habitat suitability. This does not imply that goshawks necessarily require patch sizes greater than 100 acres or that they do not use patches smaller than 100 acres in size.

In regards to the goshawk habitat provisions of Alternative E, we considered a range of planning alternatives (Appendix G, Final EIS) that examined various levels of forest ages and ranges of conditions that benefited wildlife species in different ways (section 3.3 of the Final EIS). In some alternatives, greater amounts of more desirable goshawk habitat were provided than in others (Appendix G, Final EIS). The Regional Forester selected Alternative E because he felt this alternative struck the right balance between the many demands and uses of the Chippewa and Superior National Forests. Goshawk foraging habitat conditions will change from the current condition in response to the needs for change (section 1.3.3 Need for Change in Management Direction), however other forest resources and objectives needed to be considered in making this selection.

PC# 2.6.4-11
Public Concern: The Chippewa and Superior NFs should not rely on the BWCAW to meet habitat allocations until an accurate vegetation inventory is conducted to improve low quality and speculative data.

Agency Response:
While habitat conditions in the BWCAW are an integral part of the overall wildlife habitat on the Superior National Forest, the BWCAW was not used as "the solution to all habitat temporal bottlenecks in the Superior National Forest." Revised Plans consider the contribution of lands within the BWCAW, but also address concerns for well-distributed habitats by providing habitat objectives for outside the wilderness only (Chapter 2, Landscape Ecosystem management indicator habitat objectives). Our analysis in Chapter 3.3.1 – 3.3.5 determined that Revised Plans would provide for viability of all species.

We used the best and most applicable information and vegetation data inventory available to incorporate information on the BWCAW, while acknowledging limitations of the data both inside and outside the wilderness (EIS Chapter 3.3.1). Overall forest vegetation and habitat objectives by Landscape Ecosystem provide a coarse filter management framework. All of our vegetation inventory data will continue to be updated and refined during Forest Plan implementation to insure we are using the best available information for each site-specific project. BWCAW vegetation inventory was not considered in the analysis of MIH for the Chippewa National Forest.

PC# 2.6.4-12
Public Concern: The Final EIS should include national direction on use of management indicator habitat in the appendix so that it can be compared to the use made in the plan.

Agency Response:
The national direction on the use of management indicator habitats is found in 36 CFR 219.19 (a)(1) and FSM 2620.5, WO Amendment 2600-91-5. In the WO Amendment, management indicators are defined as "…plant and animal species, communities, or special habitats selected for their emphasis in planning, and which are monitored during forest plan implementation in order to assess the affects of management activities on their populations and populations of other species with similar habitat needs which they may represent." This information is found on page B-27 of the DEIS, and is also found in Appendix B of the Final EIS.

PC# 2.6.4-17
Public Concern: The Superior NF should not pursue additional management or protection for wildlife species that rarely frequent the forest because:

- **Concerns about migratory species' populations may not be local.**
- **Adequate area has already been set aside.**
- **Management for these species comes at the cost of balance for other species.**

Agency Response:
Legal and policy guidance for management of fish and wildlife is found in 36 CFR 219.19 which states, "Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area." Additional guidance is found in Departmental Regulation 9500-4 further states, manage "habitats for all existing native and desired non-native plants, fish and wildlife species in order to maintain at least viable populations of such species."

The alternatives and Forest Plans were developed to meet this guidance by providing the range, mix and distribution of habitats needed to maintain at least viable populations of these species. Jack Pine/Black Spruce and Lowland conifer habitats are important components of this mix and distribution of habitats. Wilderness and "semi-wilderness" contribute to this mix as well, however, they cannot provide the total age and species mix needed to maintain viable populations of all species.

No special measures will be taken to provide for the habitat needs for species that are not native or desired non-native species.

PC# 2.6.4-18
Public Concern: The Final EIS and Plans should identify, map, protect, and provide protection for wildlife corridors to meet direction of Congress, Administration, and the Department of Agriculture.

Agency Response:
There is no direction by Congress, the Administration, or the Department of Agriculture that requires us to "identify, map and protect wildlife corridors." However, landscape patterns (including corridors) are very important for wildlife movement and dispersal and we have addressed these needs through our desired conditions, objectives and management indicator habitats. These include, but are not limited to: D-WL-3a, h, i, O-WL-1-2, 11, O-WL-17 (Chippewa), O-WL-18 (Superior), D-VG-7, D-WS-8, and D-WS-10. We believe that the strategic framework exists in the Forest Plans to maintain or restore opportunities for species to interact, disperse and migrate and to reduce adverse impacts associated with habitat fragmentation.

PC# 2.6.4-19
Public Concern: The Final EIS should clarify that large clearcuts are beneficial to some animals, but are devastating to others.

Agency Response:
The National Forest Management Act of 1976 and other laws and federal regulations require the Forest Service to maintain or improve biological diversity at the genetic, species, and ecosystem levels and to maintain viable populations of existing native and desired non-native species well-distributed within their range on the planning area. Management must avoid actions "which may cause a species to become threatened or endangered" (Final EIS, Chapter 3, Wildlife Habitat section). Final Forest Plans promote management to maintain viable and well-distributed populations and habitats by ensuring that environmental conditions on National Forests are present in quality, quantity, distributions, and spatial patterns that are adequately representative of – not necessarily within – the range of natural variability.

The amounts and distributions of wildlife habitats are largely a social question to address the issue of what species habitats should be emphasized to provide for the many social, economic, and ecological uses and values of wildlife. Alternatives analyzed within the Forest Plan Revision process provided different amounts of forest age groups and harvesting practices to achieve the desired conditions. Clearcutting is one management technique that is appropriate to utilize with certain existing and desired conditions. Site specific analysis of project proposals is

done in accordance with the National Environmental Policy Act to identify issues and concerns related to proposed management actions and outcomes. If the harvesting technique of clearcutting is proposed at the site specific level, concerns would then be addressed. Please see the Final EIS, Chapter 3, Timber section for further information on harvesting techniques.

PC# 2.6.4-21
Public Concern: The Final EIS and Plans should consider that the NFs have a special role to provide regionally rare habitats for species associated with shifting large fires and pine barrens to:

- **Improve the current condition for sharp-tailed grouse and maintain viability.**
- **Look for opportunities to restore habitat.**
- **Establish an objective for a 5,000 acre or larger pine barrens restoration west of Lake Leander.**

Agency Response:
Forest Plan Goals, Desired Conditions and Objectives outlined in Chapter 2 of the Forest Plan establish Desired Conditions for Forest wide Vegetation Spatial Patterns. D-VG-7 outlines a desire for vegetation spatial patterns that have been degraded or greatly diminished by past land use be restored to closely emulate landscape scale patterns that would result from natural disturbances. Final Forest Plans promote management to maintain viable and well-distributed populations and habitats by ensuring that environmental conditions on National Forests are present in quality, quantity, distributions, and spatial patterns that are adequately representative of – not necessarily within – the range of natural variability.

Site specific analysis of project proposals is done in accordance with the National Environmental Policy Act to identify issues and concerns related to proposed management actions and outcomes. The location of specific vegetative conditions and patterns is a project level goal and would be analyzed at the site level.

PC# 2.6.4-22
Public Concern: The Plans should provide for traditional wildlife management activities.

-Including erecting and/or maintaining nest boxes or platforms that provide important or critical habitat.
-Including maintaining wildlife openings and upland brush through periodic mowing, burning, or shearing.
-Including not abandoning constructed openings.
-Including not abandoning traditional wildlife management activities like maintaining forage conditions around deer yards.

Agency Response:
The Goals, Desired Future Conditions and Objectives outlined in the Forest Plan are designed to provide adequate habitat for wildlife species and eventually, the need for constructed openings, nest boxes and activities designed to maintain forage near deer yards would become be reduced. There are no Standards or Guidelines within the Forest Plan which prohibit maintenance or installation of these facilities. The opportunity and need for these activities is most appropriately addressed at the project level, where activity decisions are made.

PC# 2.6.4-23
Public Concern: The Final EIS should clarify the analysis of MIHs (p. 3.3.1-32) and describe what MIH acre and percent changes mean in terms of population declines to game species associated with young forests: snowshoe hare, woodcock, and deer.

Agency Response:
We have added clarification to this section in the Final EIS.

PC# 2.6.4-24
Public Concern: In the Superior Plan on page 2-14 Management Direction for All Resources should include a bullet for timber management.

Agency Response:
This introductory section to Forest Plan Chapter 2: Wildlife Objectives, Standards, and Guidelines has been revised to clarify the conditions that wildlife habitat depends on and the many uses of resources that may also influence habitats. Timber management is included in the second paragraph of this section.

PC# 2.6.4-26
Public Concern: The Analysis of the Management Situation for wildlife in the Final EIS should clarify that no data supports dependence on old growth for any vertebrate species or plants in Minnesota. (coordinate response with 1.4.1-9, in section 2.7.5)

Agency Response:
The Analysis of the Management Situation does not state that there are any species that are entirely dependent on "old growth", but that there is greater public demand for habitat for species associated with older forests (Revised Plans, Appendix A, EIS Appendix A, Notice of Intent [USDA Forest Service 1997a]). However, a number of species use these areas to meet at least some of their habitat needs (Chapter 3.2, 3.3.1, 3.3.4, 3.3.5, Biological Evaluation [USDA Forest Service 2004e], USDA Forest Service, 2002d, planning record). In addition, there are many other values of older forests and "old growth" including scientific, educational, aesthetic, recreational, and cultural values (Revised Plans, Appendix A, Old Growth Resources [USDA Forest Service 1996b], planning record).

PC# 2.6.4-27
Public Concern: The Plans should provide more quantitative and qualitative management objectives for wildlife and explain how the Chippewa and Superior NFs will measure, monitor, and evaluate objectives.

Agency Response:
The Revised Plans provide a range of wildlife objectives for wildlife that include both general and more explicit direction. Both general and explicit direction includes a variety of both qualitative and quantitative direction. For many of the wildlife objectives, the choice was made to not be highly specific in terms of acres of habitat or parameters of quality for several reasons. First, the Regional Forester envisioned these Plans as broad strategic, not wholly prescriptive, documents. Revised Plans emphasize site-specific project planning and analysis to address active and effective approaches to achieving objectives for wildlife. This would be accomplished within the National Environmental Policy Act framework that includes public involvement. We believe that this approach, which can incorporate new information and adaptive management approaches, provides the strategic framework within which to achieve objectives and therefore it is not necessary to prescribe more specific quantities or distribution. Secondly, for one of the key wildlife management approaches provided in the Plan

Chapter 2 – that is, providing for most species through a coarse filter management approach with Landscape Ecosystem vegetation and management indicator habitats (MIH) objectives (together with other direction for vegetation, wildlife, and watershed health) – objectives are quantifiable, measurable, and monitorable. Revised Plans' Chapter 4 Monitoring and Evaluation describes our broad, strategic approach to monitoring habitat and populations of management indicator species, threatened and endangered species, sensitive species, MIHs and their associated species, and other habitats. For both quantitative and qualitative objectives, monitoring will address (through evaluation and reporting to the public) the questions of the degree to which desired conditions, objectives, standards, and guidelines are being met.

PC# 2.6.3-1
Public Concern: The Final EIS should analyze the current and proposed multi-aged acres to insure viable populations.

Agency Response:
Multi-aged acres are analyzed in the sections that use on mature/older forests as indicators (See EIS Sections 3.3.1-5, Biological Assessment [BA], and Biological Evaluation[BE]). The mature/older indicators are based on mature, old/old growth and old/multi-aged growth stages. The basis for the analysis of indicators in the EIS results of this analysis are found in the planning record by Landscape Ecosystem and Forest-wide and this information is available on request. An example to the results is provided below:

Landscape Ecosystem/ Vegetative Growth Stage	Seedling -open	Sapling _pole	Mature	Old Old growth	Old growth_ Multi-aged	Mature+	Total Acres
Dry mesic jack pine-black spruce	4,307	15,327	12,004	1,019	476	13,498	33,133
Dry mesic white pine-red pine	5,318	12,107	16,159	3,157	138	19,453	36,878
Lowland conifer	182	1,050	778	172	28	978	2,210
Mesic aspen-birch-spruce-fir	2,799	12,507	4,301	202	244	4,747	20,053
Mesic white pine-red pine	2,119	5,253	4,311	327	481	5,120	12,491
Sugar Maple	275	2,130	257	27		284	2,689
Rich swamp	17	82	179	39		219	317
TOTAL	**15,015**	**48,455**	**37,990**	**4,943**	**1,367**	**44,300**	**107,771**

PC# 2.6.4-31
Public Concern: The Chippewa and Superior NFs should drop management indicator habitats (MIH) and replace with management indicator species (MIS).

-Because the use of MIHs is ill-conceived and violates NFMA.
-Because MIHs do not allow assessment or understanding of needs of current populations or their recovery requirements.
-Because the Plans should monitor populations, not habitat.

Agency Response:
Under the Forest Plan, both management indicator species (MIS) and management indicator habitats (MIH) are scheduled to be monitored. This is consistent with 36 CFR 219.19 (a)(1) and FSM 2620.5, WO Amendment

2600-91-5 (see response to 2.6.4-12 above). Our overall approach to meeting these requirements was to use a limited number of species, together with management indicator "habitats."

The use of management indicator habitats over individual management indicator species was selected because of the limitations of using single species documented in the Notice of Intent (USDA Forest Service 1997a, p. 19, 35), Appendix A: Wildlife of Revised Plans, Appendix B: Wildlife, Wildlife Task Team Report Appendix B (USDA Forest Service 1997e) . This assumes that the habitat quality maintained for the management indicator species would be suitable for the other species it represents. We also determined that management indicator habitats best represent the major biological communities affected by management, better facilitate evaluation of alternatives and their effects, and can be practically and efficiently monitored in conjunction with individual species monitoring. Chapter 3.3.0 and Appendix B: Wildife Section detail the rationale and selection process for management indicator habitats and species.

Because we recognize that there are also limitations to management indicator habitats, we also identified four management indicator species (gray wolf, bald eagle, northern goshawk and white pine). In addition, we also selected "other species of management interest" that because of their specialized habitat requirements, high public concern or concern for their continued viability in the planning area may not be adequately addressed by the management indicator habitats and species. These "other species of management interest" include Canada lynx, 107 sensitive plants and animals, American woodcock, white-tailed deer and ruffed grouse. A more detailed description of our approach and process can be found in Appendix B: Wildlife of the Final EIS.

PC# 2.6.4-31a

Public Concern: The Final EIS and Final Plans should use a broader contingent of species for management indicator species, because the four species used are not inclusive enough for many other forest wildlife species.

Agency Response:

The process we used to selection of individual species for analysis in the EIS is documented in the EIS Section 3.3.0 and Appendix B: Wildlife: *Identification of wildlife management indicator species (*MIS*) and habitats* (MIH). The selection of species and habitats was made to 1) address 36 CFR 219.19 requirements to identify MIS, and 2) to use a coarse/fine filter analysis approach to inclusively address species of management concern, that is, species of interest to the public for a variety of reasons. We believe that we had adequate representative analsyis of species, Rather than four species, we analyzed a minimum 114 species. These included: 107 sensitive species (Section 3.3.5 and the Biological Evaluation); 3 threatened species (2 of which are also MIS) (Section 3.3.4 and the Biological Assessment, 4 MIS (including 2 threatened species and 1 sensitive species) (3.3.6.1, 2); 3 additional species of management concern (3.3.6.3-5); and a suite of non-native invasive species (3.3.7). Through the Species Viability Evaluation process we collected information and considered numerous other species of potential viability concern (USDA Forest Service 2002d, planning record). These species included those listed by Audubon, the Fish and Wildlife Service, Partners in Flight, State and Tribal-listed and other special status species: we have added to the Final EIS Appendix D Tables DEIS-8-13 to demonstrate which species were specifically addressed and how they are addressed by MIHs. Through evaluation of species for MIS and MIH we considered the habitat needs all vertebrates and numerous other species to select both MIS and MIHs (USDA Forest Service 2002k, planning record). We believe that our process allowed for both the coarse filter approach for addressing most of the 1000s of known and unknown species on the forest and the fine filter approach for addressing 114 individual species.

Monitoring and evaluation will be a key part of evaluating the Forest Plans effectiveness in meeting the objective of maintaining all species. We would continue to systematically monitor key species and guilds such as those forest songbirds currently monitored by Natural Resources Research Institute and all MIHs and other key habitats with the goal evaluating species viability. These may be in addition to the Management Indicator Species.

PC# 2.6.4-34
Public Concern: The Final EIS should analyze old growth age grouping for MIHs separate from the current five age groupings to ensure that the oldest trees are analyzed and protected.

Agency Response:
The amount of old growth resulting from implementation of the Forest Plan is analyzed in Section 3.2.1 Forest Composition and Structure. The objectives set in the Forest Plan include objectives for age class distribution for each Landscape Ecosystem. Those age classes are detailed in 10 year increments. Although, the analysis of Management Indicator Habitats grouped mature and old forest together, the objectives for Management Indicator Habitats, separated, mature and old and established objectives for each. Those objectives are shown by Landscape Ecosystem in the Forest Plan.

PC# 2.6.4-35
Public Concern: The Chippewa and Superior NFs should conduct adequate cumulative effects analysis on effects to species.

> **-To disclose additive impacts of federal and non-federal forest management.**
> **-To include effects of management actions and outside influences, not just habitat and recognize their special role, niche, ability, or other obligation to provide conditions or features lacking on other lands.**
> **-To consider natural disturbance in Dualplan modeling habitat, so actual habitats would be different than predicted in Draft EIS; to not disproportionately rely on BWCAW in its habitat assessment; to use ground forest inventory of native plant communities in the BWCAW, rendering reliance on BWCAW information questionable; to use better habitat predictions that are less speculative.**
> **-To explain and provide evidence to support the conclusion that the predicted loss of forestland in the region would have no adverse effect on species associated with MIHs 1-10.**
> **-To include identification of population thresholds, quantitative measures of habitat, estimates of population levels and habitat availability, and mitigation measures.**

Agency Response:
The Final EIS discloses adequate cumulative effects on species in Chapter 3.3 and the influence of both forest management and development activities on the National Forests and other non-federal land was considered. A number of sources were consulted in preparation of the Cumulative Effects Analysis. Appendix H of the EIS summarizes the assumptions and activities made in preparation of the analysis. Those activities were, in turn considered in analyzing the cumulative effects on species viability through the combination of Management Indicator Habitats (MIHs), management indicator species, and other species of management concern – not through MIHs alone. This included those species of the greatest viability concern: threatened and sensitive species. For those species for which some viability concern existed, specific standards or guidelines were developed to mitigate those concerns (See Forest-wide Standards and Guidelines for Terrestrial and Aquatic Wildlife in Section 2 of the forest Plan). Population thresholds would be required if viability was threatened, however, the forest-wide goals and objectives, standards and guidelines are expected to maintain viable populations of native and desirable non-native species and therefore, thresholds need not be established. Monitoring would be conducted to assure that those standards and guidelines are implemented and effective.

The potential for natural disturbances is present and difficult to predict, especially in terms of being quantified by Landscape Ecosystems as “reasonably foreseeable”. Natural disturbances would be evaluated if, when, and where

they occur. If they have produced significantly changed conditions, and altered the appropriateness of Forest Plan Goals and Objective or Standards and Guidelines, the Forest Plan can be amended.

A strategic approach to the Forest Plans was adopted, and an important part of this approach for management of plant and animal species and their habitats is coarse filter/fine filter management. Lands are managed to provide suitable habitat for a variety of species distributed across the landscape. The Landscape Ecosystem Goals and Objectives contained in the Forest Plan were developed taking into account desired conditions for wildlife species as well as other resources. Consequently, meeting those vegetative goals and objectives would be address wildlife goals and objectives. Through this approach the Regional Forester has identified the role the National Forests would fulfill in Minnesota. Monitoring to detect population trends for fine filter species would be used to alter management when necessary to provide for species viability. The coarse filter/fine filter approach may involve sampling to determine population trends, but does not necessarily require Forest-wide population goals for sensitive species.

We believe that the strategic framework exists in the Forest Plans to address numerous planning and implementation concerns, therefore it is not necessary to add more specific management direction. For example, to implement plans, we expect to continue to conduct and improve inventories of forest resources (including inside the wilderness). The Plans promote continued scientific inquiry in order to best achieve objectives. At some point in the future, it may be more reasonal to identify population thresholds, better quantitative measures of habitat, and improved mitigation measures.

PC# 2.6.4-38
Public Concern: The Superior NF should wait until near the end of Decade 1 to create more young forest because of the current abundance of young forest.

Agency Response:
We developed and analyzed a range of alternatives that provide varying abundance and distribution of young upland forest by Landscape Ecosystem (LE). To establish objectives by alternative we considered the contribution of the conditions of the BWCAW, including the vegetation conditions that resulted from the 1999 blowdown (USDA Forest Service 2001a). This included two alternatives, B and D, which resulted in substantially less young upland forest than the Selected Alternative (see EIS Chapter 3.2, Tables-FAC-17, 19, 21, 23, 25, 27, 29). The Regional Forester considered the alternative management objectives for young forest and selected Modified Alternative E because he felt that it best met the goal of maximizing net benefits to the public. An important consideration for including the amount of young upland forest in Modified Alternative E was that much of the blowdown is concentrated in the BWCAW. Because of law (Wilderness Act) and our BWCAW management direction (Revised Plan, Chapter 3) we have limited ability to manage ecosystems. For this reason, we have a concern (described in USDA Forest Service 2001a) about the continuing decrease of jack pine-black spruce and other pine native plant communities in the wilderness. In similar communities outside the wilderness, the Revised Plans provide us the opportunity to manage to maintain these communities of concern. We expect to use timber harvest (primarily clearcutting) to promote increase of jack pine forest and this will result in young forest..

PC# 2.6.4-39
Public Concern: The Chippewa and Superior NFs should consider playing a role in conserving habitats less common on other ownership.

Agency Response:
The Chippewa and Superior National Forests recognize the importance of ecological integrity and the resulting increased demand for a management approach that blend the public's needs and interests with the biological and physical capabilities and requirements of the environment. Greater cooperative stewardship with other land

managers is key to meeting these demands because of the intermixed ownership. (Final EIS, Chapter 1). A forest-wide goal includes "Develop and use the best scientific information available to deliver technical and community assistance and to support ecological, economic, and social sustainability. (Final Forest Plans, Chapter 2).

The concept of range of natural variability (RNV) as a characterization of reference conditions is of primary importance to maintaining the biological diversity of a particular landscape – of all ownerships. RNV reports were used when analyzing and comparing alternatives, in terms of how each of them contributes to RNV at the larger landscape level. (Final EIS, Chapter 1) During the forest plan revision process, a range of alternatives were developed that responded to a variety of issues and concerns as described in the Notice of Intent. Alternatives differed as forest types moved toward or away from RNV. For the purposes of the analysis in the EIS, the range of natural variability (RNV) is used for comparative purposes only. Restoring the forested landscapes on the Chippewa or Superior National Forests to those conditions, which occurred within RNV, is not the expressed goal of future national forest management. The selection of an alternative is dependant on many tangible and intangible indicators. Sustainability of the ecosystem, providing for a variety of forested settings and opportunities, providing for treaty rights, and contributing to the economic stability of communities are all some of the few considerations in the preferred alternative selection.

PC# 2.6.4-40
Public Concern: The Plans should provide greater protection for areas of mostly deciduous trees for plants and animals that need this habitat.

Agency Response:
The concept of range of natural variability (RNV) as a characterization of reference conditions is of primary importance to maintaining the biological diversity of a particular landscape – of all ownerships. RNV reports were used when analyzing and comparing alternatives, in terms of how each of them contributes to RNV at the larger landscape level. (Final EIS, Chapter 1) For the purposes of the analysis in the EIS, the range of natural variability (RNV) is used for comparative purposes only. Restoring the forested landscapes on the Chippewa or Superior National Forests to those conditions, which occurred within RNV, is not the expressed goal of future national forest management. During the forest plan revision process, a range of alternatives were developed that responded to a variety of issues and concerns as described in the Notice of Intent. Alternatives differed as forest types moved toward or away from RNV. The preferred alternative, provides for increases of northern hardwoods toward RNV on the Chippewa NF through the tenth decade. The preferred alternative on the Superior National Forest maintains the forest in a condition as it exists, which is generally at the RNV level.

PC# 2.6.4-43
Public Concern: The Final EIS should provide analysis and other information on bur oak inclusions within the Mesic Northern Hardwood Landscape Ecosystem on the Chippewa NF.

-To address its cultural value and its condition and regeneration at cultural use sites.
-To ensure that the cultural significance of old burr oak woodlands is not masked or buried.

Agency Response:
We recognize the cultural importance of bur oak, particularly those mature inclusions within other stands. The Forest Plan is a strategic forest management document that guides natural resource management activity and establishes management standards and guidelines for the Chippewa National Forest. Final Forest Plan forest wide goals, desired conditions and objectives, standards and guides all emphasize an active and effective proposed site-specific project analysis that includes public involvement. The forest-wide goals of the Forest Plan emphasize contributing to efforts to sustain the American Indian way of life, cultural integrity, social cohesion and economic

well-being. Inclusion of bur oak could be considered at the site specific planning level and actions designed to maintain sufficient inclusions. Planning for this type of activity is greatly assisted by public involvement at the project level. Site specific decisions are made at that time within the National Environmental Policy Act framework.

PC# 2.6.4-46
Public Concern: The Chippewa and Superior NFs should ensure that early successional conditions and aspen regeneration are increased or maintained.

-Because Minnesota's forestlands comprise an important component of declining aspen forest in the Eastern U.S.
-Because lack of management in the region have left private lands without adequate representation of early successional and aspen forest types.
-Because remaining aspen stands are generally over-mature and in critical need of clearcutting or burning.
-Because the Plans lack true clearcutting, leaving major voids in representation of early successional and aspen forest types.
-Because decrease in aspen, early successional forest, and clearcutting would adversely affect wild game habitat with negative long-term effects on the economy.
-To improve management direction for aspen and early successional habitats and wildlife openings.

Agency Response:
Many of the objectives for vegetation strive to strike that balance of habitats while recognizing those habitats and species most at risk. At the same time the Forest Plans propose to produce a consistent amount of early successional habitat each decade. Other planning alternatives produce more or less early successional habitat,

PC# 2.6.4-47
Public Concern: The Plans should establish vegetation goals for early successional forest components in the General and Longer Rotation Forest Management Areas.

-Including not allowing decrease in early successional forest components in General and Longer Rotation Forest Management Areas.
-Including utilizing combinations of prescribed fire and traditional clearcutting to create blocks greater than 1000 acres.

Agency Response:
The goals and objectives for vegetative species composition, age class objectives and tree species diversity are established in the Forest by Landscape Ecosystem (Chapter 2, Revised Plans). These objectives include early successional species objectives and are designed to meet goals for a variety of resources.

The amount of logging identified in the Forest Plans is strongly related to the vegetation objectives set for each Landscape Ecosystem (Revised Plans, Chapter 2: Landscape Ecosystem Objecitves section). Biodiversity, restoration of species, recreation and scenery are important aspects of the new Forest Plans. Various alternatives were considered in detail, including one that highlighted early successional forests. The selected alternative continues to provide early successional forests across the landscape into the foreseeable future.

According to Forest Service Manual 2471.11: Forest could: "Before applying any even-aged regeneration cutting method to a stand, consider the standards and guidelines in the forest plan concerning the culmination of mean annual increment along with the size, shape, dispersal, and duration of openings. Apply clearcutting only where it

has been found to be the optimum method of regeneration to meet multiple-use objectives". Although the amount of clearcutting is reduced, it is retained as a treatment practice (see section 3.4.1 of the EIS). Only the even-aged management treatments contribute to the Landscape Ecosystem Vegetation Objectives for the 0-9 age class. Each of the alternatives included varying amounts of clearcutting with the effects disclosed in Chapter 3 of the EIS. Clearcutting is used to harvest and regenerate the aspen type. Although clearcutting is not the same as the historical natural disturbances, it does provide the necessary conditions for establishing and growing species that characteristically were regenerated by stand replacement type disturbances that created open conditions. The amount of even-aged harvesting is directly related to the amount of 0-9 age class objective set for each Landscape Ecosystem. The Plans intend to achieve the 0-9 age class objective through even-aged timber harvesting in patch sizes from 1 acre to 1,000 acres. In addition, direction is provided to establish and maintain large patches of mature and older vegetation. This includes, but is not limited to: Superior: D-VG-3, 7, 8, OVG-1, 11, 17-25, G-VG-1-6, S-VG-7; Chippewa: D-VG-3, 7, 8, OVG-1, 12, 17, 19-24, S-VG-2, 3, G-VG-1.

PC# 2.6.4-48

Public Concern: The Chippewa and Superior NFs should maintain and actively manage aspen forest type on all existing productive sites, but could convert off site aspen to more appropriate species to:

- **Improve forest health and productivity.**
- **Support important wildlife diversity.**
- **Provide economically important forest products.**
- **Support local economies through both timber and game wildlife economic benefits.**
- **Prevent loss of aspen and succession to understocked stands of brush and hazel.**

Agency Response:

The selected a management alternative balances the range of multiple uses on the Chippewa and Superior National Forests, including a full range of stands conditions and their various uses. The Forest Plans use a combination of coarse filter and fine filter strategies to accomplish this end. The forest plans reduces the amount of aspen management and was identified as part of the "need for change" in the Notice of Intent. However, aspen belongs on the landscape within most of the Landscape Ecosystems. Since the plan is directing that each vegetation growth stage be represented, aspen would be managed within each LE where it naturally occurred. The effects are disclosed in Chapter 3 of the Final EIS.

PC# 2.6.4-50

Public Concern: The Chippewa and Superior NFs should benefit more than 60 species of concern by providing more multiple age forest and less clearcutting than Alternative E provides.

Agency Response:

During the forest plan revision process, a range of alternatives was developed that responded to a variety of issues and concerns as described in the Notice of Intent. The Range of Natural Variability and Management Indicator Species were used to analyze wildlife and other related concerns. The concept of range of natural variability (RNV) as a characterization of reference conditions is of primary importance to maintaining the biological diversity of a particular landscape – of all ownerships. RNV reports were used when analyzing and comparing alternatives, in terms of how each of them contributes to RNV at the larger landscape level. (Final EIS, Chapter 1) For the purposes of the analysis in the EIS, the range of natural variability (RNV) is used for comparative purposes only. Restoring the forested landscapes on the Chippewa or Superior National Forests to those conditions, which occurred within RNV, is not the expressed goal of future national forest management.

The amounts and distributions of wildlife indicator habitats are questions used to address the issue of what species habitats could be emphasized to provide for the many social, economic, and ecological uses and values of

wildlife. Alternatives analyzed within the Forest Plan Revision process provided different amounts of forest age groups and harvesting practices to achieve the desired conditions. Clearcutting is one management technique that is appropriate to utilize with certain existing and desired conditions. Please see the Final EIS, Chapter 3, Timber section for further information on harvesting techniques.

The selection of an alternative is dependant on many tangible and intangible indicators. Sustainability of the ecosystem, providing for a variety of forested settings and opportunities, providing for treaty rights, and contributing to the economic stability of communities are all some of the few considerations in the preferred alternative selection. Rational for a preferred Alternative selection is contained within the Record of Decision. Alternative Modified E provides for increases of uneven-aged management and for less clearcutting as compared to existing forest management practices.

PC# 2.6.4-51

Public Concern: The Chippewa NF should decrease the amount of aspen forest to more natural mix of tree species that existed here at the time the treaties were signed because:

- **It was our forefathers understanding that these forests would exist into the future.**
- **The area was not adequately regenerated to mixed pines after logging at the turn of the century.**

Agency Response:

We recognize the cultural importance of all naturally occurring vegetative conditions. The Forest Plan is a strategic forest management document that guides natural resource management activity and establishes management standards and guidelines for the Chippewa National Forest. The forest-wide goals of the Forest Plan emphasize contributing to efforts to sustain the American Indian way of life, cultural integrity, social cohesion and economic well-being. The selected management alternative balances the range of multiple uses on the Chippewa and Superior National Forests, including the a full range of stands conditions and their various uses. The Forest Plans use a combination of coarse filter and fine filter strategies to accomplish this end. The forest plans reduces the amount of aspen management and was identified as part of the “need for change” in the Notice of Intent. However, aspen belongs on the landscape within most of the Landscape Ecosystems. Since the plan is directing that each vegetation growth stage be represented, aspen would be managed within each LE where it naturally occurred. The effects are disclosed in Chapter 3 of the Final EIS.

PC# 2.6.4-55

Public Concern: The Chippewa and Superior NFs should continue to maintain a mosaic of high quality early successional aspen habitats and, where appropriate, grassland habitats to:

- **Provide for golden-winged warblers and other species associated with early successional and aspen habitats.**
- **Provide habitat for grassland species with population declines and support scarce local grassland habitat when it is not detrimental to overall forest management.**

Agency Response:

The selected a management alternative that balances the range of multiple uses on the Chippewa and Superior National Forests, including the conservation of plants, animals, and the communities they inhabit. The Forest Plans use a combination of coarse filter and fine filter strategies to accomplish this end. Objectives such as O-VG-7 (Superior), O-VG-8, O-VG-9 (Chippewa), O-VG-14 (Superior), O-VG-15 (Chippewa), O-WL-17 (Chippewa) and O-WL-18 (Superior) provide the framework to examine rare and unique communities at the project level. While these may not be listed specifically in the Forest Plans, they are recognized in the project record and the strategic framework for conserving them exists in the Forest Plans.

The Goals, Desired Future Conditions and Objectives outlined in the Forest Plan are designed to provide adequate habitat for wildlife species and eventually, the need for maintained openings, would be reduced. There are no Standards or Guidelines within the Forest Plan which prohibit maintenance or installation of maintained openings. The opportunity and need for these activities is most appropriately addressed at the project level, where activity decisions are made.

PC# 2.6.4-56
Public Concern: The Chippewa and Superior NFs should increase objectives for reducing aspen.

> **-To fall with the RNV for each ecological section and to establish continuous and proportional progress towards RNV each decade.**
> **-To provide wildlife habitat for the vast majority of species that are actually in decline, not species associated with young aspen habitat.**

Agency Response:
The need to reduce emphasis on aspen as species to be regenerated was identified as part of the "need for change" in the Notice of Intent. . This was documented in Section 1.3.3 Need for Change in the Management Situation. The proposed Forest Plans include Desired Condition statements (D-ID-5, D-VG-1-6 and D-VG-8) and Objectives (O-ID-2, O-VG-6 [Superior], O-VG-7, O-VG-8, O-VG-9 [Chippewa], O-VG-15 (Superior), and O-VG-16 [Chippewa]) that provide Forest-wide direction for vegetation management. Additionally, Landscape Ecosystem Objectives provide quantified amounts of acreages in all forest types as well as expected trajectories for individual tree species that make up a forest type or a component of other forest types. These objectives, goals and directions could result in a decrease in aspen across both Forests and an increase in conifer stands.

For the purposes of the forest vegetation analysis in the EIS, the range of natural variability (RNV) is used for comparative purposes only. Restoring the forested landscapes on the Chippewa or Superior National Forests to those conditions which occurred within RNV is not the expressed goal of future national forest management.

PC# 2.6.4-56a
Public Concern: The Chippewa and Superior NFs should develop and analyze a new alternative that would promote fiber production and at least maintain current levels of game species and aspen.

Agency Response:
Alternatives A and C would increase existing levels of game species and their habitats through increase in aspen and young forest. Alternative E would come close to maintaining current habitat. For grouse, Alternative A in decade two would come close to maintain habitat on the Chippewa NF. On the Superior NF, grouse habitat would be increased from existing levels in all alternatives except Alternative D (Final EIS section 3.3.6.5.b). For woodcock, Alternatives A and C would increase habitat and E would come close to maintaining habitat on the Chippewa. On the Superior NF, Alternatives A, C, and E would increase woodcock (EIS section 3.3.6.3.b). Analysis of Management Indicator Habitat (MIH) 1a (young upland forest) also shows that Alternatives A and C would provide more upland young forest than the existing condition (EIS section 3.3.1.c).

Alternatives A and C would emphasize aspen-dominated forests. Under Alternative C fiber production would increase substantially from current levels. Please see Chapter 2 of the EIS (sections 2.4.1 and 2.4.3). Alternatives C would have an annual maximum timber sell volume that is higher than current levels (EIS section 3.4.2.b).

The EIS includes seven alternatives with different approaches to managing game species and aspen, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components

of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for managing game species and aspen. Therefore, it is not necessary to develop an additional alternative to address these interests. In addition, the Regional Forester can modify the alternative selected for implementation in the decision, including but not limited to changing the approach to managing game species and aspen.

PC# 2.6.4-59
Public Concern: The Chippewa and Superior NFs should manage forests for game and other species that depend on or benefit from healthy aspen forest and not exhibit bias towards species that were in greater abundance at a certain point in past history.

Agency Response:
The Forest Plans reduce the amount of aspen management and this was identified as part of the "need for change" in the Notice of Intent. However, aspen belongs on the landscape within most of the Landscape Ecosystems. Since the plan is directing that each vegetation growth stage be represented, aspen would be managed within each LE where it naturally occurred. The effects are disclosed in Chapter 3 of the Final EIS.

PC# 2.6.4-60
Public Concern: The Final EIS should analyze the impacts of population decline of ruffed grouse due to decrease in aspen habitats.

Agency Response:
American wood cock is represented in the Final EIS by Management Indicator Habitats 1a-Young Upland, 2a-Young Upland Deciduous, and 4a-Young Aspen/Birch; ruffed grouse are represented by Management Indicator Habitats 1a-Young Upland and 2a-Young Upland Deciduous. The effects of each of the alternatives is portrayed graphically in figures WLD-1a, WLD-2a and WLD-4a. Those effects are explained in Sections 3.3.1b through 3.3.1d of the Final EIS. The economic effects analysis was preformed in accordance with Forest Service Manual and Handbook direction which does not include analysis of the monetary value of wildlife species, for either, hunting or viewing.

Section 3.3.6.5.b of the Final EIS analyzes a range of alternatives, which would result in a range of grouse habitat quality. Overall highest quality of grouse habitat would occur with Alternatives A and C; lowest quality of habitat would occur with Alternatives B and D; habitat quality associated with Alternatives E, F and G would lie in between.

PC# 2.6.4-61
Public Concern: The Final EIS should analyze the impacts of loss of young forest on populations of ruffed grouse and American woodcock.

Agency Response:
American woodcock is represented in the Final EIS by Management Indicator Habitats 1a-Young Upland, 2a-Young Upland Deciduous, and 4a-Young Aspen/Birch; ruffed grouse are represented by Management Indicator Habitats 1a-Young Upland and 2a-Young Upland Deciduous. The effects of each of the alternatives is portrayed graphically in figures WLD-1a, WLD-2a and WLD-4a. Those effects are explained in Sections 3.3.1b through 3.3.1d. The economic effects analysis was preformed in accordance with Forest Service Manual and Handbook direction which does not include analysis of the monetary value of wildlife species, for either, hunting or viewing. Section 3.3.6.5.b of the Final EIS analyzes a range of alternatives, which would result in a range of grouse habitat quality. Overall highest quality of grouse habitat would occur with Alternatives A and C; lowest quality of

habitat would occur with Alternatives B and D; habitat quality associated with Alternatives E, F and G would lie in between.

PC# 2.6.4-62
Public Concern: The Final EIS should change analysis of and assumptions about the suitability of stem density levels of aspen in young stands for ruffed grouse habitat.

Agency Response:
Draft EIS Chapter 3.3.6.5.b Table WLD-27 has been renumbered in the Final EIS to WRG-2. The information in the table predicts that under Alternative E, for decade 2 the quantity of total grouse habitat would have declined by about 15% on the Chippewa and by 11% on the Superior, compared to existing amounts. Minnesota's grouse population today is probably higher than before European settlement; currently, there is twice as much aspen (preferred grouse habitat) within the 5 terrestrial native plant communities on the Chippewa as there was 150 years ago (Final EIS Section 3.3.6.5). Some habitats occur at 3 to 5 times the levels that likely occurred under the natural range (Final EIS Section 3.3.6.5).

Section 3.3.6.5.b of the Final EIS states that "Harvest treatments have a direct bearing on grouse habitat quality through resulting stem densities in young aspen regeneration. Clearcuts (Treatment 2) result in highest stem densities in regenerating aspen; partial harvests (Treatments 5, 7-10) have reduced stem densities, with stem density declining as residual overstory increases. Landscapes that include the availability of higher stem densities in young regenerating aspen stands (5,000-12,000 stems/acre) support higher densities of grouse than do landscapes in which the regenerating stands are more sparse. Below 2,000 stems/acre is likely to be unsuitable for grouse habitat…

Palik et al. (in press) found sucker densities 62% higher in clearcuts than in partial harvests with 54 sq. ft/acre BA (basal area) residual cover. Three years post-harvest, the clearcut units had about 7,000 stems/acre; partial harvest units had about 4,000 stems/acre…" There are not yet results for this research 5 – 8 years post-harvest, although it can be reasonably inferred that with lowered initial aspen stem densities, reductions to stem densities due to self-thinning in the first 5-10 years would also be reduced, due to better growing space for individual saplings. Additional research reported in the Final EIS (Section 3.3.6.5.b indicates that although residual BA and residual canopy are not interchangeable measurements, they are correlated with each other. Huffman et al. found at 40-50% canopy cover of residuals, a range of 3,200-8,900 stems/acre were observed. Treatment 5 leaves 30 sq. ft./acre basal area of residual overstory in place in regenerating aspen stands. Treatments 7-10 leave 60 sq. ft/acre BA of residual overstory. These research results suggest that although best quality grouse habitat is achieved through clearcutting, and the practice of leaving 30 or even 60 sq. ft./acre residual BA canopy cover reduces aspen stem density in the regenerating stand, some stands would still support minimal grouse densities."

PC# 2.6.4-65
Public Concern: The proposed increase in conifer cover type on the Chippewa NF is important and much needed.

Agency Response:
The modified Alternative E continues to provide for the increase in conifer cover type on the Chippewa NF.

PC# 2.6.4-67
Public Concern: The Plans should provide thermal conifer cover outside the BWCAW as long as effort is based on ecological classification and does not involve intensive site prep followed by planting.

Agency Response:
The Landscape Ecosystem classification system, coupled with the concept of the range of natural variability as a reference condition, was used within the Final EIS as a means of analyzing landscape conditions and their ability to maintain long-term ecological sustainability. For the purposes of the analysis in the EIS, the range of natural variability (RNV) is used for comparative purposes only. Restoring the forested landscapes on the Chippewa or Superior National Forests to those conditions, which occurred within RNV, is not the expressed goal of future national forest management. Thermal cover as a habitat vegetation condition in modified Alternative E provides thermal cover close to or within RNV amounts that also exceed existing conditions. The majority of species associated with thermal cover, (white cedar, spruce, and balsam fir), are generally not planted, rather they regenerate naturally. White cedar is not harvested at this time and would therefore not be considered for site preparation or planting.

PC# 2.6.4-68
Public Concern: The Chippewa and Superior NFs should maintain spruce-fir forest type even if it means periodic losses to spruce budworm because:

- **It has a role in ecosystem management.**
- **Some rare species depend upon it and it is excellent habitat for many other species.**

AND

PC# 2.6.4-69
Public Concern: The Final EIS and Plans should acknowledge that spruce-fir forests are a natural component of northern Minnesota.

Agency Response:
The Revised Plans recognize the importance of spruce-fir forest type and spruce-fir native plant communities. Plans provide for the increase in this type (see Revised Plans Chapter Landscape Ecosystem vegetation composition, tree component, and management indicator habitat objectives, O-VG-2, O-VG-6 [Superior], O-VG-7 [Chippewa]) and promote management for sensitive species that depend on spruce-fr) (O-WL-1-3, Chippewa: O-WL-17, 25, 26, 27 31, and Superior: O-WL-18, 20, 23, 24, 25, 30, G-WL-21) [Chippewa]. The EIS analyzed spruce-fir forest in 3.2 Vegetation and 3.3.1 Wildlife management indicator forest types and age habitat. The spruce-fir forest type is maintained over the ten decade planning horizon within modified Alternative E. The Landscape Ecosystem classification system, coupled with the concept of the range of natural variability as a reference condition, was used within the Final EIS as a means of analyzing landscape conditions and their ability to maintain long-term ecological sustainability. For the purposes of the analysis in the EIS, the range of natural variability (RNV) is used for comparative purposes only. Restoring the forested landscapes on the Chippewa or Superior National Forests to those conditions, which occurred within RNV, is not the expressed goal of future national forest management. The spruce-fir habitat acres provided for in Modified Alternative E are more than the existing Forest Plan (Alternative A) and, while result in somewhat less acreage than the RNV over ten decades (Final EIS Section 3.3.1, Figures WLD-6b, and Section 3.2, Tables FAC-16-29).

<u>MIH-7: Red and White Pine</u>

Public Concern: The Chippewa and Superior NFs should do stand replacement harvest and replanting on 1-2% of the red pine forest per year.

Agency Response:

The Forest Plans for the Chippewa and Superior are projected to accomplish what you are proposing. In the second decade of implementation, Modified Alternative E is projected to create amounts of red pine in the 0-9 age class that total about 4% of total acres of red pine on each forest. There is a similar emphasis for white pine. Over the next ten decades this results in more of a balance of age classes of the management indicator red and white pine habitat. The amount of stand replacement harvest that you desire is not projected to occur because older conifer stands are needed for habitat or other values (including sustaining timber harvests through thinning or other treatments).

PC# 2.6.4-73
Public Concern: The Chippewa NF Plan should have a specific objective to aggressively treat monoculture red pine plantations to restore species diversity, composition, and structure.

Agency Response:
We believe that the strategic framework exists in the Forest Plans to address these potential red pine plantation issues. The Final Forest Plans address red pine forest types and natural plant communities through direction that includes, but is not limited to: Landscape Ecosystem objectives for composition, age, and management indicator habitats, D-VG-3, D-VG-6, O-VG-1, O-VG-2, O-VG-6 (Superior), O-VG-7 (Chippewa), O-VG-8 (Superior), and O-VG-9, O-VG-10, O-VG-11 (Chippewa), O-VG-14-17 (Chippewa), and O-VG-13-16.

PC# 2.6.4-75
Public Concern: The Plans should identify an objective and standard for allowable vegetative management treatments in older red and white pine forest types that do not rank as high quality old growth.

Agency Response:
Proposed Plans S-VG-3 for the Superior NF has been renumbered in final Plans to S-VG-4. The Forest Plans are strategic in nature, resulting in less specific guidance for future management actions, including specific vegetative management treatments. Plans, Forest Service directives, and law direct continual scientific inquiry to ensure that appropriate ecological information on compositional and structural features is considered in project level planning. Site specific management direction, including consideration of options for management treatments, is determined through the NEPA process that includes public involvement and natural resource, social, and economic analysis. The Final Forest Plans, Chapter 2, contain vegetative objectives that address the vegetation composition and structure, age, and spatial patterns through management indicator habitat, vegetation, and Landscape Ecosystems. For these reasons, we do not believe it is necessary to add additional prescriptive direction to vegetation management direction. We believe that appropriate scientific information on characteristics of high quality old growth forests (for example, MN DNR 2003, Almendinger and Hanson 1998) will be considered.

PC# 2.6.4-76
Public Concern: The Chippewa and Superior NFs should cut mature and overmature aspen stands in a way that would increase species and age class diversity in the restoration effort.

Agency Response:
The overall amount of aspen within the Chippewa and Superior National Forests would move toward the mid range of the RNV in modified Alternative E, resulting in less young aspen and somewhat more older aspen on the Forests at the end of the ten decade planning horizon. For the purposes of the analysis in the EIS, the range of natural variability (RNV) is used for comparative purposes only. Restoring the forested landscapes on the Chippewa or Superior National Forests to those conditions, which occurred within RNV, is not the expressed goal

of future national forest management. The Final Forest Plans, Chapter 2, contain vegetative objectives that address the vegetation composition and structure, age, and spatial patterns through management indicator habitat, vegetation, and Landscape Ecosystems. These Forest Plan objectives include the themes of restoring/enhancing representation of vegetation of the native vegetation communities, including mixes of trees, shrubs, herbs, mosses, lichens, and fungi species.

PC# 2.6.4-77
Public Concern: The Chippewa NFs should clarify how minimum acres of red, white, and jack pine in S-WL-7 and S-WL-8 were calculated and show how they compare to current acres.

Agency Response:
S-WL-7 and S-WL-8 have been renumbered in the Final Plans to S-WL-9 and S-WL-10, respectively.

The Forest Plan Revision ID team used the predictions of the Dualplan model output as information in developing the parameters of the range of Alternatives and the subsequent standards and guidelines for modified Alternative E. In examining the model output for modified Alternative E, the amount of jackpine, red and white pine predicted to be harvested and the associated effects were higher than we determined to be appropriate. The Forest Service Forest Plan Revision ID team with approval by the Joint Forest Leadership Team then assigned an appropriate acreage of jack, red, and white pine to reflect appropriate conditions to accomplish desired conditions and objectives of modified Alternative E. The Dualplan model output and subsequent analysis of jackpine, red, and white pine did not indicate a similar concern with the Superior NF, and no specific standards were included in the Superior Final Forest Plan.

PC# 2.6.4-78
Public Concern: The Chippewa and Superior NF should address management of jack pine

-To display how the projected harvest of jack pine can be met on the Chippewa NF.
-To consider an accelerated management treatment plan for jack pine on the Superior NF.
-To consider jack pine conversion on appropriate sites on the Superior NF.

Agency Response:
Landscape Ecosystem information is used for adaptive land management planning, monitoring, and research. It is anticipated that using Landscape Ecosystem planning, as was done within the context of Forest Plan Revision, provides a more accurate prediction of success in terms of implementing management direction. Forest communities on the Chippewa and Superior National Forests are constantly changing due to the natural process of forest succession. Influencing succession are human and natural-induced disturbances, based on the type, amount, and intensity of a disturbance, along with the inherent ecological capability of an area. Based on long-term vegetation objectives for modified Alternative E, the amounts of jack pine would increase by three to five percent respectively on the Chippewa and Superior NFs, and would be managed on naturally occurring jack pine sites as identified via the landscape classification system **.**

Harvesting and regeneration techniques have been analyzed within the final EIS, Chapters 3.2.1 and 3.4. Chapter 3.4 indicates that even-aged harvesting, including clearcutting, are appropriate management actions. Regeneration tools are varied, and appropriate techniques are determined at the site-specific project level within the framework of the NEPA process that includes public notification and comment opportunities and analysis of the natural resource, social and economic issues. Developing a sales plan that determines the timing and quantity of timber harvest by year is not in the purview of Forest Plans. A Five Year Timber Sales Plan is developed separately at the Forest level and describes the proposed location of sales, when sales are offered, how much

volume and by which species, amount of road construction and reconstruction, bid opening date, and date of decision that reflects the NEPA analysis.

PC# 2.6.4-81
Public Concern: Alternative E should be modified to reflect upland forest age and structure percentages proposed for Alternative D Table FAC-22 for jack pine to:

- **Provide for threatened and sensitive species**
- **Ensure that there is existing habitat for the next two decades for mature jack pine-dependent species.**
- **Avoid moving away from historical amounts of jack pine.**

Agency Response:
Modified Alternative E is projected to significantly increase the amount of jack pine through regeneration on the Chippewa National Forest. The Forest Plan also has a standard that will maintain at least 5300 acres of mature or older jack pine on the forest during the first 10 years of implementation. Based on long-term vegetation objectives for modified Alternative E, the amounts of jack pine would increase by three percent on the Chippewa and would be managed on naturally occurring jack pine sites as identified via the landscape classification system (Forest Plan Chapter 2, Landscape Ecosystem Objectives). When multiple use objectives are examined as a whole for the Chippewa, the Regional Forester believes that the selected alternative strikes the right balance for the forest. Managing jack pine to levels proposed in Alternative D may preclude other uses of the forest.

MIH-9: Lowland Black Spruce-Tamarack-mixed

PC# 2.6.4-82a
Public Concern: The Chippewa and Superior NFs should significantly reduce the level of harvest in lowland forest to meet goal proposed in Alternative E of increasing mature conifer forests because:

- **The Draft EIS lacks evidence that lowland black spruce and cedar can be regenerated consistently and cost effectively.**
- **Wind, fire, and industrial logging on other ownerships will provide younger stands needed for RNV.**

Agency Response:
The Landscape Ecosystem classification system, coupled with the concept of the range of natural variability as a reference condition, was used within the Final EIS as a means of analyzing landscape conditions and their ability to maintain long-term ecological sustainability. For the purposes of the analysis in the EIS, the range of natural variability (RNV) is used for comparative purposes only. Restoring the forested landscapes on the Chippewa or Superior National Forests to those conditions, which occurred within RNV, is not the expressed goal of future national forest management. Maintaining the diversity of the jack pine-black spruce Landscape Ecosystem is largely reliant on national forest management. Of the Landscape Ecosystems analyzed, this one requires the greatest amount of disturbance to function properly. Lowland conifer composition is not expected to change significantly under any alternative during the implementation period of the revised Forest Plans.

In the Forest Plans there are a number of objectives addressing the importance of maintaining and/or enhancing viable ecosystems that contain black spruce and cedar components, including O-VG-3 (Superior) and O-VG-4 (Chippewa) which propose to maintain acres of lowland conifer and lowland hardwood vegetation communities. Other objectives include D-VG-1-8, O-VG-1, O-VG-6 (Superior), O-VG-7 (Chippewa), O-VG-23 (Superior), O-VG-18 (Chippewa), and white cedar swamp and semi-terrestrial white cedar Landscape Ecosystem objectives.

S-TM-4 of the Forest Plans allows for harvest of white cedar trees (in any forest type) when re-growth of cedar is likely to be successful or for research purposes. Black spruce management direction at the site specific project level, is determined by decisions arrived at through the NEPA process that includes public involvement and natural resource, social, and economic issue and concern analysis. National Forests are required by law to provide for the successful regeneration of a harvested stand of timber - standard TM-4 addresses this requirement. The probability of successful spruce regeneration and the cost effectiveness of the project as a whole would be analyzed at the site-specific project level.

PC# 2.6.4-82
Public Concern: The Final EIS and Plans should clarify how lowland conifer acres and percents are calculated with respect to RNV and site productivity.

Agency Response:
We took a different approach in considering lowland conifer forest for several reasons. First, disturbance data were assembled differently between the Chippewa and Superior National Forests. This resulted in dissimilar data sets between forests and different scales of data within each forest for lowland conifer forest. Secondly, Forest data prepared for Forest Plan Revision for both forests emphasized the upland forest communities. While less time was given to examining lowland forest dynamics, the disturbance modeling and the derived vegetative growth stages for lowland forests were considered to be adequate to set objectives and other management direction for the Forest Plans. The differences in the way data were derived make similar displays of data difficult and confusing.

Analysis in the Final EIS examined two indicators related to lowland conifer forest: percentage and acres in the 0-9 age class (Final EIS Chapter 3.2.1) and edge density of young lowland conifer forest (Final EIS Chapter 3.2.2). These indicators were examined by alternative for existing condition and into the future. We believe that these indicators and analysis provide information necessary to inform the decision maker of effects.

Objectives for lowland conifer forest, including mixed lowland conifer, black spruce, and tamarack forest types, considered all acres of those forest types in that particular Landscape Ecosystem (planning record). The DualPlan harvest model, which helped derive projected disturbance rates in Decades 1 and 2 relating to implementation of the Forest Plans' long term objectives, was allowed to consider only lands legally suitable for timber production for harvest and, thus, to meet the disturbance objectives (such as creating the 0-9 age class). Lowland forest typed as white cedar or black spruce/tamarack stands with a low site index (for example, stunted stands) were not considered for harvest. At the project level of implementation, the Forest Plans for the Chippewa and the Superior contain a standard (S-TM-4) that requires the Forest Service ensure adequate restocking of forested stands within 5 years following harvest. This includes lowland conifer stands. The Forest Service is required to meet this legal requirement. Monitoring and evaluation could determine whether we are successful in meeting this standard and could report the regeneration success in these and other forest communities.

On the Chippewa, five lowland ecosystems were geographically large enough to examine historical rates of disturbance and historical age and composition data. For objective setting we combined them into two groups. The White Cedar Swamp/Semi-terrestrial White Cedar LE and the Tamarack Swamp/Forested Bog/Forested Poor Fen LE are displayed in the LE based Vegetation Objectives in Chapter 2 of the Chippewa Forest Plan. Additionally, imbedded lowland forest stands are found in all of the remaining upland LEs. Rates of disturbance or vegetative growth stages for imbedded lowlands were not modeled by Frelich (2000). As a result of this, we derived and set rates of disturbance for imbedded lowlands in relation to historical rates of disturbance on the surrounding upland matrix comprised of 5 upland LEs. We understood that the historical rate of stand replacement on imbedded lowland forest is about ½ the rate of the upland matrix. Thus, each of the five upland LEs in Chapter 2 of the Chippewa Forest Plan has objectives for upland forest types and lowland forest types.

On the Superior, Frelich (1999) aggregated all lowland conifer forest at the forest level and estimated disturbance and vegetative growth stages at this scale. We recognized that this coarse scale aggregation did not recognize variable rates of disturbance of the upland matrix. Lowland forest was divided into 3 disturbance categories: Dry, Dry/mesic, and mesic. Age objectives (equating to per-decade rates of disturbance) were constructed in relation to the surrounding upland matrix disturbance rates (planning record).

PC# 2.6.4-85
Public Concern: The Final EIS should analyze lowland conifer forest effects, distinguishing lowland forest types and addressing difficulties regenerating some types.

Agency Response:
The effects to lowland conifer were analyzed in the Final EIS in section 3.2.1, Forest Composition and Structure. Table FAC-30 displays the percentage and acreage in the 0-9 age class projected by alternative for existing condition and decades 1, 2, and 5. We have added clarifications to this table and analysis to state which lowland conifer species we are referring to. White cedar was not considered for harvest by the DualPlan harvest model and we are not projecting any planned harvest in this forest type. Only black spruce and tamarack are considered for planned harvests. In the discussion following Table FAC-30, we recognized the issue of variable regeneration success in lowland conifer.

Section 3.2.2 of the Final EIS, Forest Spatial Patterns, examined some common effects among Alternatives relating to harvest in lowland conifer harvest and analyzed edge density as an indicator of impacts in lowland conifer forest.

While we recognize some uncertainty about regeneration in lowland conifer forest, the Forest Plans for the Chippewa and the Superior contain a standard (S-TM-4) that requires the Forest Service ensure adequate restocking of forested stands within 5 years following harvest. This includes lowland conifer stands. The Forest Service is required to meet this legal requirement. Monitoring and evaluation could determine whether we are successful in meeting this standard and could report the regeneration success in these and other forest communities.

PC# 2.6.4-86
Public Concern: The Final EIS should provide tables and analysis for lowland forest Landscape Ecosystems (LEs) similar to those provided for uplands.

Agency Response:
We took a different approach in considering lowland conifer forest for several reasons. First, disturbance data were assembled differently between the Chippewa and Superior National Forests. This resulted in dissimilar data sets between forests and different scales of data within each forest for lowland conifer forest. Secondly, Forest data prepared for Forest Plan Revision for both forests emphasized the upland forest communities. While less time was given to examining lowland forest dynamics, the disturbance modeling and the derived vegetative growth stages for lowland forests were considered to be adequate to set objectives and other management direction for the Forest Plans. The differences in the way data were derived make similar displays of data difficult and confusing.

Analysis in the Final EIS examined two indicators related to lowland conifer forest: percentage and acres in the 0-9 age class (Final EIS Chapter 3.2.1) and edge density of young lowland conifer forest (Final EIS Chapter 3.2.2).

These indicators were examined by alternative for existing condition and into the future. We believe that these indicators and analysis provide information necessary to inform the decision maker of effects.

Objectives for lowland conifer forest, including mixed lowland conifer, black spruce, and tamarack forest types, considered all acres of those forest types in that particular Landscape Ecosystem. The Dual Plan harvest model, which helped derive projected disturbance rates in Decades 1 and 2 relating to implementation of the Forest Plans' long term objectives, was allowed to consider only lands legally suitable for timber production for harvest and, thus, to meet the disturbance objectives (such as creating the 0-9 age class). Lowland forest typed as white cedar or black spruce/tamarack stands with a low site index (for example,. stunted stands) were not considered for harvest. At the project level of implementation, the Forest Plans for the Chippewa and the Superior contain a standard (S-TM-4) that requires the Forest Service ensure adequate restocking of forested stands within 5 years following harvest. This includes lowland conifer stands. The Forest Service is required to meet this legal requirement. Monitoring and evaluation could determine whether we are successful in meeting this standard and could report the regeneration success in these and other forest communities.

On the Chippewa, five lowland ecosystems were geographically large enough to examine historical rates of disturbance and historical age and composition data. For objective setting we combined them into two groups. The White Cedar Swamp/Semi-terrestrial White Cedar LE and the Tamarack Swamp/Forested Bog/Forested Poor Fen LE are displayed in the LE based Vegetation Objectives in Chapter 2 of the Chippewa Forest Plan. Additionally, imbedded lowland forest stands are found in all of the remaining upland LEs. Rates of disturbance or vegetative growth stages for imbedded lowlands were not modeled by Frelich (2000). As a result of this, we derived and set rates of disturbance for imbedded lowlands in relation to historical rates of disturbance on the surrounding upland matrix comprised of 5 upland LEs. We understood that the historical rate of stand replacement on imbedded lowland forest is about ½ the rate of the upland matrix. Thus, each of the five upland LEs in Chapter 2 of the Chippewa Forest Plan has objectives for upland forest types and lowland forest types.

On the Superior, Frelich (1999) aggregated all lowland conifer forest at the forest level and estimated disturbance and vegetative growth stages at this scale. We recognized that this coarse scale aggregation did not recognize variable rates of disturbance of the upland matrix. Lowland forest was divided into 3 disturbance categories: Dry, Dry/mesic, and mesic. Age objectives (equating to per-decade rates of disturbance) were constructed in relation to the surrounding upland matrix disturbance rates.

PC# 2.6.4-99
Public Concern: The Final EIS and Plans should consider the impact of Alternative E on the juxtaposition of important habitat components for wildlife.

Agency Response:
The decision to include the BWCAW in the analysis of the Superior National Forest is one based on recognizing that the BWCAW is a part of the natural resources, social and economic landscapes of the Superior and subsequently is important to the northern Minnesota regional landscape. The natural resources inherent to the BWCAW, and the social and economic conditions as a result of BWCAW management, contribute to the depth and scope of effective Forest Plan revision analysis. Not including the landscape of the BWCAW in the final EIS analysis would therefore limit the quality of information necessary to determine the selection of the Alternative to be implemented.

The final EIS indicates that there are no species in danger of loss of viability, including species requiring juxtaposition of different forest vegetation and age classes. In terms of ruffed grouse, Chapter 3.3.6 of the Final EIS indicates that currently, the amounts of young forest greatly exceed amounts predicted under RNV (Chapter 3.2.1), with the exception of some Landscape Ecosystems represented with the BWCAW. For the purposes of the analysis in the EIS, the range of natural variability (RNV) is used for comparative purposes only. Restoring the

forested landscapes on the Chippewa or Superior National Forests to those conditions, which occurred within RNV, is not the expressed goal of future national forest management. Harvest rates have declined and harvests may be shifting to other ownerships. Recent trends in forest spatial patterns and harvest intensity (Wolter and White 2002, Host and White 2003) indicate that state and private non-industrial ownerships may be providing forest conditions that provide more habitat for species requiring young forests.

Recent trends of increased habitat for ruffed grouse are likely to continue for the next 10 to 20 years when all ownerships are considered in each forest. (Final EIS, Section 3.3.6)

Chapter 3.2.1 and Appendix G of the Final EIS show the vegetation conditions predicted to occur when the landscapes that include the Chippewa and Superior were functioning within the RNV. It is anticipated that managing vegetation to more closely approach the conditions that occurred under RNV should provide sustainable amounts of habitat and population numbers within both forests. For the purposes of the analysis in the EIS, the range of natural variability (RNV) is used for comparative purposes only. Restoring the forested landscapes on the Chippewa or Superior National Forests to those conditions, which occurred within RNV, is not the expressed goal of future national forest management.

Under the "coarse-filter" approach, the belief is that forest conditions within RNV would generally provide for the maintenance of native species because they evolved under similar circumstances. Applying that rationale to grouse habitat sustainable population would occur under implementation of modified Alternative E. (Final EIS, Section 3.3.6.5). For the purposes of the analysis in the EIS, the range of natural variability (RNV) is used for comparative purposes only. Restoring the forested landscapes on the Chippewa or Superior National Forests to those conditions, which occurred within RNV, is not the expressed goal of future national forest management.

PC# 2.6.4-100
Public Concern: The Final EIS and Plans should include site-level mitigation that can effectively reduce edge impacts from logging on rare species in lowland conifer forest.

Agency Response:
The Forest Plans are strategic in nature, resulting in less specific guidance for future management actions, including specific vegetative management treatments that may reduce edge impacts from logging on rare species in lowland conifer forest. Site specific management direction is determined by the NEPA process that includes public involvement and natural resource, social, and economic analysis. The Final Forest Plans, Chapter 2, contain vegetative and wildlife objectives that address the vegetation composition and structure, age, and spatial patterns through management indicator habitat, vegetation, direction for individual species, and Landscape Ecosystems. Chapter 3 of the final Forest Plans provides standards and guidelines for (among other topics) vegetation and wildlife species management that addresses expectations at the site specific project level.

PC# 2.6.4-44
Public Concern: The Final EIS should re-calculate the large mature/older upland patch size spatial pattern indicators because the Draft EIS analysis ignores non-federal ownership.

Agency Response:
The analysis area for considering direct and indirect effects to forest spatial patterns is the NF system land managed by the Chippewa and Superior NFs. It is recognized in the final EIS, Chapter 3, Section 3.2 that land ownership patterns strongly influences landscape patterns, and that private non-industrial forest-land disproportionately contributes to habitat fragmentation by harvesting smaller patches and creating higher edge densities than other ownership groups. Lands under other ownerships within the proclamation boundaries of the Chippewa and Chippewa NFs, as well as those within the relevant ecological Sections (the Drift and Lake Plains

for the Chippewa and the Northern Superior Uplands for the Superior) would be considered in addressing the cumulative effects of proposed management scenarios. (Final EIS, Section 3.2) Please see the final EIS, Chapter 3, Sections 3.2.2 Cumulative Effects for a narrative discussion on the cumulative effects of proposed Alternative forest management effects along with information from the appropriate and relevant ecological Section.

PC# 2.8.1-14
Public Concern: The Final EIS should explain how the model over estimated the loss of certain habitat types.

Agency Response:
Modeling rules were established specifically for forest type succession of early successional forest types (such as aspen, paper birch) to mid or late successional forest types (such as spruce-fir, white/red pine, northern hardwoods). These modeling rules took effect at a specific age, such as age 90 for aspen. These rules had an immediate effect on harvest volume that could be expected from that stand in the next decade in the model and on the acreage in old aspen forest. The age of stands affected by succession rules were set back, in some cases to as young as 20 years old as in those stands succeeding to spruce-fir. Those stands are not counted as mature/older forest habitat for species such as black-throated blue warbler or northern goshawk. Succession rules may help to accurately reflect a change in harvestable timber volume, however old stands of early successional tree species such as aspen continue to provide many of the attributes of mature or older forest habitat for one to two decades. Successional transitions are not immediate as the model might indicate. In this way the loss of mature/older forest habitat or patches that contain this habitat is over-estimated. The planning record contains analysis that demonstrates these differences between amounts of mature/older habitat and large patches of mature/older habitat with and without succession rules.

Please see Appendix B for additional information on the Dualplan model.

PC# 2.8.1-14a
Public Concern:
The Chippewa and Superior NFs should modify Alternative E so that old growth forest habitats would not be increased at the expense of equally important young forest habitats.

Agency Response:
The Revised Plans provides direction to promote habitat management to provide for viable and sustainable populations of native and desired non-native species (D-WL-1-9 of the FP). Revised Plans provide for two to three times as much young and aspen forest habitat on NFS land as would have been expected under the range of natural variability, while habitats for species that favor older and conifer habitat are generally below the amount that would have been expected. For the purposes of the analysis in the EIS, the range of natural variability (RNV) is used for comparative purposes only. Restoring the forested landscapes on the Chippewa or Superior National Forests to those conditions, which occurred within RNV, is not the expressed goal of future national forest management. Analysis of this coarse filter indicator of habitat condition in Final EIS Chapter 3.2.1 and 3.3.1 (along with 3.3.5, 3.3.6.3, 3.3.6.4, 3.3.6.5) indicates that therefore the National Forests are likely to provide ample habitat for those species dependent on young forest, while providing at least adequate amount of habitat for species that require older forest. In addition to direct, indirect and cumulative effects analysis supports this conclusion, the Revised Plans provide additional management direction to Desired Conditions state above to promote habitat for species that require young forest (MIH and Vegetation Age objectives for Landscape Ecosystems, O-WL-1-5, O-WL-39 (Superior), and O-WL-40 (Chippewa).

PC# 2.6.4-111
Public Concern: The Regional Forester should select Alternative D.

-To protect wildlife and large blocks of mature forest and protect rare interior forest habitat and maintain species viability.
-Because it provides greater amounts of mature/old forest in all 10 MIHs and thus, less negative impacts. If Alternative E is selected, additional reserves of mature/old forest must be maintained to compensate for foreseeable losses from wind and disease.
-Because it provides a more acceptable alternative for already over-represented young forest wildlife and better addresses the regional scarcity of red and white pine.
-To protect wildlife and large blocks of mature forest and protect sensitive species.
-To protect wildlife and large blocks of mature forest and address landscape scale habitat issues.
-To protect wildlife and large blocks of mature forest and restore disturbed forests for wildlife.
-To protect wildlife and large blocks of mature forest in terms of forest spatial patterns and wildlife habitat

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. Alternative D was designed, in part, to provide a strong emphasis on the restoration of interior forest habitat, mature and older forest, restoration of pines, and an emphasis on providing habitat for sensitive species and other wildlife that preferred old forest habitat, conifer habitat, and interior habitat. Overall the Final EIS analysis in Chapter 3.2 and 3.3 showed that Alternative D provided the greatest amount of large blocks of mature forest, interior forest habitat, mature and older management indicator habitat (MIH) 1-10, of red and white pine, and lowest amount of edge habitat, young habitat and aspen forest habitat. The habitat outcomes in Final EIS Chapter 3.3.5 show that for a large percent of the sensitive species, Alternative D provided many of the highest habitat outcomes, while providing at least adequate viability for all species (including those associated with aspen, young, and disturbed habitats). The Regional Forester considered and recognized the numerous environmental, social, and economic benefits and values of Alternative D, but did not select it because he felt Modified Alternative E struck a better balance in addressing the issues and concerns on Chippewa and Superior NFs. The Record of Decision (ROD) describes rationale for the Selected Alternative.

While other alternatives do not provide as much of the habitats shown above, Revised Plans address the need for and value of those habitats by striving to maintain or increase those habitats over current condition. Final Forest Plans promote management to maintain viable and well-distributed populations and habitats by ensuring that environmental conditions on National Forests are present in quality, quantity, distributions, and spatial patterns that are adequately representative of – not necessarily within – the range of natural variability. Key direction is provided by, but not limited to: MIH and vegetation objectives by Landscape Ecosystem, Forest-wide vegetation and wildlife desired conditions, objectives, standards, and guidelines.

PC# 2.6.4-112
Public Concern: The Regional Forester should select Alternative C

-Because it would provide for older trees and sensitive species.
-Because it would provide for valuable wildlife habitat.

Agency Response:

The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. Overall the Final EIS analysis in Chapter 3.2 and 3.3 showed that Alternative C provided the greatest amount of young aspen forest. This would provide for important habitat needs for a variety common, uncommon and rare species. Common species include socially highly valued game species such as deer and ruffed grouse; rare species include golden-winged warbler and gray wolf and Canada lynx that rely on prey species that use young habitat. Forest Plans promote the maintenance and management of sustainable, huntable, watchable, and viable populations of all these species (including, but not limited to D-WL-1-9; O-WL-1-5, O-WL-17 [Chippewa], O-WL-18 [Superior], O-WL-39 [Superior] and O-WL-40 [Chippewa], and MIH objectives by Landscape Ecosystem). This alternative (and all others), and recognized its benefits to wildlife, tourism, and timber industry, the Selected Alternative represents a balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. For these reasons (balance of outcomes and addressing issues), it unnecessary to mitigate higher risks to the five sensitive species that would be negatively impacted and did not base the decision only on impacts to those five species. The Record of Decision (ROD) describes the rationale for the Selected Alternative.

PC# 2.6.4-113
Public Concern: The National Forests should not use the criterion of ten percent ecological representation in each landscape ecosystem for Alternative C because this is not adequate and results in unrealistic harvest projections.

Agency Response:
Although Alternative C was designed to have no less than 10% ecological representation of each vegetative growth stage in each Landscape Ecosystem, it generally was well above 10% in all vegetative growth stages, including the older and old mulit-aged stages (Final EIS Appendix G). Analysis in the Final EIS shows projected vegetation conditions (Chapter 3.2), habitat outcomes (Chapter 3.3) and timber allowable sale quantity (Chapter 3.4). We expect that these are realistic based on modeling effort described in Final EIS Appendix B.

Threatened and Endangered Species (2.6.5)

PC# 2.6.5-1
Public Concern: The Chippewa and Superior NFs should carry out proactive management programs for the conservation of threatened and endangered species and establish population goals for all T&E and RFSS species.

AND

PC# 2.6.5-5
Public Concern: The Superior Plan should place top priority on and give more recognition to the importance of its threatened species.

Agency Response:
The Forest Plans afford special attention to the conservation of bald eagle, gray wolf, and Canada lynx and the habitats upon which they depend. We worked closely with the Fish and Wildlife Service to ensure that Plans incorporated integrated resource conservation measures (including objectives, standards, and guidelines for watershed, vegetation, timber, wildlife, recreation and other resource areas), as well as applicable species-specific

measures from federal Recovery Plans for the eagle and wolf and from the Lynx Conservation Assessment and Strategy (Ruediger et al. 2000) for the lynx. Appendix B of the Biological Assessment (USDA Forest Service 2004b) for threatened and endangered species provides a detailed cross-reference showing how Plans incorporate or address applicable conservation measures and is available upon request. Management direction also considered applicable law (such as the Endangered Species Act, Bald Eagle Act, National Forest Management Act) and policy (such as Forest Service Directives, including the Forest Service Manual 2670).

Through this suite of legal and policy considerations and the management direction found in Chapter 2: Threatened and Endangered Species section, recovery of the three threatened species is addressed in two important ways: 1) implementation would provide benefits through maintenance or enhancement of extensive areas of suitable habitat in amounts and distribution sufficient, or greater than sufficient, to support prey populations and to provide secure breeding and dispersal habitat; and 2) planning would identify actions to reduce, or where possible, eliminate potentially risks to the species and their habitat to ensure that, where possible, implementation of projects would avoid adverse effects.

National Forest population goals for eagle (occupied breeding territories) are established in O-WL-15 (Chippewa) and O-WL-16 (Superior). These tier to goals apportioned to the National Forests in the Bald Eagle Recovery Plan.

Population goals for the gray wolf are established in O-WL-16 (Chippewa) and O-WL-17 (Superior). These are goals ascribed to Wolf Management Zones 1-4 by the Wolf Recovery Plan. Because wolves are wide-ranging and readily occupy habitat on all ownerships, establishing National Forest-only population goals was not recommended by the Recovery Plan or needed in order to promote wolf conservation on NFS land.

Population goals for Canada lynx are not established in the LCAS or by the Fish and Wildlife Service. This is, in part, because of the limited information currently available regarding lynx distribution and ecology in Minnesota and the rest of its southern range. In addition, establishment of population goals at the National Forest, or even Minnesota, landscape scale is not necessary to promote lynx conservation. The Regional Forester expect that any effort to establish goals would be through a future interagency effort led by the Fish and Wildlife Service.

PC# 2.6.5-6
Public Concern: The Regional Forester should select Alternative D because it provides the best protection for the three threatened species.

AND

PC# 2.6.5-9
Public Concern: The Regional Forester should select Alternative F.

-Because it provides superior wolf and lynx habitat.
-Because Alternative E would depredate lynx habitat.

AND

PC# 2.6.5-9a
Public Concern: The Regional Forester should not select Alternative E because it would not adequately support rare and sensitive species.

Agency Response:
All Alternatives, including the Plans (Modified Alternative E), Alternative D, and Alternative F, seek opportunities to benefit the Forests' three threatened species bald eagle, gray wolf, and eagle (as well as Regional Forester sensitive species) and to mitigate potential negative impacts. Analysis of each alternative in the EIS (Section 3.3.4) and in the Biological Assessment (USDA Forest Service 2004b), (and for sensitive species, the

Biological Evaluation [USDA Forest Service 2004e]) shows that each alternative meets the intent of relevant laws, including the Endangered Species Act and Multiple Use Management Act, and applicable conservations measures of federal Recovery Plans for eagle and wolf and of the Lynx Conservation Strategy and Assessment measures incorporated into the Plans.

Analysis also shows that Alternative D would provide the most protection from impacts associated with human disturbances and that Alternative F would provide forested habitat conditions most similar to those under which the threatened species evolved in northern Minnesota. However, the Plans provide adequate or greater than adequate habitat and security. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving threatened species' conservation, meeting the intent of relevant laws, and addressing the issues and concerns specific to the Chippewa and Superior NFs. The Regional Forester looked at all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The ROD also discusses how the issues are addressed by the Alternatives, including the Selected Alternative.

PC# 2.6.5-10
Public Concern: The Chippewa and Superior NFs should acknowledge the current and long-term historical importance of lynx and its habitat in the Great Lakes Region and full opportunities for lynx recovery must be maintained.

Agency Response:
The Biological Assessment (USDA Forest Service 2004b) and Draft EIS cite information in the National Biological Assessment on Lynx (Hickenbottom *et al* 1999) that suggests that at the southern periphery of its range here in Minnesota's mixed deciduous-coniferous forest much of this area is considered marginal habitat for lynx or successful lynx recruitment because it is a transitional forest type at the edge of the snowshoe hare range. However, the Biological Assessment (Section 4.4.2.2) and EIS (Section 3.3.4) also cite information in support of your contention that there have been "substantial long-term historic populations in the region." Additionally, current information from ongoing monitoring and research in the Great Lakes area confirms that lynx have successfully reproduced on the Superior NF.

The Regional Forester feels that the Plans convey that lynx is a high priority species and important part of the native biodiversity of the National Forests, regardless of whether recent populations are relatively low compared to several decades ago. The Forest Plans afford special attention to the conservation of Canada lynx and the habitats upon which they depend. We worked closely with the Fish and Wildlife Service to ensure that Plans incorporated integrated resource conservation measures (including objectives, standards, and guidelines for watershed, vegetation, timber, wildlife, recreation and other resource areas), as well as applicable measures considered and adopted from the Lynx Conservation Assessment and Strategy (Ruediger et al. 2000). Appendix B of the Biological Assessment (USDA Forest Service 2004b) for threatened and endangered species provides a detailed cross-reference showing how Plans incorporate or address applicable and is available upon request. Management direction also considered applicable law (such as the Endangered Species Act, Bald Eagle Act, National Forest Management Act) and policy (such as Forest Service Directives, including the Forest Service Manual 2670). Please refer also to the Agency Response for PC# 2.6.5-1 above.
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PC# 2.6.5-11
Public Concern: The Chippewa and Superior NFs should modify the use of Lynx Analysis Units (LAUs) in order to accomplish lynx population recovery or substantial habitat management.

> **-To extend lynx management direction in the Plans to National Forest lands outside the LAUs.**

-To identify or clarify larger landscape scales than LAUS within which to address important questions about population or population segment planning units and Programmatic Planning Analysis.
-To consider including the area north of Virginia on the Superior NF as an LAU because of potential for lynx use and to have consistency in LAU mapping between the Chippewa and Superior NFs.

Agency Response:
The National Forests and Fish and Wildlife Service coordinated to ensure that application of LAUs in the Plans, EIS, and Biological Assessment is consistent with guidance in the LCAS. Lynx Analysis Units (LAUs) function in two key ways in National Forest management. First, they provide the smallest landscape scale analysis units upon which direct, indirect, and cumulative effects analyses for lynx are performed. Secondly, they provide an appropriate landscape scale at which to identify blocks of quality lynx habitat to be maintained, thereby maintaining a good distribution of lynx habitat at scales appropriate for lynx conservation. To clarify the role of LAUs in lynx conservation on the National Forests, along with other lynx issues, we have added Appendix E: Lynx to the Plans with information on management and analysis scales both within and outside of LAUs.

Plan management objectives, standards, and guidelines (conservation measures) generally apply only to lynx habitat on National Forest land within LAUs, as per direction of the LCAS. However, the Biological Assessment (USDA Forest Service 2004b, Section 4.5.2) and Plan Appendix E (Section 5) clarify that some management measures are also appropriately applied outside of LAUs on NFS land: Pursuant to the Endangered Species Act of 1973 as amended (section 7(a)(2), exceptions to management and analysis at the LAU scale may also be warranted for some projects where it is determined that lynx may occur in action areas outside of mapped LAUs and projects may affect the lynx. Certain projects may also entail consideration of landscape patterns across large areas, including NFS lands outside of LAUs (for example, promoting habitat connectivity, management-ignited fire). Specifically, D-WL-3c, O-WL-4, 5, 8, 12, 13, 14, and G-WL-2, 7, 9 provide management direction applicable outside LAUs.

As documented in the Biological Assessment (USDA Forest Service 2004b, Section 4.5.2.3) and the planning record, the Superior and Chippewa NFs, in collaboration with the Minnesota DNR and FWS Region 3, established LAUs by March 2000. The Chippewa NF's LAUs have not changed since. The Superior NF, based on new information on lynx on the Forest and in response to comments on the Draft EIS, and coordination with the FWS and other agencies, updated its LAUs in early 2004. The key change was to map the BWCAW as a refugium (described in Plan Appendix E) and to add LAUs in the Virginia Unit, as suggested by the comment above. The FWS considers the area defined by National Forest LAU maps resulting from the national effort as the most appropriate for applying lynx habitat analysis and management.

The Biological Assessment (USDA Forest Service 2004b, Sections 4.5.2 and 4.5.3) and Lynx Appendix E (Section 5) have also added information to clarify the larger landscape scales than LAUs that are considered for lynx populations, as requested in comment above. The Great Lakes Geographic Area is the larger landscape scale identified, consistent with direction in the LCAS.

The Draft EIS and Draft Biological Assessment (USDA Forest Service 2004c) conducted simplified analyses at Forest-wide scales. The Biological Assessment (USDA Forest Service 2004b) changed the analysis units to LAUs and conducted more detailed analyses on impacts to lynx habitat within LAUs, summarized to the landscape scale. LAU-specific analyses are available in the planning record.

PC# 2.6.5-13
Public Concern: The Plans should include strong habitat management direction to address the continued existence and recovery of lynx.

-To increase lynx habitat quantity, quality, and dispersal throughout the planning units.
-To actively remove, reduce, or mitigate threats to lynx viability and habitat quality.

Agency Response:
The Forest Plans afford special attention to the conservation of Canada lynx and the habitats upon which they depend. We worked closely with the Fish and Wildlife Service to ensure that Plans incorporated integrated resource conservation measures (including objectives, standards, and guidelines for watershed, vegetation, timber, wildlife, recreation and other resource areas), as well as applicable conservation measures from the Lynx Conservation Assessment and Strategy (Ruediger et al. 2000) for the lynx. Appendix B of the Biological Assessment (USDA Forest Service 2004b) provides a detailed cross-reference showing how Plans incorporate or address applicable conservation measures recommended in the Lynx Conservation Assessment and Strategy and is available upon request. Management direction also considered applicable law (such as the Endangered Species Act, National Forest Management Act) and policy (such as Forest Service Directives, including the Forest Service Manual 2670). Plan direction includes:

- **To address management for desired lynx habitat, quantity, quality and dispersal through planning units:** the full suite of lynx objectives, standards, and guidelines.
- **To actively remove, reduce, or mitigate threats to lynx viability and habitat quality**: the full suite of Lynx objectives, standards, and guidelines for lynx. Standards and guidelines from Transportation System, Recreation, Watershed Management and other resource areas also remove or reduce threats. These are detailed in the Biological Assessment (USDA Forest Service 2004b, Section 4.5, 4.6, and Appendix B).

PC# 2.6.5-13a
Public Concern: The Plans should include management direction to minimize road construction and protect remaining roadless areas to address the continued existence and recovery of lynx.

AND

PC# 3.0-2
Public Concern: The Chippewa NF should include an objective in some areas to reduce road densities to 1.5 miles or less per square mile.

Agency Response:
The Regional Forester believes that Plans convey an increased emphasis on providing an NFS road system that is the minimum needed to provide adequate access to both NFS and non-NFS land (D-TS-2). Additional objectives, standards, and guidelines are provided in support of this Desired Condition with emphasis on building lower standard roads or temporary roads that can be effectively closed when their use for management activities is complete. From Transportation System direction (Plan Chapter 2) these include: D-TS-2, D-TS-3, O-TS-2, O-TS-3, O-TS-7, O-TS-8, G-TS-1, G-TS-12, S-TS-3, G-TS-13, G-TS-14, and S-TS-4. From Wildlife direction these also include: D-WL-5, O-WL-7, O-WL-12, O-WL-13, O-WL-14, G-WL-8, and G-WL-9. In addition, Forest Plans allocate NFS land to Management Areas that emphasize low human access, low road density, or no roads: WSR, PNM, RE, RNA, PRNA (Chapter 3-1), as well as the Boundary Waters Canoe Area Wilderness on the Superior NF. This direction is expected to beneficially address a wide array of species, including lynx, and environmental and social concerns.

The Final EIS (Chapter 3.7.1b and Appendix C) analyzes an array of alternatives for protection of remaining roadless areas. The protection in the Revised Plans, while not the highest level of all alternatives considered, is nevertheless expected to provide adequate protection and habitat for lynx, as documented in the Biological Assessment (USDA Forest Service 2004b, Section 4). In addition, any proposed activities in roadless areas would

be evaluated at the project level, providing additional opportunity for considering opportunities to benefit lynx or reduce potential negative impacts.

On the Chippewa NF, the north half of the Forest (north of Minnesota Highway 2) has a goal to strive for a road density maximum of 1 mile per square mile to address the management direction of the Recovery Plan for gray wolf in Management Zone 3 (USDI FWS 1992, p.73). While this is not achievable in many areas because of the combination of existing NF System OML 3-5 roads and non-NFS OML 3-5-equivalent roads, it does provide a goal for those areas that are one mile or less per square mile. The current average in wolf habitat areas is 1.1 mile per square mile (planning record).

PC# 2.6.5-13b
Public Concern: The Plans should include management direction to limit clearcuts to 100 meters wide.

Agency Response:
The LCAS (Ruediger et al. 2000, p. 2-3) cites literature that suggests that "clearcuts, shelterwood cuts, seed tree cuts, and diameter-limited prescriptions that result in distance to cover greater than 100 meters may restrict lynx movement and use patterns until forest regeneration occurs." This information will be considered at the project level, and if important for lynx movement at the site level, could be used to limit distance to cover. However, we did not feel that this was a necessary guideline at the LAU landscape scale. This is because management direction (O-WL-11, G-WL-3, and S-WL-1) provides guidance necessary to ensure that at LAU (and broader) scales habitat connectivity is maintained or restored. G-WL-3, in particular, ensures that at least 70% of NFS land is in suitable condition. Suitable condition provides adequate cover for lynx movement. Another reason to not limit clearcut size is that the LCAS (Ruediger et al. 2000, p 7-3) also recommends that vegetation management strategies be consistent with historical succession and disturbance regimes. The LCAS also suggests that harvest units mimic the pattern and scale of natural disturbances and retain connectivity across the landscape (Ruediger et al. 2000 , p. 7-6). The Revised Plans incorporated both these concepts. Since the disturbance regimes of the National Forests encompassed large disturbances resulting from fire, we considered that lynx evolved with large openings that are representative of the habitats and conditions that resulted from this disturbance regime.

PC# 2.6.5-13c
Public Concern: The Plans should include management direction to increase minimum amount of denning habitat from 10% to 15%.

Agency Response:
G-WL-4 provides guidance ensuring that denning habitat cannot be reduced below 10%. This incorporates applicable guidance from the LCAS (Ruediger et al. 2000, p. 7-4). Together with G-WL-3 that requires that at least 70% of each LAU be in suitable condition, there is a very high likelihood that denning habitat will always be well above both 10% and 15%, since much of suitable habitat also provides for denning habitat. It is also important to note that G-WL-4 provides a minimum threshold and does not represent an objective. Analysis in the Biological Assessment (USDA Forest Service 2004b, p. 144) showed projected conditions based on Revised Plans' vegetation and other resource objectives. Modified Alternative E results in from 30% to 45% in denning habitat in LAUs. The exception, Decade 5 for the Superior was 19%, still greater than recommended minimum. Project level planning could further consider proactive management for denning habitat, if amount of denning habitat approached levels as low 10% or 15%.

PC# 2.6.5-13d
Public Concern: The Plans should include management direction to decrease allowable change of lynx habitat vegetation to unsuitable in a 10-year prior from 15% to no more than 10%.

Agency Response:
The Revised Plans incorporated guidance from the LCAS (Ruediger et al. 2000, p. 7-5) in S-WL-1 to ensure that management activities on NFS land not change more than 15% of lynx habitat on NFS land within an LAU to unsuitable habitat in ten-year period. It is important to note that S-WL-1 provides a minimum threshold and does not represent an objective. Analysis in the Biological Assessment (USDA Forest Service 2004b, p. 140) showed projected conditions based on Revised Plans' vegetation and other resource objectives. Modified Alternative E results in from <1% to 8% unsuitable within LAUs of both National Forests, with an average of from 3.6% to 4% in unsuitable. Thus habitat objectives for lynx would generally maintain habitat well above the minimum. Project level planning could further consider proactive management for suitable habitat, if amount of unsuitable habitat approached levels as low as 15% to ensure that Objectives O-WL-9-11 for sufficient habitat are met.

PC# 2.6.5-13e
Public Concern: The Plans should include management direction to provide a strong down woody debris standard forest-wide.

Agency Response:
General Technical Report RM-254 (Ruggiero et al. 1994, p. 88) describes denning habitat as "dense, mature forest that contain large woody debris, such as fallen trees or upturned stumps, to provide security and thermal cover for kittens…" This and other information on denning habitat was also included in the LCAS (Ruediger et al. 2000, p. 1-4 to 1-5, 4-2) and analyzed in the Biological Assessment (USDA Forest Service 2004b, p. 106-107). O-WL-4, O-WL-O-5, WL-10, G-WL-4, and G-WL-5 provide direction to ensure appropriate management for lynx denning habitat. At project planning level, both landscape and site level considerations for denning habitat will ensure the consideration of management for coarse woody debris within denning habitat. In addition, other resource area management direction provides for coarse woody debris management: D-VG-3, D-VG-5, D-VG-6e, D-VG-8, O-VG-8, O-VG-11, O-WL-24, and Landscape Ecosystem objectives for mature, old, old growth and multi-aged forest (where we assume older forest provides coarse woody debris). In addition, guidance in Minnesota Forest Resources Council's *Voluntary Site-level Forest Management Guidelines* (MNFRC 1999c, Part 2: p. 3-11 and Part 3 Timber Harvesting p. 28-38) provides details on guidelines incorporated by reference into Revised Plans (Chapter 1). Together the objectives, standards, and guidelines provide strong management direction for coarse woody debris.

PC# 2.6.5-13f
Public Concern: The Plans should include management direction to maintain habitat and population connectivity at multiple landscape scales (LAUs, disjunct lynx habitat, Great Lakes Region, Canada).

Agency Response:
Conservation measures to address connectivity at multiple landscape scales were incorporated into the LCAS (Ruediger et al. 2000) to help address the shortcomings identified in the National Biological Assessment (Hickenbottom et al. 1999) for many of the NF Plans. Because these concerns were applicable to the Chippewa NF and Superior NF (weak direction in 1986 Chippewa and Superior NF Plans), the Revised Plans adapted and included LCAS measures to strengthen direction for multiple landscape scale connectivity, even where the National Forests have limited ability to effect change (such as outside the boundaries of the National Forests). This direction includes: D-WL-3c.and 3h., O-WL-11, O-WL-12, O-WL-14 and G-WL-9. Further information in Revised Plan Appendix E Section 6 provides additional potential considerations for supporting lynx conservation

management related to connectivity. In addition, the Biological Assessment Appendix B, Table B-2 (USDA Forest Service 2004b) displays how the criteria of the National Biological Assessment are addressed in the Plans.

PC# 2.6.5-13g
Public Concern: The Plans should include management direction to decrease the road density standard within LAUs from 2 miles/sq mile to 1 mile/sq mile.

Agency Response:
G-WL-8 provides guidance to generally maintain road density below two miles per square mile. This conservation measure is adapted from the LCAS, which found that preliminary information suggested that lynx did not avoid roads (except at high traffic volumes) and therefore the LCAS did not find compelling evidence to recommend management of road densities to conserve lynx (Ruediger et al. 2000, p 2-12-13 and 7-10). However, to address issues of interspecific competition and potential for increased mortality risks, both the LCAS and Revised Plans recommend a conservative approach indicated by G-WL-8. It is important to note that G-WL-8 provides a recommended maximum, where road density is not already at 2 miles per square mile or higher. Revised Plans also provide direction for minimizing the amount of road construction, striving to construct low standard or temporary roads, rather than higher standard permanent roads, and effectively closing roads when they are no longer needed: D-TS-2, D-TS-3, O-TS-2, O-TS-3, O-TS-7, 0-TS-8, G-TS-1, G-TS-12, S-TS-3, G-TS-14, AND S-TS-4. This Transportation System direction, together with D-WL-5, O-WL-7, O-WL-12, O-WL-13, O-WL-14, G-WL-8, and G-WL-9 ensure that road densities will be managed to be as low as possible.

PC# 2.6.5-15
Public Concern: The Chippewa and Superior EIS and Plans should not jeopardize lynx recovery of lynx with the addition of new over-the-snow trail miles.

Agency Response
The Biological Assessment (USDA Forest Service 2004b, Section 4.5.5, 4.6, 4.7) and the Final EIS (Chapter 3.3.4) used roads and trails as indicators of forest management impacts to lynx. They acknowledge, summarize, and analyze risks to lynx recovery associated with roads and trails. The primary risks include 1) the indirect and cumulative impacts of snow compaction (a potential for increased and negative interspecific competition) and 2) increased human access to lynx habitat (a potential for increased human-caused mortality from trapping, shooting, vehicle collision).

The potential for negative impacts from snow compaction is addressed by management guidance that seeks proactively to maintain or improve the natural competitive advantage of lynx in deep snow conditions (O-WL-13, along with O-WL-4 through O-WL-8). Where multiple uses of the National Forests may pose risks from increased compaction, Revised Plans provide additional direction that is expected to reduce impacts (O-WL-7, O-WL-13, S-WL-2, G-WL-1, 6, 7, G-WL-8, D-RMV-1, O-RMV-2 [Chippewa], O-RMV-1 [Superior], S-RMV-3 [Superior], S-RMV-4 [Chippewa], G-RMV-4, D-TS-2, 3, O-TS-2, 3, 7, S-TS-3, 4, G-TS-12, 13, 14). With this management direction, the Biological Assessment (USDA Forest Service 2004b, Section 4.7) determined that snow compaction would not be likely to adversely affect lynx.

The potential impacts from human access, however, were determined in the Biological Assessment (USDA Forest Service 2004b, Section 4.7) likely to adversely affect the lynx. The management direction listed in the paragraph before also provided mitigative direction to reduce potential effects. The Fish and Wildlife Service concurred in their Biological Opinion (USDI Fish and Wildlife Service. 2004. *Biological Opinion on Revised Land and Resource Management Plans for the Chippewa and Superior National Forests*. Twin Cities Field Office, Bloomington, MN), but determined that this would not likely to jeopardize the continued existence of lynx on the National Forests. In addition, we expect that project level planning, analysis, and implementation should better be

able to reduce potential negative impacts and promote beneficial impacts because we may have more specific information for the project area.

In exceptions to the broad strategic monitoring approach described in Chapter 4 of Revised Plans, monitoring direction provides more specific guidance for monitoring road and trail management, as recommended in the Biological Assessment (USDA Forest Service 2004b, Section 4.9). This is to ensure that this area (road and trail management, with special emphasis on S-WL-2 and G-WL-6, 7, S-TS-3, and TS-G-12, 14) receives high priority because of its crucial importance to the conservation of lynx.

PC# 2.6.5-17
Public Concern: The Chippewa and Superior NFs formally consult with the Fish and Wildlife Service on lynx and satisfy the holding in Defenders of Wildlife vs. Norton.

Agency Response:
The Chippewa NF and Superior NF coordinated extensively with the Fish and Wildlife Service during Plan revision to promote the conservation of all listed species and to informally and formally consult/confer as specified in the *Memorandum of Agreement – Endangered Species Act, Section 7 Programmatic Consultations and Coordination [between the Forest Service and Fish and Wildlife Service] – August 2000*, in 50 CFR 402, and in other law and Forest Service directives. The Forest Service Biological Assessment (USDA Forest Service 2004b) and the Fish and Wildlife Biological Opinion (USDI Fish and Wildlife Service. 2004. *Biological Opinion on Revised Land and Resource Management Plans for the Chippewa and Superior National Forests.* Twin Cities Field Office, Bloomington, MN) provide summaries of consultation history and the planning record provides more extensive documentation. The holding in Defenders vs. Norton requiring formal consultation, applied only to the Fish and Wildlife Service, not the Forest Service. With a recent decision, this is no longer an applicable holding. Nevertheless, because the Fish and Wildlife Service and Minnesota National Forests have formally consulted on lynx for plan revision, those earlier requirements for the Fish and Wildlife Service would have been fulfilled.

PC# 2.6.5-19
Public Concern: The Chippewa and Superior NFs should not close snowmobile trails to protect lynx.

Agency Response:
Management objectives are to maintain the natural competitive advantage of lynx in deep snow conditions (O-WL-13). In support of this objective, S-WL-2 allows no net increase in groomed or designated over-the-snow trail routes (this includes snowmobile trails) in LAUs on NFS land unless the designation effectively consolidates use through a net reduction of snow compacted areas. Since the Plans allow up to 100 (Chippewa NF) or 130 (Superior NF) miles of new designated over-the-snow trails, it would be necessary to effectively close other regularly used snow routes in order to achieve the "no-net increase" standard. Although the Plans do not specifically propose closing snowmobile trails to protect Canada lynx on the Chippewa or Superior NFs, project level planning and analysis, with appropriate public involvement, may consider a variety of options, including rerouting or consolidating portions of designated snowmobile trails. The National Forest staffs expect, however, that most of those routes that might be closed to allow for newly designated trails would likely not be designated snowmobile trails. Instead they are likely to be undesignated regularly used routes such as on unclassified roads or former temporary roads that were not effectively closed.

PC# 2.6.5-19a
Public Concern: The Chippewa and Superior NFs should clarify whether O-WL-12 and O-WL-13 provided direction for the entire Forest or to LAUs only.

Agency Response:
O-WL-12 and O-WL-13 of the Proposed Plans have been dropped from the lynx management section. Management direction in the Transportation System section of the Plan, O-TS-3 and S-TS-3, and G-TS-12, provides guidance for road management applicable to the entire Forest. Although this direction is expected to benefit lynx, the conservation of lynx was not the objective determining desired road policy Forest-wide. Transportation direction was developed to address multiple social and environmental issues.

PC# 2.6.5-21
Public Concern: The Chippewa and Superior NFs should insure that the provisions of the Bald Eagle Recovery Plan are used to guide bald eagle management.

Agency Response:
The Forest Plans afford special attention to the conservation of bald eagles and the habitats upon which they depend. We worked closely with the Fish and Wildlife Service to ensure that Plans incorporated integrated resource conservation measures (including objectives, standards, and guidelines for watershed, vegetation, timber, wildlife, recreation and other resource areas), as well as applicable conservation measures from Northern States Bald Eagle Recovery Plan. Management direction also considered applicable law (such as the Endangered Species Act, National Forest Management Act) and policy (such as Forest Service Directives, including the Forest Service Manual 2670). Management direction specific to the bald eagle includes O-WL-16 (Chippewa), O-WL-17 (Superior) and S-WL-3. The eagle standard ensures that the provisions of the Bald Eagle Recovery Plan are used to guide eagle management.

PC# 2.6.5-22
Public Concern: The Final EIS should add and consider differences of white pine component within stands to bald eagle analysis.

Agency Response:
The Biological Assessment (USDA Forest Service 2004b, Section 2.5.1.A) acknowledges that analyzing acres of white pine forest types and acres of old white pine forest as indicators of eagle nesting and roosting habitat has its limitations. Although these are reasonable and informative indicators, they cannot detect all changes to eagle habitat that would occur through managing to achieve vegetation and Landscape Ecosystem objectives for increasing the white pine component of upland forests across both National Forests. Nor do the white pine forest type indicators detect all changes to eagle habitat that would occur through managing to achieve Bald Eagle Recovery Plan objectives for development and maintenance of white pine nesting habitat. However, because of the strategic nature of the Plans, tools and techniques (such as underplanting) for achieving white pine diversity increases are not specified, and thus it was not possible to analyze white pine diversity quantitatively as an indicator. Future monitoring and evaluation for bald eagle management (Chapter 4) can provide quantitative information on amounts of white pine planting, and how they contribute to Plan objectives for eagle habitat maintenance, enhancement, or protection.

Regional Forester Sensitive Species (2.6.6)

PC# 2.6.6-2
Public Concern: The Chippewa and Superior NFs should improve the Plans to provide adequate protection for rare species in the first decade of implementation.

Agency Response:
The Regional Forester selected a strategic approach for managing the Chippewa NF and Superior NF. A key to this strategic approach is coarse filter management, an important part of which are the Landscape Ecosystem objectives. The different alternatives analyzed different vegetation trajectories, and the Regional Forester selected a preferred alternative that best meets multiple use objectives. In order to achieve long term vegetation objectives such as increases in mature red and white pine, short term decreases in the amount of other mature forest types (such as aspen/birch) would occur, thus creating short term decreases in habitat for some species. These projected habitat changes were analyzed for TES species in the Biological Assessment (USDA Forest Service 2004b) and Biological Evaluation (USDA Forest Service 2004e), and for the preferred alternative, no species would be at risk of loss of viability despite short term losses of habitat.

PC# 2.6.6-3
Public Concern: The Chippewa and Superior NFs should improve habitat conditions for sensitive plants associated with northern hardwood, jack pine, red pine, and black spruce forests and old growth forests.

Agency Response:
As documented in the sensitive plant Biological Evaluation (BE) (USDA Forest Service 2004e), the species mentioned in the comment (ternate grapefern, pale moonwort, and least grapefern) thrive in open habitats, many of which have been disturbed in the past. They occasionally occur in forested habitats, but their primary habitat is openings. The BE analysis shows that these species will have enough suitable habitat to maintain viability under any alternative. The other species mentioned in the comment, triangle grapefern and goblin fern, are both primarily found in mature northern hardwood forest. The management direction for sensitive plants (O-WL-1-3, O-WL-17 (Chippewa), O-WL-18 (Superior) O-WL-30 (Superior), O-WL-31 (Chippewa), S-WL-5, S-WL-7 (Chippewa), S-WL-9 (Superior), and G-WL-11) would provide protection for these species that would maintain their viability under the preferred alternative.

PC# 2.6.6-4
Public Concern: The Chippewa and Superior NFs should strive to return sensitive plants to their historical Outcome rating in order to maintain viability.

Agency Response:
Draft EIS Chapter 3.3.5.b Table WLD-17 has been renumbered in the Final EIS to Table WSS-2. Given the numerous and dramatic changes in land use that have occurred since the historical time period (pre-European settlement era of about approximately 1600-1900AD), the Regional Forester does not consider returning sensitive plants to their historic outcome ratings to be a realistic goal. Instead, the Forest Plans propose a variety of desired future conditions that emulate, maintain, or restore ecological processes (such as D-VG-7 and D-VG-8) and that conserve plant populations (D-WL-3).

PC# 2.6.6-5
Public Concern: The Chippewa and Superior NFs should establish protection for sensitive species and State threatened and endangered species that matches the level of protection for the goblin fern in S-WL-9.

Agency Response:
Chippewa goblin fern standard has been renumbered to S-WL-7. As described in the introduction to the wildlife objectives of the Proposed Plan Chapter 2, O-WL-17 (Chippewa), O-WL-18 (Superior), and defined in the glossary in the Forest Plan, a coarse filter/fine filter approach to species conservation was used. For most of the sensitive plants, Superior NF and Chippewa NF wildlife management direction O-WL-1-3, O-WL-17 (Chippewa), O-WL-18 (Superior) O-WL-30 (Superior), O-WL-31 (Chippewa), S-WL-5, and G-WL-11 would provide for the coarse filter conservation of sensitive plants and their habitat and would thus help maintain their viability on the Forests. Goblin fern, because of its documented declining trend and threats posed by non-native earthworms, requires fine filter conservation measures too, and thus S-WL-9 (Superior) and S-WL-7 (Chippewa) were developed.

PC# 1.0.7-7
Public Concern: The final Forest Plans desired conditions should utilize the fine filter approach when describing the conservation of sensitive species and their habitats.

Agency Response:
We believe that the strategic framework exists in the Forest Plans to strive for the Desired Condition quoted above (D-WL-3d) AND therefore it is not necessary to add more specific management direction. We agree that a coarse filter approach is not adequate for many of R9 sensitive species and thus Revised Plans provide special attention for sensitive species in direction that encompasses all sensitive species and direction specific to a subset of species. This direction includes: Chippewa: O-WL-17 – 32, S-WL-5-8, G-WL-11-24; Superior O-WL-18-31. S-WL-5-10, G-WL-11-22. The absence of species-specific direction is an approach that provides greater flexibility throughout the planning period to ensure that the most applicable and current information (including information provided by the commenter, species habitat reviews [USDA Forest Service 2002d], and results of NRRI monitoring [NRRI 2003]) on sensitive species is considered at the project planning level. Rather than making decisions at the programmatic level on specific management needs for sensitive species, the process of conducting a biological evaluation for each project would allow us to best address opportunities to protect, enhance, or maintain sensitive species habitat or eliminate or reduce negative impacts to ensure the species does not trend toward listing.

PC# 2.6.6-6
Public Concern: The Chippewa NF Plan should develop standards and guidelines for the black-backed woodpecker to maintain viability of this species.

Agency Response:
The Chippewa Forest Plan provides management direction specific to black-backed woodpecker: O-WL-25-26 and G-WL-19 -20. In addition, we believe that the strategic framework exists in the Forest Plans to address the species and provide for viable populations and well-distributed habitats. This includes, but is not limited to, management direction: D-WL-1-9, O-WL-1-3, O-WL-17, D-VG-8, O-VG-9, 11 12, S-WL-9, D-ID-3, -5, -6, and Landscape Ecosystem vegetation and management indicator habitats. Snag management direction is found in Minnesota Forest Resources Council's *Voluntary Site-level Forest Management Guidelines* (MNFRC 1999c, Part 2: Wildlife Habitat and Part 3: General Guidelines-Retaining Leave Trees and Timber Harvesting). This provides additional guidance incorporated by reference into Revised Plans (Chapter 1).

PC# 2.6.6-7
Public Concern: The Chippewa NF Plan should develop standards and guidelines for spruce grouse to prevent extirpation of the species from the Forest.

Agency Response:
Spruce grouse are represented by Management Indicator Habitats 8b Older/Mature Jack Pine Forest and 9b Older/Mature Lowland Black Spruce/Fir Forest. The analysis in Section 3.3.1 includes the effects of each of the alternatives on these habitats. The Biological Evaluation (USDA Forest Service 2004e) for the spruce grouse also analyzes habitat issues and makes determinations on the effects to population viability as a result from planning alternatives. Although there is a reduction in spruce grouse habitat under the selected alternative for the Chippewa National Forest in both of these Management Indicator Habitats, extirpation of spruce grouse is not expected. A Species Viability Evaluation expert panel conducted by the Forest Service considered habitat conditions projected by each alternative for spruce grouse. The panel determined that the selected alternative provided adequately distributed habitat in appropriate abundance to provide for viable spruce grouse populations.

PC# 2.6.6-8
Public Concern: The Regional Forester should select Alternative G because it presents the best balance of resources and because Alternative E will contribute to the loss of viability of several plant species.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying Management Area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The Regional Forester looked at all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The ROD also discusses how the issues are addressed by the Alternatives, including the Selected Alternative.

PC# 2.6.6-8a
Public Concern: The Chippewa and Superior NFs should improve management for rare species in Alternative E to avoid the unacceptable risk of pushing rare species into Outcome D and E categories.

Agency Response:
As noted in the analysis in EIS Chapter 3.3.5.b and displayed in Tables WSS-1 and WSS-2, some species have always been rare and have historically had outcome E, such as long-leaved arnica on the Superior NF. Other species, as the comment notes, decrease in outcome from the current condition to a lower outcome in some alternatives, such as the northern goshawk, while other species show an improving trend in some alternatives, such as the red shouldered hawk. For rare species, the coarse-filter and fine-filter management direction is designed to prevent such species from losing viability, but in some alternatives, such as alternative C for northern goshawk, there would nevertheless be a high-risk of loss of viability in the planning area. The Regional Forester weighed such risks, and no species would have a trend to federal listing or loss of viability for the Selected Alternative (Table WSS-3).

PC# 2.6.6-9
Public Concern: The Regional Forester should select Alternative F for the Superior NF.

> **-Because Alternative F provides better habitat for sensitive species than Alternative E or the current condition.**
> **-Because Alternative E is not as proactive as Alternative F (and other alternatives) for ecosystem management and would result in a continuing trend of more negative cumulative effects on habitat (mature forest, mature upland patches, stand complexity, sufficient habitat outside the BWCAW).**

Agency Response: It is recognized that Alternative F provides better conditions for some resources than Alternative E. We considered a range of planning alternatives (Appendix G, Final EIS) that examined various levels of forest ages and ranges of conditions that benefited sensitive species in different ways (section 3.3 of the Final EIS). In some alternatives, greater amounts of mature forest and sensitive species habitat were provided than in others (Appendix G, Final EIS). The Regional Forester selected Alternative E because he felt this alternative struck the right balance between the many demands and uses of the Superior National Forest. Habitat conditions will change from the current condition in response to the needs for change (section 1.3.3 Need for Change in Management Direction), however other forest resources and objectives needed to be considered in making this selection.

PC# 2.6.6-10
Public Concern: The Chippewa and Superior NFs should explore opportunities to mitigate Alternative C to mitigate five species at risk of loss of viability.

Agency Response:
Alternative C does have five species that are at risk of loss of viability. However, those viability determinations were not the only reasons that Alternative C was not selected by the Regional Forester as the preferred alternative; other resource effects, outcomes, and outputs were considered as well. If mitigations were added to Alternative C to improve the viability determinations for these species, then Alternative C would probably begin to look like a different alternative altogether and less like Alternative C.

In addition, the EIS analyzed a wide variety of alternatives with different outcomes and with varying Management Area allocations, addressing plan revision issues such as sensitive species or timber outputs in different ways. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. While Alternatives A and C may have higher timber outputs, the Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The Regional Forester looked at all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The ROD also discusses how the issues are addressed by the Alternatives, including the Selected Alternative.

PC# 2.6.6-11
Public Concern: The Chippewa and Superior NFs should use management parameters from Alternative D and B in relation to sensitive species.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying Management Area allocations, addressing plan revision issues such as sensitive species in different ways. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are

managed. While Alternatives B and D may have higher outcomes for some sensitive species, the Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The Regional Forester looked at all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The ROD also discusses how the issues are addressed by the Alternatives, including the Selected Alternative.

PC# 2.6.6-12
Public Concern: The Chippewa NF Plan should quantify objections for O-WL-28 or clarify how objectives for "adequate undisturbed nesting habitat" would be defined, measured, monitored, and evaluated.

Agency Response: Objective O-WL-28 has been changed to a guideline and renumbered G-WL-18 because it provides a management limitation or mitigation, not an objective. We believe that the strategic framework exists in the Forest Plans to provide for yellow rail without prescribing specific percents since this could vary by site, population presence, habitat quality, distribution, amount or other factors. G-WL-18, along with D-WL-1-9, O-WL-1-2, O-WL-17, G-WL-11-12, and S-WL-5, provide the key elements of this framework. During project level planning, we would consider the relevant scientific information on yellow rail habitat in order to ensure that the intent of the guideline is met and document the results in the Biological Evaluation for the project. Chapter 4 Table-MON-4 of the Forest Plan provides strategic monitoring guidance and provides an emphasis on monitoring and evaluating impacts to sensitive species. As explained in Chapter 4, the future Technical Guide would provide details of monitoring for yellow rail. As with many sensitive and rare species quantitative monitoring is not always possible, thus project and landscape level evaluation and biological opinion may take the place of quantitative measures in addressing how objectives are met.
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PC# 2.6.6-13
Public Concern: The Chippewa NF Plan should quantify objectives for O-WL-31 or clarify how objectives for "large concentrations of fire-damaged or killed flaky-barked trees…" would be defined, measured, monitored, and evaluated.

Agency Response:
The Proposed Chippewa Plan O-WL-31 was renumbered to O-WL-25. In addition, we added additional clarifying language. We believe that the strategic framework exists in the Forest Plans to address this management objective and do not believe it is necessary to prescribe specific quantities or distribution. It is expected that suitable concentrations of fire-damaged conifers will occur on the landscape through vegetative and wildlife objectives (D-VG-3, D-VG-5, D-VG-6e., D-VG-7, D-VG-8, O-VG-9, O-VG-11, 12, D-WL-3, O-WL-1-2, G-WL-5, O-WL-17). The extent of concentrations would vary by Landscape Ecosystem (LE) and would provide adequate ecological representation of the natural occurrence in a given LE. This would be considered and evaluated during project level planning and through monitoring and evaluation objectives provided in Chapter 4 of the Plan. Results of monitoring and evaluation may be quantitative or qualitative based on most applicable science and biological opinion of Forest Service, or a combination of both. Given both the variance between LEs and the wide range of possible disturbances that provide fire-damage or killed flaky-barked trees, it would not be feasible to prescribe or quantify the size of concentrations.

PC# 2.6.6-14
Public Concern: The Chippewa NF Plan should clarify how S-WL-8 will provide adequate older jack pine forest to provide for viable populations of jack pine dependent species.

Agency Response:

Chippewa NF S-WL-8 has been renumbered to S-WL-10. Species such as the black-backed woodpecker, which use mature and older jack pine forest, are not totally dependent on that forest type. Besides jack pine, additional habitat would be provided by tamarack and black spruce forest in particular. These forest types are vulnerable to mortality by inundation, making them important habitat providers for species that depend on dead and dying conifers, such as the black-backed woodpecker. Mature and older jack pine forest contributes to the viability of the black-backed woodpecker, but is not soley depended upon to provide viability.

PC# 2.6.6-15
Public Concern: The Plans should state that exclusion zones for motorized and perhaps even human-powered boats are a possible management tool in the vicinity of nests to protect black tern (CNF O-WL-24, SNF O-WL-23) or trumpeter swan (CNF O-WL-23).

Agency Response:
Superior Proposed Plan O-WL-23 has been renumbered in the Final Plan to O-WL-22. Chippewa Proposed Plan O-WL-24 has been renumbered in the Final Plan to O-WL-22 and O-WL-23 has been renumbered to O-WL-21

We believe that the strategic framework exists in the Forest Plans to address these potential impacts. This includes, but is not limited to, management direction: O-WL-17 (Chippewa), O-WL-18 (Superior), S-WL-5, G-WL-11-12, and O-RWA-1. Black terns and trumpeter swans both nest in habitats that are marshy and are small bodies of water or shallow lakes. These habitats are not typically used for boating recreation during the nesting season. Many are not feasible for boating activity. The use of exclusion zones to protect and manage black tern and trumpeter swan nesting sites is not considered necessary. In the unlikely event of a conflict between nesting activity for these species and recreation activity, an emergency area closure is always an option, without a specific objective.

PC# 2.6.6-16
Public Concern: The Chippewa and Superior NFs should improve the inadequate or deficient analysis of sensitive species in the Final EIS and Biological Evaluation (BE).

> **-Because the Draft EIS and BE does not meet minimum standards of NEPA for use of sound scientific information and consideration of cumulative effects.**
> - **Because the Draft EIS analysis process fails to identify thresholds of concern, is arbitrary, and is based on opinion, not subjective data.**
> **-Because Draft EIS fails to quantify or identify the magnitude of potential cumulative effects to threatened species.**
> **-Because the BE and Draft EIS use a flawed analysis approach by assuming that estimated habitat abundance and distribution is a surrogate for actual population abundance.**
> **-Because the Draft EIS fails to identify mitigation measures to reduce or eliminate cumulative effects.**

Agency Response:
Some commenters felt the analysis of sensitive species should be improved in the EIS and Biological Evaluation (BE) (USDA Forest Service 2004e). This response addresses the specific comments for PC# 2.6.6-16 in the order that they are listed above. A variety of peer-reviewed scientific papers (see the literature cited sections of the EIS, BE, and Biological Assessment [BA] [USDA Forest Service 2004b]) as well as panels of species experts (Schenck et al. 2002) were used to develop a solid foundation of scientific information for the biological analyses in the BE, BA, and EIS.

As noted above, the best available scientific information was used as the foundation for the biological analyses in the EIS, including the scientific literature and species experts. When such data was lacking or incomplete, other sources were used such as Minnesota DNR Natural Heritage Program data and unpublished survey reports (see the BE and BA for full description). our biologists used these sources along with professional judgment to make determinations of species viability, which were thus not arbitrary. The rationale for effects determinations are displayed in the BE and BA.

With respect to threatened, endangered, Regional Forester Sensitive Species, and Management Indicator Species, cumulative effects were analyzed fully in accordance with the standards of the National Environmental Policy Act and are displayed in the respective portions of the BE, BA, and EIS. As stated in EIS chapter 3.3.0, the cumulative effects analysis area for sensitive species includes both federal lands and lands under other ownerships. The cumulative effects analysis area boundaries are described in the BE; generally speaking, they do encompass a larger landscape. The magnitude of the cumulative effects may be displayed either quantitatively or qualitatively. Either way, the types of effects and their magnitude are displayed in the BE, BA, and EIS for TES species. See, for example, the analysis in the sensitive plant BE for Guild 4 (cliffs, talus slopes, and exposed rock habitat) in the Environmental Consequences section of the BE.

The relationship between habitats of sensitive species and population abundance is well established in the Existing Condition section of the sensitive plant and animal BE. Numerous sources are used to document these relationships, and these are well documented in the BE.

The Draft EIS did not specifically label or identify as “mitigation measures” the numerous Forest-wide and Management Area standards and guidelines that place limits on forest management activities. identify mitigation measures for sensitive species. This management direction was developed to address and mitigate impacts to sensitive species in an integrated resource management approach. In addition the following direction more specifically addresses ways to reduce or eliminate cumulative effects: (including, but not limited to:) O-WL-17 (Chippewa), O-WL-18 (Superior), G-WL-11-24 (Chippewa) G-WL-11-22 (Superior), S-WL-5-8 (Chippewa), S-WL-5-9 (Superior).In addition, the Final EIS Chapter 3.3.5.b has been revised to address this issue.

PC# 2.6.6-17

Public Concern: The Chippewa and Superior NFs should provide an adequate analysis of effects and protective management standards and guidelines for rare species and specialized habitats including:

- **Boreal owl, Nabokov’s blue, bay-breasted warbler, three-toed woodpecker, and black-backed woodpecker**
- **Rare species of wet meadows and marshes such as yellow rail, LeConte’s sparrow, and Wilson’s phalarope.**

Agency Response:

Detailed analyses of all Regional Forester Sensitive Species were conducted and are documented in the Biological Evaluation (USDA Forest Service 2004e), available in the planning record. The Final EIS provides a summary of these analyses (with additional information to the Draft EIS) and does not include the entire analysis for any species. We believe that the strategic framework exists in the Forest Plans to address both the management that would seek to maintain, benefit, or improve conditions for the species identified above and to reduce potential impacts and thus it is not necessary to add management direction. Key guidance in the Plans includes (but is not limited to): D-VG-1-8, D-WL-1-9, O-WL-1-3, O-WL-17 (Chippewa), O-WL-18 (Superior), G-WL-11-12, S-WL-5, O-WL-30 (Superior), O-WL-31 (Chippewa) and Landscape Ecosytem vegetation and management indicator habitat objectives. Certain species were provided with more specific management direction: boreal owl on Superior: O-WL-20, S-WL-6, G-WL-13; three-toed woodpecker on Superior (O-WL-23-24, G-WL-17-18, O-VG-

11); black-backed woodpecker on Chippewa (O-WL-25-26, G-WL-19-20, O-VG-12); yellow rail on Chippewa(O-WL-24, G-WL-18); and we added direction for Nabokov's blue on Superior (S-WL-7, O-WL-27).

PC# 2.6.6-18
Public Concern: The Chippewa and Superior NFs should improve the inadequate or deficient analysis of rare and sensitive plants in the Final EIS and Biological Evaluation (BE).

-Because distinct life histories and population biology of plants were not thoroughly considered.
-Because cumulative effects were not thoroughly or accurately considered and conclusions on impacts to species were not adequately differentiated.
-Because lack of differences among alternatives suggests that the Chippewa and Superior NFs did not realistically analyze immediate and long-term direct effects of logging on sensitive plants.
-Because the Outcome categories are not distinct enough to detect ecological changes or differences among alternatives.
-Because "unknown" was not an available Outcome category.
-Because analysis resulted in faulty and illogical conclusions.
-Because no explanation of why all different alternatives would have so little effect on plant viability was presented.
-Because impacts of non-native invasive species (NNIS) on viability of sensitive species were not addressed.

Agency Response:
Some commenters felt the analysis of sensitive plants should be improved in the EIS and Biological Evaluation (BE) (USDA Forest Service 2004e). This response addresses the specific comments for PC# 2.6.6-18 in the order that they are listed above. The distinct life histories/population biology of sensitive plants were considered thoroughly in the sensitive plant analysis. Table 3 in the plant BE describes this type of information for all of the sensitive plants. This information is incorporated in the analysis of each species in the environmental consequences section of the BE. As noted in a comment, none of the sensitive plants are projected to lose viability or trend toward federal listing under any alternative. This is not due to lack of thorough analysis but rather the result of consideration of management direction, model results, threats, and outcomes, as documented in the Environmental Consequences section of the BE. Although the outcomes did vary by alternative (Table WLD-17 in the Draft EIS, now renumbered to Table WSS-2 in the Final EIS), none of the alternatives triggered a viability loss for any sensitive plant species.

Another comment states that we did not analyze all relevant cumulative effects to sensitive plants, such as effects of deer herbivory (particularly to fairy slipper and ram's head ladyslipper), effects of wilderness designation, or effects of NNIS. The effects of deer herbivory were considered for species with well documented sensitivity to deer browsing, such as Canada yew (see plant BE). In response to this comment, deer herbivory effects are now considered for fairy slipper and ram's head ladyslipper, two species for which deer browse impacts are suspected but not well documented (Miller and Bratton 1992, NatureServe (2002). The positive effects of wilderness designation on rare plant habitat were not considered in the sensitive plant analysis. Although protection of suitable sensitive plant habitat would occur under some alternatives as the result of wilderness designation, the overall benefits to suitable habitat would be minor since only a small amount of suitable habitat would be protected (up to 0.9% in Alternatives B and D on the Chippewa and up to 2.7% in Alternative D on the Superior). The IDT acknowledges the threat NNIS pose to sensitive plants; however, based on the existing condition described for NNIS (EIS chapter 3.3.5.a), NNIS do not currently pose a significant threat to sensitive plants nor will they during the time period of the analysis, because of application of Forest objectives, standards, and guidelines. For species in the mesic hardwood forest guild, the effects of the major threats of management

activities on the abundance and distribution of suitable habitat were considered. The major threats to these species were the effects of timber harvest, road and trail construction, and the spread of non-native invasive earthworms; according to the scientific literature, deer herbivory was not considered a major threat to any of these species (see plant BE appendix 1). The analysis in the BE now incorporates information from Schulz et al. (2001).

It was suggested that the direct effects of logging on sensitive plants were not realistically analyzed. However, the direct effects of logging were considered in several ways. The types of direct effects of logging are described in the plant BE in the Affected Environment, and these effects are considered in the BE in the Environmental Consequences. Additionally, different types and amounts of harvest were modeled for different forest habitats, and the model outputs were one factor that was considered in determining the sensitive plant outcomes. Thus, the effects of logging were adequately considered.

Responding to the comment that the outcome categories are not distinct enough to detect ecological changes or differences among alternatives: the outcomes were designed to cover a range of ecological conditions, and they are an attempt to put into meaningful categories information that covers a spectrum of ecological conditions. While there may be some overlap between categories, the IDT feels the categories are sufficiently distinct to describe the range of suitable ecological conditions encountered by species on the Forests. For further description of the categories and outcome rating process, see Schenck et al. (2002).

One commenter suggests that the plant BE is inadequate because “unknown” is not an available outcome category. Although “unknown” is not an outcome category, uncertainty was explicitly incorporated into the outcome ranking process. Uncertainty about species outcomes results from a variety of sources, such as limited biological information for some species, but rather than make an “unknown” outcome category, the uncertainty about outcomes was captured by rating the likelihood of different outcomes. For more information, see Schenck et al. (2002).

We disagree that the plant BE analysis resulted in faulty and illogical conclusions because outcome E did not detect decreases in habitat quality. As noted in Schenck et al. (2002), the outcomes are appropriate for the scale of the analysis, which is programmatic, not site-specific. The availability of suitable habitat was considered, and for some species that currently have outcome E, the availability of suitable habitat may decrease during the planning period for some alternatives. The IDT acknowledges that this would not cause the outcome to drop below outcome E; suitable habitat would remain “highly isolated and exist at very low abundance”. The outcome would still accurately and logically describe the conditions for that species. Although no change in outcome may be detected, any change in viability for the species would be detected and captured in the determination of effects call.

One commenter suggests that the plant BE is inadequate because there is no explanation why all different alternatives would have so little effect on plant viability. In the analysis of alternatives, no viability risks emerged to sensitive plant species because suitable habitat conditions sufficient for species viability would be maintained by all alternatives through general Forest-wide management direction and management direction for specific MAs. See the plant BE for detailed analysis.

A comment suggests that the plant BE is inadequate because it does not address the positive effect of wilderness designation on sensitive plants through creation of areas less prone to NNIS invasion. The IDT acknowledges this as a potential effect of wilderness designation. However, because the effect would be very minor, it was not analyzed. Only a small amount of habitat would be protected from NNIS invasion by wilderness designation (up to 0.9% in Alternatives B and D on the Chippewa and up to 2.7% in Alternative D on the Superior). See the NNIS analysis in EIS chapter 3.3.5.c for further discussion.

PC# 2.6.6-19
Public Concern: The Chippewa and Superior NFs should address the impacts of logging on sensitive plants.

-To include discussion of impacts on populations at site and landscape levels.
-To include discussion of fragmentation and edge effects of tree harvest.

Agency Response:
The effects of logging on sensitive plants were considered in this programmatic effects analysis. The types of direct and indirect effects of logging are described in the plant Biological Evaluation (BE) (USDA Forest Service 2004e) in the Affected Environment, and these effects are considered in the BE and in the Environmental Consequences. Additionally, different types and amounts of harvest were modeled for different forest habitats, and the model outputs were one factor that was considered in determining the distribution and abundance of sensitive plant habitat and, consequently, the sensitive plant outcomes. EIS Chapter 3.2.2 (Forest Spatial Patterns) and Chapter 3.3.2 (Spatial Patterns – MIHs) address fragmentation and edge effects resulting from timber harvest. Forest Plan management direction O-WL-1-3, O-WL-17 (Chippewa), O-WL-18 (Superior) O-WL-30 (Superior), O-WL-31 (Chippewa), S-WL-5, S-WL-7 (Chippewa), S-WL-9 (Superior), and G-WL-11 would provide for the conservation and maintenance of sensitive plants and their habitat.

PC# 2.6.6-20
Public Concern: The Final EIS should provide an analysis of shrub and herb layers of Landscape Ecosystems and the Plans should provide priorities for management of non-tree vegetation.

Agency Response:
The shrub and herb layers vary widely across each Forest in response to landform, soils, hydrology, disturbance history, and many other factors. The Forest Plans do provide management guidance for the shrub and herb layers; see D-VG-6, O-VG-8, 9 (Chippewa) and O-VG-7, 8 (Superior). Specific guidance for commercially important special forest products is provided in Superior's Plan with D-VG-2, G-VG-7-11 and Chippewa's Plan D-VG-2, G-VG-2-6. The EIS addresses the shrub and herb layer in Chapter 3.2.1.b Indicator 4 – Use of Management Treatments Which Increase Within-stand Complexity. Although not displayed in the EIS, the acres of non-forest vegetation (for example, bogs, shrub swamps, marshes) are available for review from the project file; these vegetation types were not modeled because their acreages are not expected to change over time.

PC# 2.6.6-21
Public Concern: The Final EIS and Plans should analyze impacts on and conservation management for neotropical migratory birds (NTMB).

-Because neotropical migratory bird habitat has declined because of timber harvesting and populations of several species have declined.
-Because the boreal forests of Minnesota are critical to the survival of many wood warblers and other neotropical migrants.
-To comply with the Migratory Bird Treaty Act and Executive Order of January 11, 2001 requirements to reduce or eliminate "takes" of migratory birds and incorporate analysis of effects on migratory bird impacts into Final EIS.

Agency Response:
Habitat requirements of neotropical migratory birds (NTMB) vary considerably between species. As suggested, some species such as black-throated blue warbler, require large expanses of mature forest. However, others such as the golden-winged warbler, require shrub and young regenerating forest habitats. Other species, such as the

olive-sided flycatcher and bay-breasted warbler, thrive in different types of disturbed forest. Vegetation management directly affects NTMBs, but activities affect different species differently. Vegetation management provides new habitat and benefits for some species while displacing and adversely affecting others. The Draft and Final EISs do not address the effects of vegetation management on every NTMB species. However, the range of conditions for the group collectively is reflected in the analysis of Management Indicator Habitats (Chapter 3.3.1). We have added planning record information on status and management indicator habitat association of all resident and migratory birds to Appendix D of the Final EIS (Tables DEIS-3 and -8-10). There is a wide variation in vegetative conditions between the alternatives, each one benefiting some NTMB species and not others. All of the alternatives provide a representation of habitats that provides for the viability of all NTMBs. As for the species mentioned as experiencing severe declines, olive-sided flycatcher, black-throated blue warbler, and bay-breasted warbler, there is no regional data suggesting that there is any population trend. These species are Regional Forester Sensitive Species, and are therefore analyzed specifically in the Biological Evaluation (USDA Forest Service 2004e).

The Regional Forester selected Alternative E because he felt this alternative struck the right balance between the many demands and uses of the Superior and Chippewa National Forests. Habitat conditions will change from the current condition in response to the needs for change (section 1.3.3 Need for Change in Management Direction), however other forest resources and objectives needed to be considered in making this selection.

The Migratory Bird Treaty Act, and Executive Order of January 11, 2001 have been interpreted to include the direct killing of protected bird species, and was not intended to include forest and range resource management activities.

PC# 2.6.0-5
Public Concern: The Chippewa and Superior NF Plans should use neo-tropical migratory birds (NTMBs) as a sensitive class of species for which to manage.

Agency Response:
The EIS analyzes the effects of the Forest Plans on neo-tropical migratory birds such as the Connecticut warbler and bay-breasted warbler in EIS Chapters 3.2.2 and 3.3.2 which deal with forest spatial patterns. The preferred alternative of the Chippewa NF Plan would make long-term improvements relative to current conditions to the spatial pattern of habitats such as the amount of interior forest, the size and amount of mature upland forest patches, and the amount of forest edge habitat. These improvements preclude the need to track neo-tropical migratory birds as Management Indicator Species. On the Superior NF, the Forest as a whole will be improving with respect to spatial patterns for these species. Improving spatial patterns will occur in Zones 1 and 2 as well as the BWCAW, but decreases in indicators for spatial patterns will occur in Zone 3. Both Forests intend to continue monitoring neo-tropical migrants to relate population levels to habitat conditions (Table MON-4f)

PC# 2.6.6-22
Public Concern: The Superior NF needs to ensure viability of *Astragalus alpinus* near Isabella through ATV or ORV policies that better protect this species' habitat.

Agency Response:
The *Astragalus alpinus* habitat near Isabella is designated as a Unique Area (MA 8.3) in the Forest Plan. Cross country travel with snowmobiles and ATVs will be prohibited in MA 8.3 by S-UB-5.

PC# 2.6.6-23
Public Concern: The Chippewa and Superior NFs should complete necessary surveys and inventories of species and their habitats.

Agency Response:
The Regional Forester selected a strategic approach for managing the Chippewa NF and Superior NF. A key to this strategic approach is coarse filter management. Objectives, standards, and guidelines for wildlife such as O-WL-1-3, O-WL-17 (Chippewa), O-WL-18 (Superior) O-WL-30 (Superior), O-WL-31 (Chippewa), S-WL-5, S-WL-7 (Chippewa), S-WL-9 (Superior), and G-WL-11 establish the management direction necessary for maintaining the viability of plant and animal species in the planning area. This direction does not include specific guidance for individual species or habitat surveys and inventories. However, such data will be gathered when necessary as determined during implementation of the Forest Plan.

PC# 2.6.6-24
Public Concern: The Chippewa NF Plan should establish management direction for surveying and mitigating for sensitive, State-listed, and tribally-listed species.

Agency Response:
Objective O-WL-2 discusses the management of desired conditions and mitigation of impacts for all species, including sensitive, State-listed, and tribally listed species. Specific objectives and standards and guidelines are also provided for species that have been determined that the coarse filter management objectives are not adequate to provide the desired conditions. Together, the coarse filter objectives and fine filter direction for certain species is anticipated to provide for the desired population levels of all species.

Species surveys are a function of project NEPA analyses. Surveys are needed when specific data are lacking that are required to complete an effects analysis. The need for surveys would vary with the type and context of the proposed project, its location, and association with a given species, along with current knowledge and information on the species and project area. The Forest Plan does not have any specific direction that would determine if and when surveys should be conducted. That is determined by the need for information to conduct an effects analysis under NEPA.

PC# 2.6.6-25
Public Concern: The Chippewa and Superior NFs should include State listed species on the Regional Forester sensitive species list.

Agency Response:
State-listed species and their rankings were considered during the Forest Plan revision process, and several such species were either added or dropped during the Regional Forester's Sensitive Species maintenance update that occurred on October 20, 2003. The Chippewa NF and Superior NF will consider new information during Forest Plan implementation as it becomes available.

PC# 2.6.6-27
Public Concern: The Final EIS and Chippewa NF Plan should have separate sections for botanical resources.

Agency Response:
Botanical resources are addressed in EIS chapter 3.3 Wildlife Habitat to help streamline the document and group resources with similar issues and concerns. Please note the definition of "wildlife habitat" and "wildlife" in the first paragraph of Chapter 3.3.

PC# 2.6.6-28
Public Concern: The Superior NF should analyze habitat for boreal owl in Boundary Waters Canoe Area Wilderness (BWCAW).

> **-To determine whether the species would still be of viability concern if BWCAW habitat is considered.**
> **-To address bias of Forest Service biologists for species such as the boreal owl that prefer old growth forests.**

Agency Response:
Boreal owl habitat within the BWCAW was considered during the analysis of effects within the Draft EIS (page 3.3.5-10) and within the Biological Evaluation (USDA Forest Service 2004e) for the Boreal Owl. While the BWCAW does provide habitat for the Boreal owl, habitat outside of the wilderness will be impacted due to reductions in upland nesting habitats and habitat fragmentation. These impacts outside of the wilderness effect overall well-distributed, forest-wide habitat.

When analyzing impacts to wildlife and wildlife habitat, the BWCAW was considered in the overall effects analysis. Alternative Landscape Ecosystem objectives were developed for all vegetative growth stages (age classes). These objectives were based on varying degrees of representation of the range of natural variation and included age-class contributions from the wilderness. Landscape Ecosystems have different degrees of representation in the wilderness and therefore some ecosystems are more affected by the wilderness than other ecosystems. In general, when analyzing the entire forest including the wilderness, the old age classes are currently underrepresented when compared to future objectives. This under representation creates the need to emphasize those wildlife species requiring older forests for the purpose of assuring maintenance of viability.

PC# 2.6.6-29
Public Concern: The Superior NF should modify the Plan to improve habitat for boreal owls.

> **-To address decreases in mature upland forest in proximity to large patches of lowland mature conifer, loss of white pine, and increase in fragmentation (in the first two decades).**
> **-To address decline of prey populations after clearcutting.**
> **-To consider establishing Habitat Conservation Areas and to establish 500-acre or half-mile nest buffers.**

Agency Response:
It was determined that while proposed management activities within Alternative E may impact individuals, they were not likely to cause a trend toward federal listing or loss of viability for the boreal owl (DEIS Table WLD-17, now renumbered to Table WSS-2 in the Final EIS). Only alternatives A and C created a risk of a loss of viability.

Upland mature conifer forest increases in decades 2 and 10. This is also true for mature and old spruce/fir types (pages 3.3.1-22 and 23, DEIS).

The EIS analyzed a variety of alternatives with different outcomes and varying strategies for protection of sensitive species. The Regional Forester believes that the selected alternative adequately protects the boreal owl.

PC# 2.6.6-30
Public Concern: The Chippewa and Superior NFs should protect four-toed salamanders and their habitat.

Agency Response:
Forest Plans provide protection for four-toed salamanders and their habitat through management direction specific to four-toed salamanders (O-WL-19) and through more direction also more widely applicable to other sensitive species (O-WL-1-3, O-WL-17, S-WL-5, and G-WL-11). In addition the salamander's habitat is addressed through coarse-filter management objectives for vegetation and management indicator habitats in Chapter 2 forest-wide desired conditions, objectives, standards and guidelines and Landscape Ecosystem objectives. We believe that the strategic framework exists within the Forest Plans to address potential impacts. A key to this strategic approach is coarse filter management. For some species, fine filter management was developed because of limited population numbers or because of the expected regularity of management activities that typically have adverse impacts on potential breeding habitats. However, because the four-toed salamander distribution on the forest is poorly understood, it was felt that the existing coarse filter direction would be most appropriate for protecting this species. This direction does not include specific guidance for individual species or habitat surveys and inventories. However, such data will be gathered when necessary as determined during implementation of the Forest Plan. Protection offered by guidelines such as G-TM-6 and standard S-WL-5 would maintain populations of this species.

The Harding (1997) reference was considered in the Species Viability Evaluation (SVE) process, where it was considered in the species data collection form for four-toed salamander. SVE panel information was considered in the sensitive animal Biological Evaluation (USDA Forest Service 2004e).

PC# 2.6.6-31
Public Concern: The Chippewa and Superior NFs should provide staff with guidance on rare species issues pertaining to abundant species on the fringe of their range vs. rare species that are locally abundant.

Agency Response:
The various different types of species distribution patterns are considered in the analysis of Regional Forester's Sensitive Species, for example in EIS Chapter 3.3.5.a or in the sensitive plant BE Table 3. Biology staff are aware of these distribution patterns.

PC# 2.6.6-32
Public Concern: The Plans should establish population goals for all sensitive species.

Agency Response:
The Regional Forester adopted a strategic approach to the Forest Plans, and an important part of this approach for management of plant and animal species and their habitats is coarse filter/fine filter management. Using this approach, population goals are not required. Instead, lands are managed to provide suitable habitat for a variety of species distributed across the landscape. Monitoring to detect population trends is used to alter management when necessary (Forest Plan Table 4-f) to provide adequate suitable habitat. However, for some species, fine filter management was developed because of limited population numbers or because of the expected regularity of management activities that typically have adverse impacts on potential breeding habitats. Again, monitoring to detect population trends for fine filter species would be used to alter management when necessary to provide for species viability. The coarse filter/fine filter approach may involve sampling to determine population trends, but does not necessarily require Forest-wide population goals for sensitive species.

PC# 2.6.6-33
Public Concern: The Final EIS should publish credentials, research funding sources, and financial and conflict of interest disclosures for all wildlife panel experts.

Agency Response:
We do not believe that research funding sources and financial disclosures are relevant information with regard to Species Viability Evaluation (SVE) expert panel participants. Experts were chosen for their "reputations for objectivity, initial lack of local bias, and for active transfer of required skills for panel participation ("people skills") in addition to technical expertise" (USDA Forest Service 2000c). Species experts were located using local professional networks, government agencies, academic facilities, national institutes, wildlife or natural history societies. Published literature was considered as well, however many of the participants did not have published work. Many species experts are recognized by their peers for being the most knowledgeable individuals on a particular species in this region, though their credentials (e.g. academic degrees, number of published papers, professional affiliations) may not reflect this knowledge. We believe that the selection process considered a broad enough array of viewpoints and expertise to level any bias held by an individual expert. The structure of the expert panels also minimizes the effect of individual bias.

PC# 2.6.3-9
Public Concern: The Chippewa and Superior NF Plans should include additional management to sustain three-toed woodpecker.

Agency Response:
We believe that the strategic framework exists in the Forest Plan to at least maintain minimum viability of this species. O-VG-11,12 (Chippewa) and O-VG-10,11 (Superior) provide vegetation objectives that increase the amount and variety of prescribed fire to provide habitat for wildlife that require burned vegetation such as the three-toed woodpecker. They also provide direction to retain an adequate representation of naturally disturbed forest that is not salvaged. This would include insect affected stands.

The Superior Forest Plan also provides direction specific to three-toed woodpecker (O-WL-23-24 and G-WL-17-19). The guidelines include protection of nest sites until the young have fledged and retaining 6-10 jack pine per acre in ecologically appropriate areas. They also provide guidance for maintaining adequate amounts of undisturbed nesting habitat.

PC# 2.6.3-10
Public Concern: The Chippewa and Superior NF Plans should include additional management to protect boreal owl nesting sites.

Agency Response:
S-WL-6 has been revised to increase the buffer zone to 300 feet. We considered the information in the Birds of North America (Hayward, G. D., and P. H. Hayward. 1993. Boreal Owl (*Aegeolus funereus*). In The Birds of North America, No. 63. A. Poole and F. Gill, (eds.). Philadelphia: The Academy of Natural Sciences; Washington, D.C.: The American Ornithologists' Union.). We also considered information in *Final Report to USDA-Forest Service, Superior National Forest - Boreal Owl: Its Habitat and Prey in the Superior National Forest* (G.J. Niemi, PI. 2003. Center for Water and the Environment
Natural Resources Research Institute, University of Minnesota, Duluth, MN. 74 pp.) to increase the buffer to 300 feet. Researchers have found boreal nests in a variety of forest patch conditions. Some nests have been located within the center of large mature tracts while other nests have found close to habitat edges. A 300-foot buffer provides at least minimal protection to the nest tree to prevent nests from blowing over during high winds or as a

result from forest management activities. We also believe that the strategic framework exists in the Forest Plan to provide further protections if site level project planning indicates that a greater buffer is warranted. Other management direction is also applicable to the boreal owl to ensure that the Superior NF maintains at least minimum viability of this species and compel us to examine such site level conditions. These include, but are not limited to: O-WL-1, 2, 3, 18, and 20, S-WL-5, G-WL-11, G-WL-12..

At the coarse filter landscape level, additional nesting habitat would become available as aspen forest or the aspen component ages and contributes to meeting other forest type objectives. These include Forest Plan Chapter 2 management direction for vegetation and Landscape Ecosystem objectives for vegetation forest types, forest ages, tree components, and management indicator habitats.

PC# 2.6.4-41
Public Concern: The Plans should provide objectives for old growth northern hardwood forest because of its importance to sensitive ferns.

Agency Response:
We believe that we are accomplishing what you propose in northern hardwood forest types. The species of ferns that you list are also found in northern hardwood classified as "mature" in addition to old growth or multi-aged forest (Planning Record). We recognize that older forest conditions may be more beneficial for these species. For the Superior, the Landscape Ecosystem Objectives for the Sugar Maple LE (Chapter 2, Forest-wide Management Direction), where much of the habitat for these species likely exists on the Superior, shows a long-term objective of having 75% of this LE in age classes 50 years or older, with 50% at 100 years or older. Total amounts of habitat (50 years or older) in Decades 1 and 2 do decrease, largely due to decreases in the 50-99 year old age class. Amounts of forest greater than 100 years old increase in each decade examined. The long-term objective for amounts of northern hardwood forest type, forest-wide, would remain at the current 4% (Table FAC-27, DEIS The mid-point of RNV value for the Sugar Maple LE for the Superior also equals 4%). Amounts of the northern hardwood forest type in the Sugar Maple LE would increase (Forest-wide objectives for the Sugar Maple LE).

Similarly on the Chippewa, forest cover greater than 80 years old in the Mesic Northern Hardwood LE, where most habitat for these species occur, increases from existing condition in each decade examined (Forest-wide Management Direction for the Mesic Northern Hardwood LE, Chippewa Forest Plan). Amounts in the 40-79 year old age class decreases from the existing condition. Forest-wide, the long-term northern hardwood forest type objective on the Chippewa National Forest would increase from the current 13% to 17% (Table FAC-26, DEIS).

In addition to these coarse filter habitat requirements, each forest would address fine filter requirements of the goblin fern (*Botrychium mormo*) through S-WL-6 (Superior) and S-WL-7 (Chippewa). On the Superior this would buffer known colonies with a 250 foot buffer. On the Chippewa, additional detail in this standard would maintain conditions that support this species in unoccupied habitat as well as occupied.

Other Species of Management Concern (2.6.7)

PC# 2.6.7-1
Public Concern: The Chippewa and Superior NFs should have public and scientific review of the Northern Goshawk report because the report is overly speculative and omits use of readily available knowledge.

Agency Response:

The "Species Profile and Effects Analysis Protocol for the Northern Goshawk on the Chippewa National Forest" (Williamson et al. 2001) was developed as a desk reference intended to provide a consistent approach to identifying, maintaining, or enhancing goshawk habitat on the Chippewa, and for analyzing potential effects of proposed management activities. It was used as an information source for the northern goshawk effects analysis in the Draft EIS. Williamson et al. (2001) is based upon the current literature for this species, opinions of species experts, local research, and Chippewa expertise. It includes citations of 23 pieces of literature or consultations with experts. Much of it is based on Boal et al. (2001), which is a rigorous, peer reviewed, and since published scientific study, primarily based on site specific data collected on the Chippewa National Forest and other areas of northern Minnesota. It is probably the most robust and credible research on northern goshawk home range and habitat use conducted in the eastern United States. Casson (1996) was an effects analysis for a project biological evaluation and was not intended to be a paper reporting scientific research. However, that document was peer reviewed by goshawk experts, including Richard Reynolds, who developed the analysis protocol used, among others. The results of that analysis have since been corroborated by the research findings of Boal et al. (2001), and by continued anecdotal evidence at known goshawk nesting sites in Minnesota. We believe that use of Williamson et al. (2001), as an information source in conducting the effects analysis, and hence, resulting in goshawk guidelines, is valid.

It is not clear what readily available knowledge the commenter is referring to as being omitted. We are familiar with published and unpublished goshawk research conducted elsewhere in the Lake States. We considered this information where applicable. However, in some cases, those studies were conducted on either small samples, on a population segment that makes it not comparable to Minnesota research (i.e., predominantly on females), using telemetry methods with higher error rates than Minnesota research (i.e., using ground telemetry methods), or are primarily anecdotal versus quantitative. The productivity data presented and the presumption that this is occurring in a landscape much different than that presented in Williamson et al. (2001) may be the information being referred to. However, this productivity data, along with other anecdotal information from known nesting territories, is consistent with Casson (1996), Williamson et al. (2001), and Boal et al. (2001). For instance, the Cass River goshawk territory that Casson (1996) concluded was marginally viable in terms of habitat suitability, has been inactive for the past 4 years, and has not fledged young since 1998, suggesting that habitat conditions at this territory are tenuous. This territory has approximately 38% of its foraging habitat in upland forest over 50 years old. Casson (1996) and Williamson et al. (2001) both estimated that a minimum of 40% is needed to maintain suitable habitat in a territory, while 60% was optimum, and 80% was the maximum. All of the territories discussed by the commenter (Winnie North Project) are within this range.

Thomas Erdman was involved in our Species Viability Evaluation expert panel for forest raptors. He and other Midwest raptor experts evaluated proposed Forest Plan conservation approaches and planning alternatives on the northern goshawk in addition to other raptor species. Robert Rosenfield was invited but was unavailable for this effort.

PC# 2.6.7-2
Public Concern: The Chippewa NF should provide data to support the viability need to maintain 30 – 40 pairs of goshawks.

Agency Response:
It is known that some goshawk populations are migratory and some are not. Telemetry data from Minnesota indicate that goshawks that reside and reproduce on the Chippewa and Superior National Forests are not migratory. They may travel greater distances during the winter to hunt, but they remain in northern Minnesota. They appear to be joined by migratory goshawks from further north during the winter months. Goshawk counts at Hawk Ridge reflect migratory populations further north. Their relationship with resident goshawks in Minnesota is unknown. Numbers of migrating goshawks appear to be cyclic on a 10-year cycle, presumably in response to prey cycles. However, the cycle peaks have become much smaller over the past 2 decades. During the peak in

1972, 5382 goshawks were counted, at the 1982 peak, 5819 goshawks were counted, in 1992, the peak count was 2247, and in 2000, the peak count was 1236. This indicates that besides being cyclic, migrating goshawk populations (at least those passing by Hawk Ridge) appear to be declining significantly. Erdman et al. (1998) looked at the relationship between hare and grouse cycles and resident goshawk productivity, not necessarily population numbers. In addition, breeding season prey studies in Minnesota (Smithers et al., 2003) indicate that resident goshawks are not hare and grouse obligates, and depend on red squirrels, a resident of mature forest habitats, as a primary prey source.

There is no demographic data to suggest that, "the loss of one goshawk nest on the Forest will lead to a lack of goshawk viability". The Draft EIS does not indicate that to be the case and it is not part of the analysis or a basis for any direction in the Forest Plan. Likewise, the Forest Plan does not suggest that 30-40 pairs of goshawks are necessary to maintain species viability. The Forest Plan does have a management objective (O-WL-32) of a minimum of 20-30 pairs. The commenter may have confused this objective with a minimum viable population number. The northern goshawk was selected to be a Management Indicator Species (MIS) for the Forest Plans. As such and under Federal regulations, population objectives must be set for each MIS. Population changes of an MIS are believed to indicate the effects of management activities on this species and other species that utilize similar habitats. The objective O-WL-32 meets the requirements of Federal regulations. Continued monitoring during the implementation of the Forest Plans will help determine if this or other objectives can be achieved.

PC# 2.6.7-3
Public Concern: The Chippewa and Superior NFs should perform a landscape-scale habitat assessment for known goshawk nest sites to enhance guidelines and increase public acceptance of management.

Agency Response:
The nesting territory landscape analysis being requested would have limited value. Rather than reflecting optimal, or desirable habitat conditions for goshawks, such an analysis would show the mean habitat conditions for known nesting territories. This would not necessarily reflect optimum habitat, and using the data provided by the commenter, it is clear that it would probably not reflect optimum habitat. Commenter's Table 1 shows that 39% of the Chippewa National Forest uplands are providing mature (Saw Timber) habitat. The mean representation of this habitat component in the Commenter's goshawk sample is 49%. This indicates that goshawks are using landscapes that provide more mature upland forest habitat than provided by the Forest on the average. Goshawks are attempting to maximize the amounts of mature forest in their home ranges. This does not mean that they have optimum amounts of this component, only that habitat selection favors more than is normally available

Rather than being inconsistent with goshawk habitat use figures presented, the management guidelines, and habitat parameters used in the effects analysis are validated by these figures. The habitat conditions in question, shown in the commenter's table under "Desk Reference", are only the foraging habitat conditions considered to be optimal. Looking at mature (Saw Timber) forest uplands, the desk reference also states that the lower limit is considered to be 40%. Clearly, in the sample of nesting territories used in this comment, all of the territories fall within this range of habitat conditions (the lowest amount being 41%). This is further anecdotal evidence that the habitat parameters used in the analysis are valid.

Although the commenter's discussion on percentages of habitat components vs. the desk reference are confusing, we do agree with the commenter that more young forest may provide better goshawk foraging habitat, particularly since some primary prey species benefit from young forest. However, since the data show that goshawks tend to maximize the amounts of mature forest in their home ranges, and telemetry data show that goshawks actually forage in mature forest, an increase in young forest at the expense of mature forest would not benefit goshawks. More young forest at the expense of "Pole Timber" habitat may likely improve goshawk foraging habitat, and

perhaps 40% young and 60% mature would be an ideal condition. However, since much of the mature forest is early successional forest types such as aspen and jack pine, they are temporal in nature and recruitment must occur for replacement over time. This makes the "Pole Timber" habitat component important for future mature forest habitat. Additionally, minimizing "Pole Timber" habitats to increase seedling/sapling forest without decreasing mature forest, would require the repeated regeneration of the seedling/sapling forest habitats. This would prevent the Forests from meeting their multiple use mandates and would not meet the objectives of the Forest Plan. Therefore, a balance is necessary between seedling/sapling, pole timber and saw timber habitat types that meets the mature timber habitat requirements, allows for replacement of the mature forest type, and allows mature forest to be regenerated to provide for the seedling/sapling type. The primary criterion for suitable foraging habitat is that mature forest needs to cover between 40% and 80% of the upland landscape, with 60% representing optimum conditions. Within that range, the seedling/sapling and pole timber categories need to be represented so that habitat conditions are sustainable over time.

PC# 2.6.7-4
Public Concern: The Chippewa and Superior NFs should include specific goshawk foraging area guidelines.

Agency Response:
The nesting territory landscape analysis being requested would have limited value. Rather than reflecting optimal, or desirable habitat conditions for goshawks, such an analysis would show the mean habitat conditions for known nesting territories. This would not necessarily reflect optimum habitat. The analysis parameters used in the DEIS analysis use a range of habitat conditions under which sustainable goshawk populations can exist, based on scientific literature, local research results, and local expertise.

The Proposed Forest Plan does not have any specific foraging area guidelines. Telemetry data has shown that foraging areas are highly variable, in both shape and size, dependant on specific landscape conditions. In addition, the data has shown that foraging areas can change from year to year within the same territory. Therefore, managing habitat conditions within arbitrary circles, or within some other designated area, is not necessarily serving to manage a given foraging area. Goshawk territories can change over time. Some territories may be abandoned and others established. The Proposed Forest Plan meets goshawk foraging habitat requirements generally, Forest-wide, through vegetative objectives as shown in Table DLP-3. For decade one, upland vegetation is expected to be 9% seedling/sapling, 48% pole timber, and 44% saw timber. Although this will result in areas that will be suitable as goshawk foraging, and areas that will not be suitable, it is expected that suitable foraging habitat would be provided for the objective of 20-30 breeding pairs.

Regarding nest site and territory activity, we typically analyze habitat requirements for goshawks where a nest structure continues to exist. Telemetry data for goshawks in Minnesota shows that a goshawk pair can be in a territory and not be nesting. Additionally, alternative nest sites are often used and may not be known by managers. Either of these situations may lead to the impression that a nest site is inactive. Anecdotal information from other locations indicates that seemingly inactive territories can become active after 5 or more years of inactivity. This indicates two possible situations: first, a breeding pair or a member of an original pair may be returning to a territory; second, habitat for one breeding pair continues to be favorable habitat for other breeding pairs. We believe that this information shows that caution should be used when considering the inactivity of goshawk nest sites and territories. The strategic nature of the Forest Plans compels us to examine such information at the project level.

PC# 2.6.7-5
Public Concern: The Chippewa and Superior NFs should count patches of mature forest less than 100 acres toward the landscape goal because goshawks nest and forage in patches of that size.

Agency Response:
There is no proposed management direction associated with the 100-acre patch criterion. The concept of 100 acres patches was used in the Draft EIS as an analysis parameter. Although goshawks are known to nest in patches smaller than 100 acres, such information lacks the context of landscape conditions. Studies of goshawks in Minnesota (Boal et al. 2001) determined that considerable mortality occurs in adult goshawks as a result of predation by red-tailed hawks and great horned owls. These two predators are favored by fragmented forest habitats while goshawk security from these predators, decreases. We believe that using a patch size of 100 acres provides a reasonable measure of goshawk habitat fragmentation and gives a useful picture of the suitability of landscape conditions for goshawks. The consideration of smaller habitat patches is reflected in Goshawk Indicator 1: Mature Forest Availability.

PC# 2.6.7-6
Public Concern: The Final EIS should consider effects of potential natural disturbances on goshawk habitat indicators and possible cumulative effects.

Agency Response:
Vegetative analyses in the DEIS anticipate that active management would replace much of the natural disturbance. It is recognized that there would be some additional natural disturbance effects, but this is expected to be minor. Large catastrophic disturbances, such as the 1999 blow down in the Boundary Waters Canoe Area Wilderness cannot be projected and analyzed. These large disturbances would need to be evaluated on their own and would likely trigger a Forest Plan amendment or revision.

PC# 2.6.7-7
Public Concern: The Chippewa and Superior NFs Plans should provide goshawk management direction.

-To maintain goshawk viability
-To provide goshawk population goals
-To provide appropriate habitat.
-To incorporate the goshawk desk reference.
-To include specific goshawk foraging area guidelines.

Agency Response:
Proposed Plan S-WL-4 (Chippewa) has been renumbered in Final Plans to S-WL-8 (Chippewa) and S-WL-5 (Superior) has been renumbered to S-WL-10. Proposed Plan G WL-13 has been renumbered to G-WL-24 (Chippewa) and G-WL-22 (Superior).

The proposed Forest Plans provide both population objectives and management direction to manage and protect northern goshawk populations. Establishment of minimum viability population levels is difficult and complex to achieve. It is more constructive to develop proactive population objectives that reflect the contributions of goshawk populations to overall forest ecosystem diversity and health. On the Chippewa, this population objective is between 20 and 30 breeding pairs.

The Forest Plans have standards and guidelines that manage nesting sites and post-fledgling sites. Standard S WL-8 (Chippewa) and S-WL-10 (Superior) manages nesting sites within a 50-acre area. G-WL-24 (Chippewa) and G-WL-22 (Superior) manage post-fledgling areas within a 500-acre area. Although nest site management includes only 50 acres, these 50 acres are imbedded in the 500 acres post-fledgling area. In addition, although there is no specific direction to manage for them, alternate and replacement nest sites are provided within the 500-acre post-fledgling area. In effect, having six 30-acre potential nest sites (totaling 180 acres) in a post-fledgling

area of 500 acres, of which at least 60% is in suitable habitat (providing at least 300 acres of habitat), exceeds the recommendations of the referenced University of Alberta Goshawk Team. Aspen and birch forest typically needs to be at least 50 years old to be considered suitable habitat within the post-fledgling area. However, aspen and birch forest between 25 and 50 years old can be considered suitable, only if field verification demonstrates specific stand conditions are equivalent in both horizontal and vertical structure to a conventional 50-year old stand of that forest type.

There is no specific management direction for management of goshawk foraging areas. Telemetry data has shown that foraging areas are highly variable, in both shape and size, dependant on specific landscape conditions. In addition, the data has shown that foraging areas can change from year to year within the same territory. Therefore, managing habitat conditions within arbitrary circles, or within some other designated area, is not necessarily serving to manage a given foraging area. Goshawk territories can change over time. Some territories may be abandoned and others established. The Proposed Forest Plan meets goshawk foraging habitat requirements generally, Forest-wide, through vegetative objectives as shown in Table DLP-3. For decade one, upland vegetation is expected to be 9% seedling/sapling, 48% pole timber, and 44% saw timber. Although this will result in areas that will be suitable as goshawk foraging, and areas that will not be suitable, it is expected that suitable foraging habitat would be provided for the objective of 20-30 breeding pairs.

The Regional Forester considered a range of planning alternatives (Appendix G, Final EIS) that examined various levels of forest ages and ranges of conditions that benefited wildlife species in different ways (section 3.3 of the Final EIS). In some alternatives, greater amounts of more desirable goshawk habitat were provided than in others (Appendix G, Final EIS). The Regional Forester selected Alternative E because he felt this alternative struck the right balance between the many demands and uses of the Chippewa and Superior National Forests. Goshawk foraging habitat conditions will change from the current condition in response to the needs for change (section 1.3.3 Need for Change in Management Direction), however other forest resources and objectives needed to be considered in making this selection.

PC# 2.6.7-16
Public Concern: The Chippewa and Superior NFs should convert more forest type in the first decade to increase preferred goshawk forest type.

Agency Response:
The representation of forest types on the landscape is not the primary factor determining goshawk habitat conditions. Some of the best habitat appears to be older aspen forest, in many cases. The primary factor is forest age composition and arrangement on the landscape.

We are unaware of any data related to habitat conditions influencing interactions between individuals. It is true that fragmented habitats become more risky for goshawks, particularly when hunting and transporting prey items to the nesting site. Impacts of fragmentation and isolation of mature forest patches on individual interactions is less clear.

The Regional Forester considered a range of planning alternatives (Appendix G, Final EIS) that resulted in various amounts and quality of goshawk habitat. Tables WLD-19-22 in the Draft EIS, now renumbered to Table WNG-1-4 in the Final EIS) show the range of habitat conditions considered. In some alternatives, goshawk habitat conditions improve fairly rapidly, while in others, habitat recovery is delayed. The Regional Forester selected Alternative E because he felt this alternative struck the right balance between the many demands and uses of the Chippewa and Superior National Forests. Forest age and species diversity as they relate to goshawk habitat will change from the current condition in response to the needs for change (section 1.3.3 Need for Change in Management Direction), however other forest resources and objectives needed to be considered in making this selection.

PC# 2.6.7-17
Public Concern: The Plan should include standards and guidelines that use the best science and are consistent with other regions of the USFS supporting goshawk populations.

Agency Response:
Proposed Plan S-WL-4 (Chippewa) has been renumbered in Final Plans to S-WL-8 (Chippewa) and S-WL-5 (Superior) has been renumbered to S-WL-10. Proposed Plan G WL-13 has been renumbered to G-WL-24 (Chippewa) and G-WL-22 (Superior).

The Forest Plans have standards and guidelines that manage nesting sites and post-fledgling sites. Standard S-WL-8 (Chippewa) and S-WL-10 (Superior) manages nesting sites within a 50-acre area. G-WL-24 (Chippewa) and G-WL-22 (Superior) manage post-fledgling areas within a 500-acre area. Although nest site management includes only 50 acres, these 50 acres are imbedded in the 500 acres post-fledgling area. In addition, although there is no specific direction to manage for them, alternate and replacement nest sites are provided within the 500-acre post-fledgling area. In effect, having six 30-acre potential nest sites (totaling 180 acres) in a post-fledgling area of 500 acres, of which at least 60% is in suitable habitat (providing at least 300 acres of habitat), exceeds the recommendations of the referenced University of Alberta Goshawk Team. Aspen and birch forest typically needs to be at least 50 years old to be considered suitable habitat within the post-fledgling area. However, aspen and birch forest between 25 and 50 years old can be considered suitable, only if field verification demonstrates specific stand conditions are equivalent in both horizontal and vertical structure to a conventional 50-year old stand of that forest type.

The Forest Plans have no specific management direction for management of goshawk foraging areas. Telemetry data has shown that foraging areas are highly variable, both in shape and size, dependant on specific landscape conditions. In addition, the data has shown that foraging areas can change from year to year within the same territory. Therefore, managing habitat conditions within arbitrary circles, or within some other designated area, is not necessarily serving to manage a given foraging area. Goshawk territories can change over time. Some territories may be abandoned and others established. Therefore, it may be more practical to provide suitable foraging habitat over a larger landscape scale, rather than managing for specific nesting territories. The Forest Plans meet goshawk foraging habitat requirements generally, Forest-wide, through vegetative objectives as shown in Table DLP-3. For decade one, upland vegetation is expected to be 9% seedling/sapling, 48% pole timber, and 44% saw timber. Although this will result in areas that will be suitable as goshawk foraging, and areas that will not be suitable, it is expected that suitable foraging habitat would be provided for the objective of 20-30 breeding pairs.

This approach may provide more flexibility for both goshawks and forest managers, and may be more responsive to the dynamics of a constantly changing forest ecosystem.

The Regional Forester considered a range of planning alternatives (Appendix G, Final EIS) that examined various levels of forest ages and ranges of conditions that benefited wildlife species in different ways (section 3.3 of the Final EIS). In some alternatives, greater amounts of more desirable goshawk habitat were provided than in others (Appendix G, Final EIS). The Regional Forester selected Alternative E because he felt this alternative struck the right balance between the many demands and uses of the Chippewa and Superior National Forests. Goshawk foraging habitat conditions will change from the current condition in response to the needs for change (section 1.3.3 Need for Change in Management Direction), however other forest resources and objectives needed to be considered in making this selection.

The Forest Plans do have standards and guidelines that manage nesting sites and post-fledgling sites. S-WL-8 (Chippewa) and S-WL-10 (Superior) manages nesting sites within a 50-acre area. G-WL-24 (Chippewa) and G-WL-22 (Superior).manage post-fledgling areas within a 500-acre area. Although nest site management includes only 50 acres, these 50 acres are imbedded in the 500 acres post-fledgling area. In addition, although there is no

specific direction to manage for them, alternate and replacement nest sites are provided within the 500-acre post-fledgling area. In effect, having six 30-acre potential nest sites (totaling 180 acres) in a post-fledgling area of 500 acres, of which at least 60% is in suitable habitat (providing at least 300 acres of habitat), exceeds the recommendations of the referenced University of Alberta Goshawk Team.

PC# 2.6.7-18
Public Concern: The Chippewa and Superior NFs should define objectives for goshawk populations and subsequent monitoring.

Agency Response:
Superior Proposed Plan O-WL-33 has been renumbered in the Final Plan to O-WL-31. Chippewa Proposed Plan O-WL-37 has been renumbered in the Final Plan to O-WL-32.

The number of breeding goshawk pairs is not necessarily the number of active nesting territories in a given year. The population objective (O-WL-32 [Chippewa] and O-WL-31 [Superior]) for the northern goshawk was developed by roughly examining the maximum potential number of goshawk foraging areas that could be held within each Forest and adjusting this potential downward to account for land area in non-habitat and also to account for other uses of the Forests. It is well known that not all breeding pairs nest every year, so having 9 active nesting sites does not reflect the number of breeding pairs occupying the Forest. The commenter brings up a good point about establishing some criteria on what constitutes a breeding pair for monitoring purposes. Monitoring active nests may not provide a reasonable measure of the number of breeding pairs being supported. Goshawk monitoring requirements are displayed in Forest Plans Chapter 4, Table MON-4. Basically, the requirement for goshawk monitoring will involve measuring population trends and habitat conditions, and evaluating the relationship between the two measurements. The actual population monitoring technique will be developed at a later time. Criteria based on some measurement of recently active territories will be considered in development of the technique. Habitat monitoring will involve measuring the vegetative composition of nesting and post-fledgling areas, and use of vegetative condition data for the Forests.

The northern goshawk is a Management Indicator Species (MIS) as well as a Regional Forester Sensitive Species. As a MIS, the goshawk objectives O-WL-32 (Chippewa) and O-WL-31 (Superior), are designed to provide habitat for a larger number of species under the coarse filter concept, thereby contributing to meeting the General Wildlife Objective (O-WL-1) of sustaining viable populations of native and desired non-native species. Population objectives are developed for MIS to meet Federal Regulations (36 CFR 219.19). Although it may appear that the goshawk is being used to bias forest management, goshawk habitat requirements provide a good landscape basis for providing habitats for a large variety of forest species. The LE based forest vegetation objectives do compel us to manage the National Forests to meet forest type and age objectives. These would be met primarily through timber management activities.

PC# 2.6.7-21
Public Concern: The Plans should address the importance of early successional habitat patches for goshawk prey species.

Agency Response:
Proposed Plan G WL-13 has been renumbered to G-WL-24 (Chippewa) and G-WL-22 (Superior).
The provision of goshawk prey can best be described as a combination of prey abundance (as pointed out in the comment) and prey accessibility. In other words, there needs to be ample numbers of a prey species, but the goshawk needs to be able to capture the prey for it to be of use. Many goshawk prey species, such as ruffed grouse and snowshoe hare, are produced in early successional habitats. However, research repeatedly demonstrates that goshawks hunt in predominately mature and older forest. Boal et al. (2001) found that goshawk

foraging habitat in Minnesota is also characterized as having higher levels of structural complexity, such as snags and down woody material. So, suitable habitat for goshawks is a combination and interspersion of both young, early successional, and mature and older forest habitats.

The importance of young, early successional forest is discussed in the response to Comment PC# 2.6.7-3. It is recognized that more seedling/sapling habitat may benefit goshawk habitat, but as the preponderance of research data, including local telemetry data (Boal et al. 2001) show, goshawks fail to sustain breeding territories when the amount of mature forest habitat in the matrix drops below a threshold. Data indicate that this threshold is around 40%, particularly in Minnesota.

In addition, Breeding season prey studies in Minnesota (Smithers et al. 2003) indicate that the most frequently captured prey is red squirrels (31% of prey items), a species associated with older coniferous forest. In contrast, ruffed grouse constituted 5% of prey items in this study. From a biomass perspective, this study concluded that the most important prey items were snowshoe hare (27% of the biomass) and red squirrels (25% of the biomass), while ruffed grouse was of less importance (12% of the biomass). During the course of this study, snowshoe hares were experiencing a near population peak, and ruffed grouse were near a population low. The study was a breeding period study, and does not reflect winter food items, which could be very different. The point is, not all important prey items for goshawks are produced in early successional habitats. Although early successional forest is recognized as an important component of goshawk habitat, the amount and distribution of mature forest on the landscape is considered the predominant parameter in defining suitable habitat.

PC# 2.6.7-24
Public Concern: The Plans should identify quantifiable and measurable management direction for white pines.

> **-Because by definition in the Draft EIS an "Objective" is measurable.**
> **-Because impacts can be analyzed and costs can be calculated only if objectives for planting are quantified.**
> **-Because without measurable objectives environmental impact cannot be determined, white pine is a management indicator species, the Chippewa and Superior NFs play a lead role in white pine management in Minnesota, and measurable objectives bring resources and focus necessary for recovery.**

Agency Response:
The LE based vegetation composition and age objectives do provide measurable objectives for given time periods (by decades 1 and 2) for a given Landscape Ecosystem for a forest type, including white pine. The percentages listed translate into acre objectives that compel the Forests to take action to meet those objectives. The directional objectives in the context of LEs for tree species diversity would also compel actions to move in that direction. Increasing white pine on the landscape would be accomplished by achieving the forest-wide objective and LE specific objectives to increase white pine. Project level analyses and implementation of the Forest Plans would determine exactly where pine would be placed and what methods would be used to achieve the objectives. These methods could include mechanical site preparation and natural seeding, use of fire, or planting. Analysis of effects for strategic directions in the Forest Plans is in the Final EIS for forest composition and structure, Chapter 3.2.1.

PC# 2.6.7-25
Public Concern: The Plans should quantify objectives for acres (rather than percentage) of white pine cover type Decade 1 and for acres with 1,000 plus stems white pines per acre.

AND

PC# 2.6.7-28
Public Concern: The Plans should establish or increase quantitative and measurable management direction for white pine underplanting in partial cuts.

-Including establishing a Forest-wide standard for 20,000 additional acres of planting in Decade 1 with 1,000 white pine per acre.
-To do a more adequate job of planting white pine as a component and make better use of uneven-aged regeneration methods.

Agency Response:
The Chippewa and Superior National Forests recognize the importance of white pine in all of the Landscape Ecosystems of northern Minnesota. For this reason, some adjustments were made to increase the amounts of white pine restoration in the first two decades. The Landscape Ecosystem Objectives section of both proposed Forest Plans displays the long term goal for white pine as a forest type along with the projected amounts expected to occur after decade one and decade two of implementation. Nearly all of the upland Landscape Ecosystems show increases in white pine as a forest type. Additionally, all upland Landscape Ecosystems on both Forests show an increase in white pine as a component of other forest types. Tables DPL-2 (Chippewa) and NSU-2 (Superior) show the Forest-wide Vegetation Composition Objectives for the two Forests. Vegetation Desired Condition D-VG-6 and Objectives O-VG-7, 9 (Chippewa) and O-VG-6, 8 (Superior) specify that restoring and retaining tree species diversity, including white pine, is an expected outcome of forest management activities. Because of the recognized importance of white pine, it will continue to be a priority tree species for retention during timber harvest.

The Forest Plans utilize percentages in order to set a strategic direction for changes in forest cover. Setting a percentage allows a range of acre accomplishments to meet this strategic direction. However, percentages still translate into a range of acreages that would meet the objective. Forest typing implies a predominance of a particular tree species. A stocking rate of 1000 trees per acre may not be necessary in all situations to achieve the objectives of increasing white pine on the landscape. The strategic framework exists in the Forest Plans to increase the white pine component through various methods (including under planting) and to use various treatment methods (such as uneven-aged treatments) to accomplish an increase of white pine. Modeling projections for the selected alternative shows the use of uneven-aged treatments (designed to increase stand structure and increase pine species) to meet overall forest vegetation objectives.

PC# 2.6.7-26
Public Concern: The Plans should increase management or protection for white pine trees and forest types.

-Including establishing specific, measurable direction for retention of late successional white pine.
-Including establishing measurable direction for underplanting and other techniques to - increase white pine type or white pine presence in other types.
-Including, for Decade 1, at least 25% of the upland acres logged should be converted to white pine or white pine dominated type.
-Including protecting white pine stands until 50% of the 100-year goals for type restoration are achieved.
-Including protecting and restoring a greater amount of white pine.
-Including modifying Alternative E to reflect upland forest and age structure percentages proposed for Alternative D Table FAC-22 for white pine.
-Including protecting white pine from logging.

-Including protecting mature/old growth white pine from any cutting.
-Including establishing a priority for encouraging the growth of white pine through replanting and protection of old-growth white pine.
-Including establishing a standard for reserving all white pines in all harvest units until the cover type and intra-stand composition is double current levels – with exception for public safety.
-Including establishing a standard for reserving all naturally generated white pine patches over 20 acres until tree distribution has reach RNV levels.
-Including establishing a standard for a minimum of 30,000 acres old red and white pine type on the Superior.
-Including establishing a standard for white pine retention so that a natural event or blowdown does not lead to local extinction.
-Including establishing a distribution standard for white pine retention.

Agency Response:
The LE based objectives found in the forest-wide management direction in Chapter 2 of the Forest Plans for forest composition and within stand tree species component compels the Chippewa and Superior forests to increase the amount of white on the forests in the next 10 to 15 years. In the case of the composition objectives, these are quantifiable. In the case of tree species diversity objectives it is expected that activities and treatments that favor white pine regeneration will result in an increase of white pine. Periodic monitoring (such as forest inventory analysis) will determine if objectives are being met.

Many of the Landscape Ecosystems on the Chippewa and Superior were dominated by white and red pine in certain growth stages (Appendix G, Final EIS), including old and old growth stages. Both Forest Plans have objectives to increase the amount of forest cover, 100 years old or older (Forest Plans, table DLP-3 for the Chippewa, NSU-3 for the Superior). Long lived tree species, such as pine, are best suited to meet these age objectives. Logically, we would utilize existing mature/older white pine to work towards meeting these objectives. Objectives in Forest Plans compel actions by the Forest Service. Standards and guidelines are limits to management to eliminate or mitigate adverse impacts.

The selected alternative sets increases in white pine in the context of other multiple use objectives. Greatly increasing this amount may preclude meeting other objectives that the Regional Forester has determined are important in the overall context of National Forest management. Other alternatives proposed more or less white pine planting or restoration.

White pine objectives were increased on the Chippewa NF in the final Forest Plan.

Project level analysis will examine the condition of white pine with regard to insects and disease, age class including old or old growth conditions, or retention of white pine as a reserve tree.

PC# 2.6.7-27
Public Concern: The Plans should state that white pine is a preferred leave tree in timber harvest units and follow recommendations of the DNR White Pine Initiative Annual Report for 2000.

Agency Response:
The Forest Plans tier to MFRC voluntary site-level guidelines for snag and reserve tree designations (Chapter 1 of the Forest Plans), including recommended tree species for retention. These guidelines list white pine as one of the preferred species for retention. This said, the LE based vegetation objectives in Chapter 2 of the Forest Plans compel the Forest Service to increase white pine forest type and the component of white pine within forested

stands during the implementation period the Plans (the next 10 to 15 years). We recognize that retaining the white pine seed source by methods such as reserving white pine within harvest areas is an important part of the overall objective of increasing white pine.

PC# 2.6.7-30
Public Concern: For restoration of white pine the Chippewa and Superior NFs should only use white pine seed native to the ECS section.

Agency Response:
Currently, both Forests use only white pine seed that originated within the respective ecological subsections.

PC# 2.6.7-31
Public Concern: The Chippewa and Superior NFs should provide a white pine recovery plan and be accountable for recovering white pine.

Agency Response:
All alternatives would maintain or increase white pine on a landscape scale, with more emphasis placed on white pine restoration in some alternatives, for example in alternatives B, D, F, and G, than in other alternatives. Two objectives (O-WL-32-33 [Superior] and O-WL-33-34 [Chippewa]) specifically address white pine restoration, and specific quantitative objectives for increasing white pine are presented in the Landscape Ecosystem Objectives portion of the Forest Plans. While the Chippewa and Superior NFs' do not propose a "recovery plan" for white pine per se, both Forests do proposed accountable, credible plans for restoring white pine on the landscape.

PC# 2.6.7-32
Public Concern: The Chippewa and Superior NFs should describe indicators of good sites for conversions to healthy white pine stands.

Agency Response:
As noted in EIS chapter 3.3.6.2.a, white pine has a broad ecological amplitude and can succeed on a wide variety of soils, including shallow well-drained soils over bedrock; outwash plains; deep glacial till deposits in a scoured bedrock terrain; and sandy or gravelly stagnation moraines. Often, the sites have a lot of competition from brush species like hazel, honeysuckle, and mountain maple. White pine planting would only occur on sites that are considered suited to white pine, and not on sites that are better suited to other species that would be more competitive, for instance jack pine. Most white pine planting in the past has been in plantations, and important considerations for success of white pine plantings, based on past experience and current forestry research, include: controlling competing vegetation, protecting young trees from deer browsing, and pruning to reduce damage from blister rust and white pine weevil.

PC# 2.6.7-33
Public Concern: The Chippewa and Superior NFs should explain the advantages of planting white pine as opposed to red pine.

Agency Response:
Red pine and white pine share many ecological characteristics, so there would be some common benefits to planting either species. However, white pine are longer-lived than red pine and grow taller than red pine, and thus have some benefits over red pine in terms of wildlife habitat (for example, as preferred nest trees for bald eagles or ospreys) and in terms of the structural diversity that white pine supercanopy trees offer to the forest.

PC# 2.6.7-34
Public Concern: The Final EIS should improve the inadequate environmental and economic analysis of proposed white pine management.

-To analyze the impact of the 1999 blowdown on white pine in the BWCAW.
-To analyze the costs of converting aspen to conifer, the likelihood of successful conversion, or the lost timber revenues resulting from old growth.
-By discussing the likelihood of obtaining the higher levels of future funding needed to achieve successful conversion
-To analyze and justify the increase of white pine cutting.
-To analyze impacts of problems limiting white pine regeneration and address unrealistic and flawed assumptions about natural reproduction and survival.
-By making the rate of shift toward historic conditions more gradual than what's proposed in the draft preferred alternative

Agency Response:
The responses to PC# 2.6.7-34 address the specific sub-issues that are raised in the order that they are listed above. The EIS does consider the impact of the 1999 blowdown on white pine in the BWCAW. For MIH 7 (red and white pine forest), projected levels of red and white pine forest in and outside of the BWCAW are shown by alternative in EIS chapter 3.3.1.c, Figure WLD 7a and 7b. The levels of red and white pine projected in the BWCAW are based on analysis published in the BWCAW Fuel Treatment EIS; for more detail, see the BWCAW Fuel Treatment EIS. Although the levels of red and white pine in the BWCAW would not vary by alternative in the future, the alternatives do address the issue of white pine restoration by proposing varying levels of white pine restoration.

The costs described by the commenter are accounted for in the DualPlan model (Appendix B). While the immediate economic effects of white pine restoration might not be favorable, the long term outcomes of white pine restoration have multiple social and ecological benefits. While the Forests recognize the difficulties in regenerating white pine, for example, high deer populations which lead to seedling herbivory, forest managers believe that in the long term, white pine restoration objectives will be achieved.

Finances could be a limiting factor to implementing any aspect of the Forest Plans, not just white pine restoration. Congress establishes funding levels for agency budgets, based in part on agency funding requests. The Forest Plan EIS accounts for the costs of white pine restoration and the Forests will budget for the costs of white pine planting in their annual budget process to accomplish their goals.

The EIS analyzes a range of levels of white pine harvest, which would occur as thinning or shelterwood harvests. Alternatives B and D propose very little white pine harvest and a high level of white pine restoration, while alternatives A and C propose higher levels of white pine harvest and lower levels of white pine restoration. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. While Alternatives B and D may have higher levels of white pine restoration that some members of the public find more favorable, the Selected Alternative represents what the Regional Forester believes to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs.

As noted above, the EIS analyzes a range of levels of white pine harvest. Modified alternative E proposes intermediate levels of white pine harvest over the 10 decade time horizon of the Plan. The EIS acknowledges the challenges of establishing white pine, such as blister rust and white pine weevils. The assumptions made about white pine seedling survival are based on the best available information about white pine planting and care and

the Forests' current experience with white pine planting. Forest Plan monitoring would determine whether white pine survival objectives are being met, and management practices would be changed if needed.

The different alternatives considered different levels of white pine restoration. Modified alternative E proposes intermediate levels of white pine restoration over the 10 decade time horizon of the Plan.

PC# 2.6.7-35
Public Concern: The Final EIS should explain why the Plans state that there has been insignificant conversion of white pine types to other types.

Agency Response:
Existing forest stands that are typed as white pine (where a predominance of white pine exists) have generally been maintained and not converted to other forest types. Individual white pine trees are often retained in other forest types as reserve trees, for wildlife habitat, or as a seed source. These practices would generally not change in the new Forest Plans. Along with the projected increase in management activities that favor or increase white pine in the selected alternative, there would be an overall increase the amount of white pine on both forests. For historical context, the EIS states in several chapters, such as chapter 3.2.1.a and 3.3.6.2.a, that there has been a dramatic downward shift in the abundance of white pine in the last century. This is the reason, in addition to social and economic reasons, the selected alternative proposes restoring white pine to levels approaching the range of natural variation for this species, as shown in Figure WLD-7b.

PC# 2.6.7-36
Public Concern: The Final EIS should discuss the current health and status of white pine stands planted since 1986.

Agency Response:
Please see the additional analysis in EIS chapter 3.3.6.2.a that addresses this comment.

PC# 2.6.7-38
Public Concern: The Chippewa and Superior NFs should not harvest timber at the level proposed in Alternative E because this will not allow proposed white pine restoration.

Agency Response:
The Forest Plans for the Chippewa and Superior (based on Modified Alternative E) plan to increase the presence of white pine across each forest's landscape (Forest Plan Tables DLP-2 for the Chippewa and NSU-2 for the Superior). Other Alternatives may propose to increase white pine faster or to a greater degree. The EIS analyzes alternatives including the range of levels of timber harvest, including harvest of white pine, as well as different levels of white pine restoration. Alternatives B and D propose very little white pine harvest and a high level of white pine restoration, while alternatives A and C propose higher levels of white pine harvest and lower levels of white pine restoration. Each alternative meets the intent of relevant laws. The Selected Alternative represents what the Regional Forester believes to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs.

PC# 2.6.7-39
Public Concern: The Plans should provide specific and proactive management direction for deer, moose, and other important game species.

-Including objectives, standards and guidelines for deer, moose, and grouse
-Including direction to maintain abundant habitat for game species or currently common species and maintain or improve public hunting opportunity.
-Including, at a minimum, language addressing protection of and management for important areas like deer (and moose) wintering areas and moose calving areas.

Agency Response:
The Regional Forester selected a management alternative that he feels balances the range of multiple uses on the Chippewa and Superior National Forests, including the conservation of plants, animals, and the communities they inhabit. The Forest Plans use a combination of coarse filter and fine filter strategies to accomplish this end. While these may not be listed specifically in the Forest Plans, they are recognized in the project record and the strategic framework for conserving them exists in the Forest Plans. Some species habitat are maintained or become more or less abundant as a result of the selected alternative. Specific objectives and standards and guidelines are also provided for species that have been determined that the coarse filter management objectives are not adequate to provide the desired conditions. Together, the coarse filter objectives and fine filter direction for certain species are anticipated to provide for the desired population levels of all species. All species, flora and fauna alike, are expected to remain viable under the new forest plans.

PC# 2.6.7-40
Public Concern: The Regional Forester should select Alternative A to avoid negative impacts to moose, deer, and grouse populations in the long-term.

Agency Response:
The Forest Plans for the Chippewa and Superior National Forests, based on Modified Alternative E, would produce predictable and sustainable amounts of early successional habitat that game species favor. While the predicted amounts in future decades of this habitat may be less than recent or existing conditions, game species populations are predicted to be more than adequate to support sustainable uses such as hunting. The Final EIS analyzes effects to woodcock (chapter 3.3.6.3), white-tailed deer (chapter 3.3.6.4), and ruffed grouse (chapter 3.3.6.5). Alternatives are analyzed with different outcomes and with varying Management Area allocations. The Final EIS analysis addresses the full range of Plan Revision issues, including game species, subsistence, and vegetation management. Each alternative meets the intent of relevant laws. None of the alternatives were designed to meet a single issue or single set of issues such as game species habitat. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The Regional Forester looked at all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The ROD also discusses how the issues are addressed by the Alternatives, including the Selected Alternative.

PC# 2.6.7-41
Public Concern: The Plans should not promote management for deer.

-Because moose and caribou are the National Forests' native game animals.
-Because brainworm is lethal to moose.
-Because high deer populations are already greatly in excess of what was natural and many plants cannot continue to exist with high populations.

Agency Response:

We concur that although white-tailed deer currently occur across the two national forests, before European settlement, deer in Minnesota were associated primarily with the deciduous woods and prairie edges of the south and west central parts of the State (Draft and Final EIS Section 3.3.6.4). Only after the northern coniferous forests were logged and cut-over lands burned, did white-tails become abundant in the north. A review of deer and moose ecology is provided in the planning record (Species Data Collection Form: White-tailed Deer 2/07/02, Species Data Collection Form: Moose 2/20/02). Deer, moose and caribou interactions, historical populations, and response to settlement and logging are discussed in detail in these documents, as is the issue of brain worm.

Section 3.3.6.4.a and 3.3.6.4.b of the Final EIS provide analysis of a range of alternatives which would result in deer habitat conditions, which would range from lower to higher than current conditions, and which would include conditions far in excess of the RNV to below RNV. The issue of negative effects of deer herbivory is discussed in the Final EIS Section 3.3.6.4.

PC# 2.6.7-42
Public Concern: The Plans should provide management guidance to address the negative impacts of deer with respect to deer herbivory

Agency Response:
Section 3.3.6.4 of the Draft and Final EISs indicate that at "…high population levels, white-tailed deer can cause major changes in the composition and structure of forest communities by browsing shrubs and tree seedlings, and grazing understory forbs…a variety of herbaceous plants may decline under sustained deer foraging…Canada yew, listed as a sensitive species on the two national forests, is an uncommon coniferous shrub across most of the northwoods because it is a preferred food of deer and doesn't recover well after browsing…Regenerating forest stands can be damaged by high population levels of deer. Deer browsing can alter species composition. Regeneration of northern white cedar and eastern white pine can be very difficult due to deer depredation."

Section 3.3.6.4.a and 3.3.6.4.b provide analysis of a range of alternatives which would result in deer habitat conditions which would range from lower to higher than current conditions, and which would include conditions far in excess of the RNV to below RNV.

PC# 2.6.7-44
Public Concern: The Regional Forester should select most aspects of Alternative D because of its overall economic and social benefits including lower deer populations that result in quality timber.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying Management Area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The Regional Forester looked at all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The ROD also discusses how the issues are addressed by the Alternatives, including the Selected Alternative.

PC# 2.6.7-44a
Public Concern: On the Chippewa NF the Regional Forester should select Alternative B, D, F, or G because they may decrease high density of deer and reduce deer's numerous negative impacts on vegetation and the structure of the landscape.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying Management Area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The Regional Forester looked at all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The ROD also discusses how the issues are addressed by the Alternatives, including the Selected Alternative.

PC# 2.6.7-44b
Public Concern: The Regional Forester should not select Alternative E and instead should select:

> **-Alternative B to reduce risk to maintaining species viability and better address the problem of habitat fragmentation.**
> **-Alternative G because it provides wildlife habitat that is as all-inclusive as possible and it provides better protection than Alternative E for rare natural resources.**

Agency Response:
Overall, analysis in the Final EIS shows that both Alternative B and G provide habitat outcomes and other vegetation conditions closer to what would have been expected under the historical range of natural variability and thus they were expected to lessen risk to rare natural resources or provide more beneficial conditions for many of the rarer species (such as sensitive species) on the National Forests. However Revised Plans meet the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester believes that the Selected Alternative adequately protects rare natural resources and addresses habitat fragmentation while providing what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

PC #2.6.7-44c
Public Concern: The Regional Forester should select Alternative F.

> **-Because it would better fulfill the regulatory requirement for viable populations than the other alternatives.**
> **-To provide an adequate coarse filter.**
> **-Because it would meet the goals for mature/old MIHs outside the BWCAW.**
> **-Because it would create more white pine than Alternative E, providing better habitat conditions for viable populations and overall vegetation diversity.**

Agency Response:
Note: Draft EIS Tables WLD-23-25 have been renumbered in the Final EIS to Tables WPN-1-3.Overall, analysis in the Final EIS shows that Alternative F would generally provide habitat outcomes and other vegetation

conditions closer to what would have been expected under the range of natural variability. Thus this alternative would, in comparison to the Selected Alternative, be expected to: lessen risk to many of the rare species and rare natural resources; provide more beneficial conditions for many of the rarer species (such as sensitive species); provide better assurance of maintaining species viability for many species whose coarse filter habitats are below the range of natural variability; increase white pine to a greater degree; and result in fewer potential negative impacts based on spatial patterns of forest vegetation. The Regional Forester recognized the benefits of this alternative for many species of wildlife. However, Revised Plans meet the intent of relevant laws, including the National Forest Management Act CRF219.19 and Multiple Use Management Act, under which the National Forests are managed. The Regional Forester believes that the Selected Alternative adequately protects rare natural resources, maintains species viability, addresses habitat fragmentation, increases white pine while providing what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

We acknowledge that the commenter in the statement above is correct that the Superior NF Revised Plan was not predicted to be able to meet the Proposed Plans' objectives for increasing the amount of interior forest (O-VG-22) or form increasing the patches of mature or older upland forest in patches 300 acres or greater (O-VG-23). These objectives have been replaced by new objectives in the Revised Plan that are better stated objectives: O-VG-16 through O-VG-25. The Final EIS determined that these objectives would likely be met during the implementation period. Because of current conditions of vegetation, desired future conditions, and the contributions of the BWCAW to large patch and interior forest to desired landscape patterns and wildlife habitats in Zone 3, we expect a decrease in the short term in large patches of mature old upland forest and interior forest in Zone 3, while managing to restore desired vegetation composition, structure, and pattern for the long term.

PC# 2.6.7-46
Public Concern: The Chippewa NF should establish large blocks of land as wilderness to:

- **Meet requirement of maintaining or increasing biological diversity.**
- **Provide an area where deer density may be low, decreasing adverse environmental impacts of deer.**

Agency Response:
The EIS Appendix C documents analysis of Roadless Area Review and Evaluation and evaluation for possible recommendations for wilderness. No wilderness additions were proposed for the Final Plans because of extremely low opportunity on the Chippewa.

We reviewed Alverson et al. (1988) during development of plans and alternatives and used its information, in part, to develop and include Forest Plans direction to promote management of large blocks of mature and older forest, increase forest interior habitat, and reduce the amount of forest fragmentation (including edge habitat) (D-WL-3, D-VG-7, O-VG-19-24). In addition G-VG-1 provides for a minimum of 19 patches of mature or older upland forest in patches of 1,000 acres or greater. (S-VG-3) ensures that 85,000 acres of mature or older upland forest are maintained in patches 300 acres or greater. Approximately 3800 acres are allocated to Research Natural Areas and Potential Research Natural Areas Management Areas where impacts of deer browsing are expected to be reduced from the surrounding forest matrix.

PC# 2.6.7-47
Public Concern: The Final EIS should improve inadequate or faulty analysis of deer in the Draft EIS.

-To either dismiss acres of prime deer habitat as an indicator or address winter habitat as the limiting factor on deer populations in northeastern Minnesota.
-To address impacts of high deer populations on herbivory of plants and plant communities, moose populations, Lyme's disease, human-vehicle collisions, and damage to home landscaping.
-To address moose and deer interactions
-To acknowledge that decreasing foraging habitat is a step toward decreasing deer density instead of claiming that management is irrelevant in combating the impacts of deer.
-Because it is inappropriate to use natural range of variation of deer populations.

Agency Response:
A review of deer and moose ecology is provided in the planning record (Species Data Collection Form: White-tailed Deer 2/07/02, Species Data Collection Form: Moose 2/20/02). Deer, moose and caribou interactions, historical populations, and response to settlement and logging are discussed in detail in these documents.

White-tailed deer are one of several "other species of management concern" that are analyzed in the Draft and Final EISs. Deer is a species of management concern because it is a key prey species for the federally endangered gray wolf, and because it is a very high public interest species with important social, ecological, and economic values and impacts, both positive and negative (Draft and Final EIS Section 3.3.6.4). As an indicator, the deer does a good job at highlighting differences among the alternatives because each alternative will result in varying habitat conditions.

We state in the Draft and Final EIS that deer are limited in northern Minnesota by severe winters (Draft and Final EIS Section 3.3.6.4.a). Two habitat components were selected to serve as indicators of deer habitat in the Draft and Final EIS analysis. Amount of deer foraging habitat was used as an indicator, because abundant deer foraging habitat helps to support high populations of deer. Amount of deer winter thermal cover was used as an indicator, because thermal cover may affect survival rates of deer during harsh winters (Draft and Final EIS Section 3.3.6.4).

It is widely recognized that some negative effects of high deer populations include deer-vehicle collisions, reforestation and other herbivory issues. Section 3.3.6.4 of the Draft and Final EIS states that "concern exists that landscapes which are particularly favorable for deer, a common species, do not necessarily provide adequately for the long-term sustainability of some other species, including some which are considerably more rare. There is also concern that at high population levels, white-tailed deer can cause major changes in the composition and structure of forest communities by browsing shrubs and tree seedlings, and grazing understory forbs…a variety of herbaceous plants may decline under sustained deer foraging…Canada yew, listed as a sensitive species on the two national forests, is an uncommon coniferous shrub across most of the northwoods because it is a preferred food of deer and doesn't recover well after browsing…Regenerating forest stands can be damaged by high population levels of deer. Deer browsing can alter species composition. Regeneration of northern white cedar and eastern white pine can be very difficult due to deer depredation."

Section 3.3.6.4.a and 3.3.6.4.b provide analysis of a range of alternatives which would result in deer habitat conditions which would range from lower to higher than current conditions, and which would include conditions far in excess of the RNV to below RNV. The cumulative effects analysis indicates that local increases or decreases in deer populations may be possible over the next 5 decades, particularly where the Forests have large blocks of federal ownership. Because the Superior has large blocks of land with few other ownership in-holdings, it is more likely that alternatives which would change deer habitat carrying capacity of Federal lands would have a population-level effect on the Superior. Much of the Chippewa ownership is interspersed with other land ownerships, hence, the ability for an alternative to have a long-term effect on deer populations on the Chippewa is highly dependent on forest management activities on other ownerships.

RNV as used in the Draft and Final EIS deer habitat analysis (Figures WLD 14-17, now renumbered in the Final EIS to Figures WTD-1-4) refers to vegetative conditions predicted to occur at the ecological Section level when those landscapes were functioning within the range of natural variability (DEIS Section 3.3.6.4); details of how RNV values were defined for Landscape Ecosystems are contained in Appendix G of the Draft and Final EIS. We concur that although white-tailed deer currently occur across the two national forests, before European settlement, deer in Minnesota were associated primarily with the deciduous woods and prairie edges of the south and west central parts of the State (Draft and Final EIS Section 3.3.6.4). Only after the northern coniferous forests were logged and cut-over lands burned, did white-tails become abundant in the north.

PC# 2.6.7-48
Public Concern: The Chippewa NF should address edge habitat reduction in the Final EIS and modify Alternative E to implement edge habitat reduction now:

- **To help control deer from becoming over abundant and having negative impacts on some plants.**
- **Because Alternative E will exacerbate the trend of continuing increase of edge habitat.**

Agency Response:
The Draft and Final EISs disclose a variety of negative effects of high deer populations, including herbivory issues (Section 3.3.6.4). Section 3.3.6.4.a and 3.3.6.4.b provide analysis of a range of alternatives which would result in deer habitat conditions which would range from lower to higher than current conditions, and which would include conditions far in excess of the RNV to below RNV. Management Induced Edge is analyzed in the Draft and Final EISs as Indicator 4 (Section 3.2.2.b). Objective O-VG-23 and -24 of the Forest Plan would increase the average size of temporary forest openings, and reduce the amount of forest edge created through vegetation management activities.

PC# 2.6.7-49
Public Concern: The Chippewa and Superior NFs should strive to maintain the quality of existing ruffed grouse habitat.

Agency Response:
Section 3.3.6.5.b of the Draft and Final EIS analyzes a range of alternatives, which would result in a range of grouse habitat quality. Overall highest quality of grouse habitat would occur with Alternatives A and C; lowest quality of habitat would occur with Alternatives B and D; habitat quality associated with Alternatives E, F and G would lie in between.

PC# 2.6.7-50
Public Concern: The Final EIS should address the degree to which each alternative will negatively impact grouse habitat through habitat loss and degradation.

Agency Response:
The Final EIS Section 3.3 addresses the effects of implementation of alternatives on both game and non-game wildlife and plant species. The Standards and Guidelines in Chapter 2 of the Revised Forest Plan are designed to maintain viable populations of all desirable game and non-game species. Population estimates would be inaccurate suppositions based upon model predictions, prior trends and most significantly, on administration of game regulation by Minnesota Department of Natural Resources, are outside Forest Service control. Although those estimates might be interesting, they would not prove adequate for the Regional Forester to make an informed decision.

PC# 2.6.7-51
Public Concern: The Final EIS should include conifer forest in its analysis of ruffed grouse.

-To address the importance of conifer forest habitat.
-To address the impression in the Draft EIS that the amount of young aspen is paramount index for determining suitable habitat.
-To explain that ruffed grouse are unlikely to decline precipitously if young aspen forest declines from current condition.

Agency Response:
Section 3.3.6.5 of the Draft and Final EIS provide a brief overview of grouse habitat relationships, based on a review of the literature (Species Data Collection Form: Ruffed grouse, 3/5/02, Project Record). It is indicated that although grouse occur throughout the deciduous and coniferous forests of North America, they are most abundant in early-successional forests dominated by aspens and poplars; they achieve their greatest abundance in northern regions where aspen, especially quaking aspen, are a dominant component of the forest. Aspen-birch forests were used as an indicator of grouse habitat, because the density of grouse is closely linked to the availability of these habitats. The Summary to Section 3.3.6.5.b indicates that of the alternatives analyzed in the Draft and Final EISs, all except Alternative D provide more grouse habitat than RNV. It is predicted that at least a minimum sustainable grouse population would occur under any of the alternatives, except for Alternative D.

PC# 2.6.7-52
Public Concern: The Final EIS should address the importance of habitat features for ruffed grouse at the sub-stand level.

Agency Response:
As for other wildlife species analyzed, the grouse habitat indicators do not provide a precise estimate of habitat amounts predicted to occur for any given species analyzed within the Draft and Final EIS. Rather, indicators provide a basis to make relative comparisons among the alternatives with respect to a variety of potential effects.

PC# 2.6.7-53
Public Concern: The Final EIS should correct Tables WLD-27 and WLD-28 to show that in 100 years conversion of aspen to conifers will not be a wholesale conversion to nothing but conifers.

Agency Response:
Note: Tables WLD-27-28 of the Draft EIS have been renumbered in Final EIS to Tables WRG-1-3, which includes the addition of WRG-1 with Decade 1 information. The desire to change the existing condition for conifer:deciduous composition was identified in the Notice of Intent to revise Forest Plans, in part to better represent historic conditions. Forest types speak to a predominance of a tree species, where within-stand diversity speaks to the variety of trees at the stand level. The Forest Plans is proposing to increase the acres of forest typed as 'conifer', though we also have objectives (see O-VG-7- 9 (Chippewa) and O-VG-6- 8 (Superior), and the LE based vegetation objectives in Chapter 2) to increase within stand diversity – the variety of species found within a forest stand. Forest stands have and would have a variety of tree species - including aspen. You referenced the amount of aspen predicted to be produced under the selected alternative in future decades. The selected alternative would harvest predictable and sustainable amounts of aspen into the future and would provide a steady supply of young aspen forest on both Forests. In the Vegetation analysis (section 3.2.1) in the Final EIS, indicator 3 analyzed management treatments that increased within stand diversity. This analysis provides more detail on conditions that could be expected in the selected alternative, including the deciduous:confer proportion. Within-stand diversity objectives are listed in the LE based objectives, Chapter 2 of the Forest Plan, along with

forest type objectives. These objectives more specifically identify which tree species would be increased in an ecological context.

PC# 2.6.7-54
Public Concern: The Final EIS should address the effects of management on ruffed grouse populations including an analysis of effects of a more diverse forest.

Agency Response:
As for other wildlife species analyzed, the grouse habitat indicators do not provide a precise estimate of habitat amounts predicted to occur for any given species analyzed within the Draft and Final EISs. Rather, indicators provide a basis to make relative comparisons among the alternatives with respect to a variety of potential resources and effects.

Section 3.3.6.5 of the Draft and Final EISs provides a brief overview of grouse habitat relationships, based on a review of the literature (Species Data Collection Form: Ruffed grouse, 3/5/02, Project Record). It is indicated that although grouse occur throughout the deciduous and coniferous forests of North America, they are most abundant in early-successional forests dominated by aspens and poplars; they achieve their greatest abundance in northern regions where aspen, especially quaking aspen, are a dominant component of the forest. Aspen-birch forests were used as an indicator of grouse habitat, because the density of grouse is closely linked to the availability of these habitats.

PC# 2.6.7-55
Public Concern: The Chippewa and Superior NF Plans should emphasize game species.

-To address negative economic impacts in terms of reduced hunting opportunities.
-To maintain public hunting and fishing opportunities for the future.

Agency Response:
Revised Forest Plans provide direction to manage environmental conditions to sustain viable populations of native and desired non-native species and to manage habitats that continue to support populations of wildlife that address peoples' current and future need for and interest in wildlife. Revised Plans provide an emphasis on continuing to provide for habitats for game species and a spectrum of opportunities for hunting and fishing. This includes, but is not limited to: D-WL-1, -2, -3g, D-WL-4-9, O-WL-1-3, O-WL-39 (Superior), O-WL-40 (Chippewa), D-REC-10, O-SE-1, D-WS-1 and Landscape Ecosysem vegetation and habitat objectives for the wide variety of habitats used by game species.

PC# 2.6.7-56
Public Concern: The Final EIS should consider dropping American woodcock as an indicator.

Agency Response:
The woodcock is included in the Draft and Final EIS as a “species of management concern” and is not proposed as a management indicator species (MIS). The Draft and Final EIS provides the rationale for selecting American woodcock as species of management concern in Section 3.3.6.3.: in summary, woodcock is a species of management concern because it is a high public interest game species for which there is also a concern about population declines rangewide.

PC# 2.6.7-57
Public Concern: The Final EIS should conduct a more thorough analysis on the effects of forest openings on woodcock.

Agency Response:
The Draft and Final EIS analysis (Section 3.3.6.3.b) includes consideration of forest openings and timber harvest relative to American woodcock. Forest plan modeling output does not predict changes in the openings habitat component, although the young aspen/birch component varies by Alternative (Draft EIS Figures WLD-11, 12, 13. These have been renumbered in the Final EIS to Figures WCK-1-4, which includs the addition of WCK-1).

PC# 2.6.7-58
Public Concern: The Plans should provide a wide range of early successional habitats to support abundance of the woodcock and other early-successional habitat-associated species which have shown national and regional declines.

Agency Response:
The Draft and Final EISs (Section 3.3.6.3.b) include the consideration of both shrub wetlands and young aspen/birch forests as components of woodcock habitat. Figures WLD 12 and 13 (renumbered in the Final EIS to Figures WCK-3-4) indicate that under Alternative E, young aspen/birch habitats would exist in more than twice the quantity of shrub swamps available on the Chippewa and Superior National Forests. On the Superior, this amount of young aspen/birch would exceed existing conditions; on the Chippewa it would be slightly less than existing conditions. On both Forests, there would be more young aspen/birch forest habitat than associated with forest vegetative conditions that would have occurred within the range of natural variability across the broader landscape. In decade 2, it is estimated that there would be at least 225,000 acres of woodcock habitat on the Superior, and at least 130,000 acres of woodcock habitat on the Chippewa National Forest.

PC# 2.6.7-59
Public Concern: The Chippewa and Superior NFs should maintain a high degree of clearcutting treatments in aspen types to maintain huntable (not viable) populations of woodcock.

Agency Response:
As indicated in the preceding response, under Alternative E in decade 2, it is estimated that there would be at least 225,000 acres of woodcock habitat on the Superior, and at least 130,000 acres of woodcock habitat on the Chippewa National Forest. Figures WLD-18 and WLD-19 of the DEIS indicate that clearcuts (treatment 2) far exceed all other harvest types (treatments 5, 7-10) combined with respect to number of aspen acres treated under Alternative E. Note: Figures have been renumbered in the Final EIS to WRG-1 and WRG-2.

PC# 2.6.7-60
Public Concern: The Chippewa and Superior NFs should maintain wildlife openings in woodcock breeding and roosting areas and should clearcut aspen to produce dense young aspen for woodcock breeding habitat.

Agency Response:
The Draft and Final EISs (Section 3.3.6.3.a) indicate population trends for American woodcock have been declining from the late 1960s through present in Minnesota, the Lake States, and the Central woodcock management region. Given this species' habitat preferences for young forests and abandoned farmlands, it is likely that early logging and settlement of the northern Lake States forests improved habitat conditions in the breeding grounds for woodcock, allowing population growth to occur. Settlement and abandoning of farmlands

likely benefited woodcock until those abandoned lands reverted back to forest and became too old for woodcock. Woodcock are currently locally common on the Chippewa and Superior National Forests, with abundant potential habitat available.

The Draft and Final EISs (Section 3.3.6.3.a) indicate northern areas within the Great Lakes states contain relatively high population densities of American woodcock, and are therefore considered to be important to regional woodcock populations. Major causes of observed woodcock population declines over the past 30 years are believed to be degradation and loss of suitable habitat on both the breeding and winter grounds due to forest succession and various human uses. Quantity and likely quality of habitat is decreasing as rate of change of farmland into young growth forests decreases; reduction in even-aged forest management may discriminate against this species.

The Draft and Final EISs (Section 3.3.6.3.b) indicate that the declining woodcock populations in Minnesota, the Lake States and the Central woodcock management region, suggest the habitat on the National Forests in Minnesota are important. The habitat requirements for this species are more complex than our comparisons of the young aspen/birch forest suggests, since this habitat is plentiful on the Superior National Forest yet populations are declining. Currently, habitat conditions of this species on the Superior would appear to be the best they have been in 40-50 years. As indicated in the preceding response, under Alternative E in decade 2, it is estimated that there would be at least 225,000 acres of woodcock habitat on the Superior, and at least 130,000 acres of woodcock habitat on the Chippewa National Forest.

PC# 2.6.7-61
Public Concern: The Plans should change riparian area management direction to avoid significantly degrading woodcock habitat in riparian areas.

Agency Response:
We considered information in Keepie and Whiting (1994) when developing integrated resource management direction that would influence woodcock habitat. We do not believe that the Plans would result in significantly degraded woodcock habitat because of riparian prescriptions. As indicated in the Riparian Emphasis Areas Management Area Direction (Forest Plan), riparian emphasis areas are located along major rivers and lakes that receive varying levels of public use for recreational purposes. Roughly half of the Riparian Emphasis Areas MA is suitable for timber management. This MA encompasses well under half of the riparian areas on the Forests.

As indicated in the Forest Plan Glossary, the functional riparian area is subdivided into two management zones: the “near bank” zone, and the “remainder” zone. The “near bank” zone is within 100 feet of lakes, open water wetlands and streams five feet or more in width, and within 50 feet of the known locations of any perennial stream less than 5 feet wide or any intermittent stream less than 5 feet wide, but more than 3 feet wide. Objectives O-WS-3 and O-WS-5 of the Forest Plan indicate management in the “near bank” zone favors long-lived tree species. Within the “remainder” zone, extended rotation of tree species is favored (O-WS-5).

Standard S-WS-9 and S-WS-10 (Forest Plan) indicates that tree harvest within the near-bank zone is only for the purposes of maintaining or restoring riparian ecological function. Outside of the near bank zone timber harvests will be scheduled, and are expected to occur along a gradient of soil moisture conditions.

PC# 2.6.7-62
Public Concern: The Final EIS should reevaluate woodcock habitat needs by consulting with scientists with demonstrated expertise in woodcock ecology.

Agency Response:

A review of woodcock ecology is provided in the planning record (RFSS Risk Evaluation for American Woodcock, 5/24/02). This review included the review of 19 pieces of scientific literature, including articles prepared by James Kelley, Dan McAuley, Larry Gregg, and Dan Dessecker. The citations for these articles are presented in the Risk Evaluation. James Kelley reviewed the Risk Evaluation and provided comments for consideration and improvement (planning record, e-mail 8/7/2002).

PC# 2.6.7-63
Public Concern: The Final EIS should correct the error in the assumption that shrub wetlands are historical habitat that is preferred to temporary openings provided by natural disturbance or forest management.

Agency Response:
The woodcock is included in the Draft and Final EISs as a "species of management concern" and is not proposed as a management indicator species (MIS) per 36 CFR 219.19. We addressed the woodcock in the Draft and Final EISs because of its role as a game species and concern over its population trends regionally and nationally. See Final EIS 3.3.0 and Appendix B: Wildlife of the EIS for further explanation of how wildlife species were addressed.

A review of woodcock ecology is provided in the planning record (RFSS Risk Evaluation for American Woodcock, 5/24/02). This review included the review of 19 pieces of scientific literature, including articles prepared by Dan McAuley. The citations for these articles are presented in the Risk Evaluation. One of the articles reviewed (Dessecker and McAuley 2001) describes ideal woodcock habitat as dense young forest or shrub-dominated habitats on moist soils.

The article referenced by the commenter evaluated habitat characteristics near 89 woodcock nests in Maine, and found that nests were in 15 cover types. "The aspen, tamarack, and alder types were used as nest sites more often than expected in relation to habitat types available at random sites (McCauley et al, 1996, p. 138).

The Draft and Final EISs (Section 3.3.6.3.a) describe woodcock having "specific habitat structural and moisture requirements. Ideal woodcock habitat is provided by young forest and abandoned farmlands mixed with forests (Keppie and Whiting 1994). Forest openings and old fields are used as singing grounds as young trees move in. Adjacent young hardwoods and mixed woods with shrubs, especially young alder, provide moist ground for daytime feeding."

"Ideal brood habitat is characterized by dense, hardwood cover on good soils that support an abundance of earthworms (Straw et al. 1994), an important food source for woodcocks. A dense canopy provides broods with protection from avian predators, and shades out herbaceous plants, allowing broods ready access to earthworms (Straw et al. 1994)…Young aspen and birch provide a forest mixture appropriate for woodcocks in the north-central woodcock range…"

Stands mapped as vegetation type 66 are type 6 Shrub Swamp, as defined in U.S. Fish and Wildlife Circular 39 (p. 22 of S.P Shaw and C. G. Fredine. 1956. Wetlands of the U.S.: their extent and their value to waterfowl and other wildlife). Brush species in these wetlands includes alders, willows, and dogwoods. Within stands mapped on the Chippewa and Superior National Forests as vegetation type 66, a variety of conditions will be found, and will include some areas of sedge or grasses. Areas which are predominately wetland sedge/grass are mapped as vegetation type 62.

Shrub wetlands are one of the habitat components evaluated for woodcocks. The others are grass-forb-shrub openings (upland openings) and aspen/birch forests under 20 years old (Draft and Final EISs Section 3.3.6.3.a). The Draft and Final EISs indicate that "the relative importance or overall preference for young aspen/birch forest

to shrub wetlands is not well understood; however, the shrub wetland portion of the habitat base is considered to be a locally important breeding habitat condition buffer to the boom and bust young forest conditions created through natural stand replacement disturbance events".

It is important to recognize that vegetation type 66, as well as openings and young aspen/birch forests, are treated as indicators of habitat. Within any of these indicators, there will be some amount of area that does not fulfill woodcock habitat needs. We agree that some of the vegetation type 66 stands will be too wet, or have vegetation that does not serve as woodcock habitat. There will also be some aspen/birch regeneration that will be on sites too dry to likely provide woodcock habitat. In addition, there will be numerous inclusions of suitable habitat within forested stands of non-habitat forested types which may provide woodcock habitat, which are not accounted for by this indicator. Indicators are not expected to provide 100% accurate predictions of quantities of habitat; rather, their purpose is to provide the opportunity for comparison of relative amounts of habitat provided under all alternatives considered within the EIS.

PC# 2.6.7-64
Public Concern: The Final EIS should include information on woodcock habitat for the Chippewa similar to the Superior.

Agency Response:
Draft EIS Figure WLD-11 has been renumbered in the Final EIS to WCK-2. Information requested has been added to the similar figure for the Superior: Draft EIS Figure WLD-12, renumbered in Final EIS to Figure WCK-1.

PC# 2.6.3-12
Public Concern: The Chippewa and Superior NF Plans should include moose as an indicator species.

Agency Response:
The Forests have limited the selection of management indicator species to four indicator species, favoring instead, the selection of management indicator habitats because they better reflect the broad spectrum of wildlife issues than do individual species. The management indicator habitats represent the major biological communities on the National Forests that are affected by management, and represent "coarse filter" habitats that are associated with many species. Appendix D of the EIS Tables DEIS-8-10 display how moose habitat conditions are analyzed. Management for moose is encompassed in Plan vegetation and management indicator habitat objectives for Landscape Ecosystems as well as by other vegetation management direction, including but not limited to: D-VG-1-8 and D-WL-1-5. To address moose's importance for both hunting and wildlife watching we added the following direction: Chippewa: D-WL-3g, O-WL-40, D-REC-10-11; Superior: D-WL-3g, O-WL-39, D-REC-10-11.

PC# 2.6.4-103
Public Concern: The Final EIS should re-analyze the white-tailed deer indicator with the assumption that a small subset of the forest outside the BWCAW is critical for winter cover.

Agency Response:
We stated in the Draft and Final EISs that deer are limited in northern Minnesota by severe winters (Draft and Final EIS Section 3.3.6.4.a). Two habitat components were selected to serve as indicators of deer habitat in the DEIS analysis. Amount of deer foraging habitat was used as an indicator, because abundant deer foraging habitat

helps to support high populations of deer. Amount of deer winter thermal cover was used as an indicator, because thermal cover may affect survivorship of deer during harsh winters (DEIS Section 3.3.6.4).

Section 3.3.6.4.a of the Draft and Final EISs state that "…for northern Minnesota, it is believed by most biologists that conifer cover is critical both for thermal protection and for reducing snow depth and surface crusting…During severe weather, deer concentrate, or "yard up" in areas of dense conifer cover. Snow restricts deer movement and covers nourishing food; cold temperature and wind tap the white-tails' energy reserves. Heavy conifer cover blocks snow and reduces wind and radiation heat loss…On the Superior National Forest, deer migrate to winter range every year, regardless of winter severity. This may be due to higher snow depths and winter severity; or it could also be influenced by traditional deer feeding near major deer yards. Most northeastern Minnesota deer migrate up to 55 miles each year between summer and winter ranges, which remain the same each year."

Non-native Invasive Species (2.6.8)

PC# 2.6.8-1
Public Concern: The Plans should provide management guidance to address non-native invasive species (NNIS) that is more specific and stronger than in the Proposed Plans.

-To specify how the Chippewa and Superior NFs will address Executive Order 13112 and to clarify how the Chippewa and Superior NFs will reduce the spread of NNIS and determine which species to concentrate on.
-To identify means of control and eradication
-To identify priority species and to fight the spread of NNIS aggressively, seek to wipe out NNIS hotspots, and prevent colonization of NNIS not already on the National Forests.
-To proactively manage existing NNIS populations and prevent local introductions.
-To use native plants and avoid non-native invasive species.
-To reduce the spread of earthworms, considering management suggestions developed by the Minnesota DNR exotic species program.
-To add to the list of actions in O-WL-41 (Use of Integrated Pest Management).

Agency Response:
Although some may think that the proposed Plans lack enough specific management direction for reducing NNIS spread and determining which species to concentrate on, the NNIS objectives in the Plans (Superior: O-WL-37, O-WL-38, O-ID-1; Chippewa: O-WL-38, O-WL-39, O-ID-1) do provide strategic guidance while at the same time providing management flexibility on how to reach the objectives. The Forests are aware of the different ways that NNIS are spread and of the fact that there are numerous treatment and prevention methods available for use in moving towards these objectives. While none are specifically prescribed in the Plans, the whole suite is available for use and would be applied as appropriate when the Plans are being implemented. Chapter 3.3.7.b of the Final EIS describes the numerous sources of additional strategic guidance available for meeting the objectives described in the Plans.

Although no NNIS lists are given in the Plans, the species under consideration are listed in Table NIS-2 in Final EIS Chapter 3.3.7.a.

As noted in one of the public comments, the Chippewa and Superior NFs are obligated to follow Executive Order 13112, which deals with invasive species. The Executive Order states that a federal agency shall "not authorize,

fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species in the United States or elsewhere unless, pursuant to guidelines that it has prescribed, the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions." The quote of the Executive Order provided in the public comment was incomplete. When the whole quote is considered, it is clear that the Plans meet the intent of the Executive Order.

Guideline G-WS-1 (Superior) and G-WS-1 (Chippewa) address the use of native species for revegetation. This guideline promotes the use of native species, but permits the use of exotics like annual rye or sterile wheat for cover crops, and maintains the flexibility for using exotics when exceptional cases arise.

Earthworms, another non-native invasive species, were singled out by some commenters as requiring specific management guidelines. Standards S-WL-9 (Superior) and S-WL-7(Chippewa) specifically address earthworms since they pose a threat to habitat for goblin fern, a Regional Foresters Sensitive Species. Final Plan management direction for non-native invasive species also provides direction: D-WL-9, O-WL-38-39 (Chippewa) and O-WL-37-38 (Superior). Furthermore, Minnesota state law prohibits releasing most exotic species into the wild (Minnesota Statutes 84D.06), including earthworms.

The MN DNR publication "Ecological Risk Assessment of Non-Indigenous Earthworm Species" (MNDNR 2003) was not considered during the analysis conducted for EIS chapter 3.3.7. However, other references such as Gundale (2002), Holdsworth et al. (2003), and Hale et al. (2000) were used, and these discuss the same risk factors for earthworm spread that are raised in the MN DNR publication.

PC# 2.6.8-2
Public Concern: The Plans should include additional guidelines that minimize earthworm infestation caused by road and trail construction.

Agency Response:
Chippewa NF Proposed Plan S-WL-6 has been renumbered in the Final Plan to S-WL-7. G-WL-21 has been renumbered to G-WL-25 and G-WL-22 has been renumbered to G-WL-23

We acknowledge the concern for the spread of earthworm infestation. This issue was addressed in a standards for protecting the habitat for goblin fern, a Regional Forester's Sensitive Species: S-WL-7 (Chippewa) and S-WL-9 (Superior). Additionally non-native invasive species management is addressed D-WL-9, O-WL-38-39 (Chippewa) and O-WL-37-38. Roads and trails management in the Plans also provides direction to minimize the amount of roads (D-TS-2-3. O-TS-2, O-TS-4, S-TS-13, G-TS-1) and to mitigate potential negative impacts by effectively closing roads and trails not needed for management (O-TS-3, O-TS-7, G-TS-12, S-TS-3, S-TS-4) and generally preventing public use of temporary roads (G-TS-14).

PC# 2.6.8-3
Public Concern: The Draft EIS should address non-native invasive insects and pathogens in Section 3.3.7 Non-Native Invasive Species

Agency Response:
Non-native invasive insects and pathogens are addressed in the EIS in chapter 3.2.3, Forest Insect and Disease.

PC# 2.6.8-4
Public Concern: The Draft EIS should cite peer-reviewed science to support statements of significant threat to ecosystems from earthworms.

Agency Response:
The threat of earthworms to ecosystems is supported by Gundale (2002), which is a peer-reviewed paper in *Conservation Biology* that is cited in EIS chapter 3.3.7.a. In response to your comment, we also include as a reference a recent article from *BioScience* that reviews earthworm impacts (Hendrix and Bohlen 2002) and an abstract from research conducted by Hale et al. (2000).

PC# 2.6.8-5
Public Concern: The Plans should clarify D-WL-9 to define "minor component" and to explain how the condition would be achieved and measured.

Agency Response:
The wording of D-WL-9 was left deliberately unquantified because neither Forest has a precise estimate of how many infested acres exist. EIS chapter 3.3.7.a describes the preliminary estimate of non-native invasive plant infestation on the Chippewa NF and Superior NF as being approximately 800 acres and 1850 acres respectively, which represent 0.1% on the Chippewa NF and 0.09% of Superior NF lands. At these infestation levels, NNIS can still be considered a "minor component", but defining "minor" precisely reduces the flexibility of the Forests to respond to the NNIS threat in the most appropriate and efficient manner available. For example, the management goal for some species found on nearly every roadside might be containment or preventing further spread. However, for other species such as new invaders eradication might be the goal. Such considerations make it difficult to put a specific number on "minor". Project level analyses conducted in support of Forest Plan implementation would better define and address this issue at the site level.

PC# 2.6.8-6
Public Concern: The Final EIS should improve analysis of non-native invasive species and address impacts in Alternative E.

-To discuss impacts of logging and other forest disturbances.
-To discuss impacts of new wilderness areas.

Agency Response:
For the NNIS analysis, the indicators were limited to miles of new maintenance level 1 roads and temporary roads and water access, and they did not include an indicator directly related to logging such as acres of timber harvest. The rationale for omitting a logging-related indicator is that the vast majority of terrestrial non-native invasive plant impacts occur along roads, as noted in indicator description in EIS chapter 3.3.7. On the Superior and Chippewa NFs, NNIS infestations are commonly found in temporary roads within harvested stands, but only very rarely in the harvested stand itself away from the road. This situation may change with the spread of garlic mustard, but currently roads are an excellent indicator for NNIS. As noted in 3.3.7.b, young forest canopies close quickly and would be likely to limit the spread of many NNIS, which often are ruderal species that do best in openings.

The effects of wilderness areas on NNIS spread were not considered in the Draft EIS, but the analysis has been changed to incorporate this aspect of NNIS spread.

The Primack (1993) paper is cited by the commenter to establish the fact that NNIS favor disturbed habitats; although this paper is not cited in the analysis, this fact is stated in the analysis in EIS chapter 3.3.7.a.

PC# 2.6.8-7
Public Concern: The Chippewa and Superior NFs should explain why the Draft EIS concludes that the cumulative effects of the Plan would be negligible and not differ much between alternatives.

Agency Response:
The analysis in EIS chapter 3.3.7.b was modified to improve the cumulative effects discussion.

The commenter cites Primack (1993) and Westbrooks (1998) to establish the fact that NNIS pose a severe threat to biodiversity and that NNIS can displace native vegetation. Although these papers are not cited in the analysis, these facts are stated in the analysis in EIS chapter 3.3.7.a.

PC# 2.6.8-8
Public Concern: The Chippewa and Superior NFs should conduct research on the impact of earthworm invasion and the combined impacts of earthworms and logging.

Agency Response
Research on the impact of earthworm invasion is being conducted. The analysis cites Hale et al. (2000), Holdsworth et al. (2003), and Gundale (2002), who all have or are conducting research on worm impacts on the Chippewa NF. The Chippewa NF is also conducting an administrative study to examine the effects of logging on goblin fern (USDA Forest Service 2002), a species that is sensitive to both logging impacts and earthworm invasion.

PC# 2.7.9-9
Public Concern: The Forest Plans should make the standard to maintain worm-free areas more prominent and should be applicable to other species besides the Goblin Fern since other species are adversely affected by worm invasion.

Agency Response
Chippewa NF Proposed Plan S-WL-6 has been renumbered in the Final Plan to S-WL-7.

The format of the Forest Plans was changed somewhat between draft and final. These changes may help accomplish what you are suggesting. In the final Forest Plan, standards and guidelines are placed proximate to the associated desired conditions and objectives by resource area. We made this change to achieve better understanding and improve implementation. Standard S-WL-7 (Chippewa) and S-WL-9 (Superior) for goblin fern are forest-wide management standards that are just as important as other forest-wide standards and carry equal weight as other standards, regardless of the location of the standard in the document. Part of the intent of the goblin fern standard is to protect goblin fern habitat by preventing worm-free goblin fern habitat from being infested with worms. This standard will protect other species (besides goblin fern) which occur in the goblin fern's habitat from worm impacts, as desired by the commenter.

PC# 2.7.9-10
Public Concern: Forest Plans need to have management direction to identify worm-free areas because S-WL-6 incorrectly assumes that all worm-free areas have been identified.

Agency Response
Chippewa NF Proposed Plan S-WL-6 has been renumbered in the Final Plan to S-WL-7.

The analysis in Forest Plan EIS chapter 3.3.5.a acknowledges that earthworm distributions on both forests are poorly known. Forest-wide worm surveys would be useful in the implementation of S-WL-7; however, such surveys are not prescribed in management direction because the Regional Forester selected a strategic approach for managing the Chippewa NF and Superior NF. Thus, many details of Forest Plan implementation are left to the individual forests to provide management flexibility while still meeting the intent of pertinent laws and forest policy. Specific decisions on worm surveys would be made at the forest-level.

Forest Vegetation

Forest Vegetation – General (2.7.1)

PC# 2.7.1-1
Public Concern: The Chippewa and Superior Forests should restore forest age and species diversity.

-To restore amounts of mature or older forest and associated species
-To benefit a wider range of wildlife species
-By promoting longer rotation cycles

Agency Response:
The Forest Service considered a range of planning alternatives (Appendix G, FEIS) that examined various levels of mature or older forest and a range of conditions benefited wildlife species in different ways (section 3.3 of the FEIS). In some alternatives, longer rotation cycles would be a result of the age and composition objectives incorporated into the alternative (Appendix G, FEIS). These would be a result of a decreased level of regeneration harvest and objectives to increase mature or older forest acres. The Regional Forest selected Modified Alternative E because he felt this alternative struck the right balance between the many demands and uses of the Chippewa and Superior National Forests. Forest age and species diversity will change from current condition in response to the needs for change (section 1.3.3 Need for Change in Management Direction), however other forest resources and objectives needed to be considered in making this selection.

PC# 2.7.1-2
Public Concern: The Chippewa and Superior Forests should consider the rarity of vegetative communities when planning and analyze the potential effects of natural disturbance events on rare communities.

-On cover types and age classes that are well-below RNV levels or scantily distributed.
-Particularly to the representation and distribution of the older and old-growth age classes and to cover types and vegetation age classes that require frequent maintenance-level disturbance such as fire.
-

Agency Response:
The Chippewa and Superior Forests took a landscape approach in revising the Forest Plans. Vegetative information is considered to be at a fairly coarse scale. Rates of natural disturbance were calculated section-wide

for Landscape Ecosystems (Appendix G, FEIS; Frelich 1999, 2000). While historically wind, fire, and other natural disturbances created the variety of forest ages and communities, the Forest Service assumed that a majority of the disturbance within the Chippewa and Superior would be created by timber harvest. Natural disturbances would still occur, but at a lower rate than historically (due factors such as fire suppression), and would be additive to the disturbance rates prescribed in the Landscape Ecosystem objectives in Chapter 2 of the Forest Plans. Major natural disturbance events and the subsequent changes to forest conditions, such as a large windstorm or fire, may have to be addressed by a forest plan amendment. Rare communities or those with very few acres and well below historic levels are difficult to incorporate into landscape level planning. The Forest-wide Desired Conditions and Objectives for Vegetation Management in Chapter 2 of the Forest Plans gives general and specific guidance that will be used during implementation of the Plans to account for these rare ecosystem elements and the additive disturbances that could affect them. Forest-wide objectives for vegetation include language to restore the diversity of tree species, shrubs, herbs, structural diversity, and ecosystem processes.

PC# 2.7.1-4
Public Concern: The Dualplan model should account for the constraints of the Recreation Opportunity Spectrum, spatial limitations, and patch size.

Agency Response:
The DualPlan harvest model did incorporate specific constraints related to Management Areas (MAs) proposed on the Chippewa and Superior. The MA's reflect the ROS objectives and offer varying recreation opportunities specific to the MA theme. For instance, Semi-primitive non-motorized MAs offer non-motorized recreation in a landscape with high scenic integrity. Modeling for spatial attributes (i.e. patch size or interior forest) has been included into model runs for the selected alternative in the Forest Plans. This allowed us to examine and evaluate the effect of meeting spatial management direction along with age and forest composition objectives. Section 3.2.2 in the FEIS outlines the environmental effects of meeting these multiple objectives. Forest Vegetation Spatial Patterns objectives are found in Chapter 2 of the Forest Plans.

PC# 2.7.1-5
Public Concern: The alternative modeled for the Final EIS needs to accurately reflect the Preferred Alternative in the Forest Plans

> **-By containing additional clarifications and additions that better reflect the assumptions used in the Dualplan model for with-in stand structural/compositional complexity.**
> **-Otherwise the Final EIS would be arbitrary and capricious.**

Agency Response:
The DualPlan harvest model did incorporate the harvest prescriptions listed as options to meet the Landscape Ecosystem based vegetation objectives set for the Preferred Alternative. Acres treated with these prescriptions for the preferred alternative are shown in Table FAC-31 in the Final EIS. In addition, the effect of these treatments and others considered in the harvest model are analyzed in Indicator 3, Use of Management Treatments that Increase Within-Stand Complexity, in Chapter 3.2.1 of the FEIS. The LE based forest vegetation objectives specific to Modified Alternative E ultimately drove the harvest model to utilize certain harvest methods that are reflected in Table FAC-31. These objectives will compel the Forest Service to achieve similar conditions on the Chippewa and Superior National Forests in implementing the Forest Plans.

Each Forest Plan revision alternative has a different approach to managing natural resources on the Chippewa and Superior NFs. When we modeled the alternatives we had to make decisions for the modeling rules that would best reflect the theme of each alternative. Because the model had limitations and assumptions (described in Appendix

B of the Draft EIS), we adjusted Modified Alternative E's Allowable Sale Quantity by 10% (Draft EIS, p. B-32). The rationale for the adjustment is described in Appendix B of the Draft EIS.

In the Final EIS, the description of Modified Alternative E has been modified to reflect the changes made to it in response to comments. Modified Alternative E was re-modeled as well to reflect more current existing condition data, to better meet the range of objectives, and in the context of changed Management Area boundaries.

PC# 2.7.1-11
Public Concern: The Superior NF should consider the forest land within the BWCAW when setting tree species diversity objectives and age class objectives for the range of alternatives in the Final EIS.

Agency Response:
The Landscape Ecosystem approach used in setting vegetation objectives did examine the forest land within the BWCAW (Appendix G of the FEIS). This approach examined historic tree composition throughout the ecological section, including within the Wilderness. Rates of disturbance characteristic to each LE were calculated based on historic information and observations. This also included the Wilderness. While the composition, age, and within stand diversity objectives were set for lands outside the Wilderness, these objectives were made in full consideration of the contributions of Wilderness. We utilized current vegetation information contained within the BWCAW Fuel Treatment EIS (USDA 2000) to specifically guide us in accounting for the Wilderness.

PC# 2.7.1-12
Public Concern: The Superior NF should manage forest vegetation age and composition to be more compatible with the activities of the primary visitor base.

-Hunters represent a relatively small proportion of visitors to the Superior.
-Because most visitors come to the forest for hiking, wildlife viewing, and solitude.

Agency Response:
You are correct about the primary visitor base for the Superior NF. Table ROS-1.5, NVUM Monitoring Summary (Annual RVDs) in Chapter 3.8.1 in the FEIS outlines these statistics. National forests are managed for multiple uses and benefits. The Superior NF will continue to be diverse in terms of animal and plant species and provide for a larger percentage of mature forest vegetation than for younger age classes. Much of the Forest outside the BWCAW will be managed to preserve the remote character of the landscape, with associated recreational opportunities and benefits. As a result, opportunities for hiking, viewing wildlife, and solitude continue to be available within a variety of forested settings across the Forest.

PC# 2.7.1-13
Public Concern: The Final EIS for the Superior NF should be amended to account for false assumptions used in the Draft EIS and to recognize spatial imbalances that would be created by the proposed Forest Plan.

-False assumptions are used on the contributions of the BWCAW to forest age, composition, and plant and animal diversity lead to a further loss of these features outside the BWCAW.
-The Forest Plan creates spatial imbalances in the distribution of older forest cover by allowing more intensive harvest adjacent to the BWCAW.

Agency Response:
The Forest Service believes that the BWCA wilderness contributes significantly to the vegetative and spatial diversity of the Superior National Forest and the ecological section it lies within. At this scale, it is believed that the BWCA provides well distributed habitat. The Regional Forester has chosen a management strategy that relies on the contributions of the BWCA for vegetation composition, age, and spatial patterns in ecological units and areas that overlap with the wilderness or are immediately adjacent to the wilderness. National Forest lands outside the BWCA in this area would place less emphasis on forest spatial patterns because of the contributions of the nearby wilderness and would place greater emphasis on age class and forest composition objectives in these areas.

On the Superior the strategy selected by the Regional Forester would set Spatial Zones to account for the contributions of the BWCA in management direction. Forest-wide, fragmentation of large mature or older upland forest patches will occur primarily in Spatial Zone 3. In Spatial Zones 1 and 2 the overall objective is to increase the number and acres in large patches during implementation of the Plan. In Zone 3, the emphasis is on meeting composition and age objectives for the landscape ecosystems.

PC# 2.7.1-14
Public Concern: The Chippewa and Superior NFs Final EIS and Forest Plans should include Landscape Ecosystem distribution and total departures from RNV at the Ranger District level in order to tier site-specific projects to the Forest Plan.

AND

PC# 2.7.3-1
Public Concern: The Chippewa and Superior Forest Plans should establish vegetation objectives and standards by LE and Ranger District.

-For effective implementation.
-For increased accountability.

Agency Response:
Project level implementation of the Forest Plans at the Ranger District level would be guided by the Landscape Ecosystem objectives and other forest-wide objectives for vegetation. The goal of the objectives chosen for the preferred alternative is not necessarily to move the Forests to within RNV for forest vegetation. Therefore, information on departures from RNV do not aid in determining how effectively a project moves the Forest towards meeting the objectives in the Forest Plans. RNV was used in the EIS as a reference point for change and evaluating ecological effects among a range of planning alternatives. It is also calculated at a landscape scale that may not be applicable at a Ranger District level. Implementation of the Forest Plans will also incorporate activities to meet objectives other than strictly vegetation objectives. An individual project may not move the Forest towards Landscape Ecosystem objectives, but it may contribute towards a riparian objective for instance. Cumulatively, though, projects across the Forests are expected to meet the full range of objectives during the life of the Plans. Monitoring and evaluation will determine if these objectives are attainable and if Forests are on track to meet projected outcomes.

PC# 2.7.1-15
Public Concern: The Final EIS and Forest Plans should identify specific techniques for restoration of native species by LE, current conditions, the cost estimate needed to move Forests back to NRV.

Agency Response:

Specific techniques for restoration will be addressed at the project level where the goals and objectives of Forest Plans are implemented and achieved. Because of the strategic scope of the Plans and analysis the FEIS analyzed the degree to which each alternative moved forest composition, age, within stand diversity, and spatial patterns from current condition and in relation to the range of natural variation (RNV). The goal of the revised Forest Plans is not to move Forests back to RNV, though this historic condition is used as a reference for all of the alternatives considered in the FEIS. The Purpose and Need for Change (Ch. 1.3 in the EIS) outlines the driving issues in Forest Plan revision including tree species that were historically more abundant.

PC# 2.7.1-16
Public Concern: The Chippewa and Superior NFs should discuss and analyze the shrub and herb layers of Landscape Ecosystems and LTAs.

> **-So that Ranger Districts can set priorities for non-tree vegetation beyond sensitive plant species protection.**
> **-So that shrubs can be assessed in relation to RNV.**
> **-To clarify information in Draft EIS Appendix G, including any relationship to Minnesota DNR ECS field guide.**
> **-So that the Forest Service can restore these habitat elements to their natural distribution and frequency.**

Agency Response:
The context that we used for both the Superior and Chippewa NFs was that of Ecological System and Native Plant Communities in the Laurentian Mixed Forest Province (Aaseng et. al. 2003) and earlier versions for the Chippewa in Almendinger and Hanson (1998). RNV for vegetative cover other than forest trees is lacking because quantitative data for historic conditions do not exist. Inferences could be made on shrub layer conditions that occurred historically, however the quantitative methodology to estimate the historic range developed by Frelich (1999, 2000) could not be used. To this end, vegetation objectives O-VG-8 (CNF) and O-VG-7 (SNF) in chapter 2 of the Plans compels Forests to restore to a more representative condition the diversity of shrubs and herbs, including sensitive or rare shrubs and herbs.

PC# 2.7.1-17
Public Concern: The Forest Service should identify the data source for the statements regarding state-wide changes to forest cover types.

Agency Response:
Table HEIS-1 on page H-4 of the DEIS Appendix H came directly from table 5.8 on page 5-15 of the Final GEIS study on Timber Harvesting and Forest Management in Minnesota, April 1994.

PC# 2.7.1-18
Public Concern: The Forest Plans should, to a greater degree, retain, conserve, develop, and grow older-aged, mixed species, and greater sizes of forest stands.

> **-Because these Forests are important for migratory song birds and species that depend on less-disturbed interior forest habitat.**
> **-To develop higher value forest products.**

Agency Response:
The Preferred Alternative has LE based vegetation objectives that include older aged and mixed species forest stands within the context of the other objectives in this alternative. In addition, Forest Vegetation Spatial

Objectives would have the forests increase forest patch sizes, numbers of patches, and amounts of interior forest forest-wide on the Chippewa and in Spatial Zones 1 and 2 on the Superior. Harvest and spatial modeling completed for the FEIS indicates that these objectives are feasible with the large combination of objectives in the Preferred Alternative. The FEIS Chapter 3.4.3, Mix of Forest Products, addresses how alternatives would provide various timber products. The Preferred Alternative would generally benefit sawmills with increased saw timber availability. Other alternatives increase these landscape elements or produce higher value forest products to a greater degree, but the Regional Forester believes the Preferred Alternative better balances multiple uses on the Forests.

PC# 2.7.1-20
Public Concern: The Chippewa and Superior NFs should do more to protect biodiversity for the long term.

> **-To protect the economic base for tourism and recreation.**
> **-Because the biodiversity of the Chippewa and Superior NFs is the unique feature that draws people and sets these places apart from their surroundings.**
> **-By providing for complete, functioning, and diverse forests.**

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying Management Area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws under which the National Forests are managed. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs including protecting biodiversity. The Regional Forester looked at all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The ROD also discusses how the issues are addressed by the Alternatives, including the Selected Alternative.

PC# 2.7.1-23
Public Concern: The Forest Plans must put the needs of the forest before those of the market and extracting industries.

Agency Response:
Forest Plans attempt to balance a range of demands from National Forests, including market and extracting industries, species habitats, and ecological restoration. The Regional Forester feels that the Preferred Alternative for the Chippewa and Superior Forests strikes this balance and will result in healthy forests in the long term.

PC# 2.7.1-24
Public Concern: Forest Plans should recognize that mature forest ecosystems take generations to create.

Agency Response:
We recognize that many structural attributes of mature or older forest ecosystems require more than the minimum of 40 years we assigned to some forest types to reach a “mature” condition. This is a generalization we used to address a minimum economic or harvest rotation age and a minimum age where the forest structure begins to more resemble later successional stages or older forest communities than younger forest communities. This generalization was also used to characterize habitat conditions for wildlife such as canopy closure, tree size, and tree mortality. These factors of habitat quality change measurably for many forest communities after age 40.

PC# 2.7.1-27
Public Concern: The Chippewa and Superior NF Forest Plans should not extend age class structure because this would contribute to an already out of balance age class structure.

Agency Response:
In the context of attempting to meet multiple land management objectives and to work towards long-term desired conditions, there is a need to extend some age classes in order to achieve composition and spatial objectives in the Forest Plan. We project that some forest management activities and forest succession will help each Forest meet the age class and composition objectives for older forest. Disturbance rates (harvest rates) on each forest in the Preferred Alternative are predicted to be more than adequate to meet the habitat needs of grouse, woodcock, deer, moose, and golden-winged warbler (Chapter 3.3.6 in the FEIS). On the Chippewa this rate would be slightly less than that of the last decade and greater on the Superior than that of the last decade.

PC# 2.7.1-28
Public Concern: Chippewa and Superior Forest Plans need to better recognize the role of natural disturbance, including fire and wind, because fire in a managed forest behaves differently than in old growth.

Agency Response:
We recognize that fire behaves differently in managed forest than in old growth. We also recognize that fire has been largely excluded from the landscape on either harvested or unharvested sites. The vegetation objectives for selected alternative for the Chippewa and Superior National Forests propose to increase forest components and processes that were once more common on the Forests including the amount of old and old growth forest, the amounts of conifer species and the amounts of older red and white pine. Other desired conditions (e.g. D-VG-5) compel the Forest Service to use fire and other management activities to change vegetative condition within ecologically and socially acceptable ranges. In combination, we believe that the future landscape will better resemble the historic landscape in terms of species composition and ecological processes.

PC# 2.7.1-30
Public Concern: The Forest Service should adopt an old forest definition as forests beyond rotation age for specified forest types because how old forest is defined appears to have reduced the amount of forest available for harvest consideration.
Agency Response:
Forest available for harvest consideration is based on a combination of LE based vegetation objectives, land suitability, Management Area designation, and other management direction in the Forest Plan (i.e. objectives, standards, guidelines). Some of these are specific to the Preferred Alternative, others are common to all alternative management scenarios. These interact to result in a set of outcomes for the Forests. In the case of the Preferred Alternative, the Regional Forester felt that this alternative struck the right balance of outcomes for each Forest. Other alternatives do result in more harvest and less old forest. This is at the expense of other social, ecological, or economic qualities.

PC# 2.7.1-31
Public Concern: The Forest Service should balance ecological, economic, and social goals proposed in Forest Plans, by conducting a sensitivity analysis on the impacts of providing old forest in relation to timber outputs.

Agency Response:

We analyzed a range of planning alternatives in the FEIS that examined a range of harvest levels and levels of old forest, among other indicators. We believe that the economic, social, and ecological trade-offs have been documented in the FEIS.

PC# 2.7.1-35
Public Concern: Forest Plans should use silvicultural prescriptions as the predominant tool to accomplish long range goals and objectives.

Agency Response:
The Forest Plans under Appendix D, Proposed and Probable Practices, shows that timber harvests will be the predominant tool for accomplishing the long range goals and objectives. The desired conditions and objectives for vegetation in Chapter 2 of the Plans also indicate that harvests and silviculture will be the predominant tool for accomplishing changes to forest cover.

PC# 2.7.1-36
Public Concern: Forest Plans should include the use of herbicides as a key tool in vegetation management.

Agency Response:
Herbicide use is not precluded by the revised Forest Plans. However, project level analyses will need to be completed before herbicides could be used.

PC# 1.4.1-3
Public Concern: The Final EIS should use information from state-of-the-art research on forest vegetation.

Agency Response:
We considered the papers you mention in the analysis of vegetation in the EIS. Page 6 of the References section in the EIS shows three papers cited with Dr. Host as primary author. We feel that we generally did use state-of-the-art research in the EIS. We agree that there has been a great reduction in multi-aged forest from historic to current conditions.

PC# 4.1-62
Public Concern: The Plans should not increase harvesting in lowlands and old growth.

Agency Response:
We analyzed a range of planning alternatives in the FEIS that examined a range of harvest levels in lowlands and levels of old forest, among other indicators. The Regional Forester believes that the Preferred Alternative balances amounts of these resources with other desired resources and conditions on the National Forests.

PC# 2.7.1-36a
The Chippewa National Forest should emphasize conservation of genetic stock of true white oak in the Forest Plans.

Agency Response:
While species at the edge of their range (such as Quercus bicolor) are important features on National Forests,

Forest Plans generally set management direction for a National Forest at a broad programmatic level – especially in the context of changing scientific knowledge. Project level analyses are better able to deal with new knowledge and the tree by tree scale of the issue you describe.

Vegetation concerns relating to Forest Plan Desired Conditions, Standards, Guidelines, and Appendices (2.7.2)

PC# 2.7.2-1
Public Concern: The Plans should have revised wording for D-VG-6 and D-VG-7.

Agency Response:
We recognize that there may be multiple ways to achieve healthy forests. RNV serves as a reference point for past ecological conditions, that if emulated, would result in sustainable forest systems, viable species populations, and healthy forests. Scientific literature and expert opinion concur that current patterns and conditions have degraded and diminished from historic conditions. The selected alternative for the Chippewa and Superior National Forests do not propose to return forest conditions to historic conditions (RNV), but to return some aspects of the forests to within RNV, others closer RNV, and still others that will remain outside of RNV. We believe that these desired conditions are appropriate to guide the Chippewa and Superior National Forests in the Forest Plans.

PC# 2.7.2-2
Public Concern: The Forest Plans should revise desired condition statements for fuels, insects, and disease.

-For D-ID-1.
-For D-ID-4.
-For D-PH-1.

Agency Response:
The General Forest MAs on the Superior and Chippewa National Forests represent the single largest MA on each forest excluding the BWCAW on the Superior. As such, management of insect and disease outbreaks could potentially be far-reaching. However, it is not the intent of the Forest Plans to limit management of insect and disease outbreaks to only the General Forest MA. The desired conditions that you list and the accompanying objectives apply forest-wide on each forest regardless of MA. Desired conditions such as D-VG-5 or D-VG-8 also apply forest-wide and compel the forests to consider ecological and social issues related to disturbances such as fire, insects, diseases, or others. There are, however, other multiple use objectives that must be considered and worked towards in combination with those desired conditions and objectives for fire, insects, and diseases. Other objectives may take precedence in any given project, though overall each forest desires to meet all of the objectives within the planning period covered by the Forest Plans.

PC# 2.7.2-3
Public Concern: The Forest Plans must include logging methods reflected in the "proposed and probable harvest treatments by Management Area" (CNF D-3 and SNF D-3) and include management direction to produce the results from partial or selection harvest modeled in Dualplan.

Agency Response:
Objectives and constraints were used to drive the DualPlan harvest model. Model results include projected forest composition, age, and spatial patterns outcomes. Model results also can account for various treatment methods used in the model to achieve the driving objectives within a model run. We expect that a similar amount and array of harvest methods would be needed to meet Plan objectives during implementation in coming years. However, it is unlikely that we will be able to exactly do what the model is predicting. In addition, multiple objectives will need to be considered and effects disclosed on any project. These objectives include consideration of activities to create beneficial effects for wildlife or mitigative effects to projects on wildlife. Periodic monitoring during implementation of the Forest Plans will determine if effects to wildlife are within those expected in the FEIS.

PC# 2.7.2-4
Public Concern: In Forest Plans, if S-VG-3 is retained in this form

-There should be a requirement that prevents the conversion by logging
-Further define what constitutes "larger diameter trees" and methods for retention.

Agency Response:
The objective for large patches of Red and White Pine on the Superior NF (Objective O-VG-18) is to maintain the large patch character, including interior forest, and the character of mature or older vegetation communities. Standard S-VG-4 sets a lower limit for management for stand conditions, while the National Forest would usually be working toward meeting the objective. Generally, management direction is striving to maintain relatively rare ecosystem elements such as these. It is unlikely that such stands would be converted to another forest type through management. It is difficult to define conditions for every forest stand, given the wide variability that exists. Project level, stand-specific prescriptions would address the characteristics of 'large diameter' trees and requirements to retain them.

PC# 1.0.6-2
Public Concern: The Final Plans should be more aggressive and move more quickly toward the range of natural variability.

-To improve habitat for native wildlife and threatened and endangered species.
-Because grouse, deer and woodcock will still be present in huntable numbers.
-Through a reduction in harvest in under-represented vegetation.
-Through a reduction of harvest levels until RNV is achieved.
-Through the use of fire to mimic historic conditions and maintain pine forests.
-By having quantifiable objectives to achieve within the life of the Plans.
-Making more progress towards Desired Conditions during the life of the Plans.

Agency Response:
The goal of the objectives chosen for the selected alternative is not necessarily to move the Forests to within RNV for forest vegetation. RNV was used in the EIS as a reference point for change and evaluating ecological effects among a range of planning alternatives. The EIS analyzed the degree to which each alternative moved forest composition, age, within stand diversity, and spatial patterns from current condition and in relation to the natural range of variation (NRV) or the historic range of variation (HRV). Implementation of the Forest Plans will also incorporate activities to meet objectives other than strictly vegetation objectives. An individual project may not move the Forest towards Landscape Ecosystem objectives, but it may contribute towards a riparian objective for instance. Cumulatively, though, projects across the Forests are expected to meet the full range of objectives

during the life of the Plans. Monitoring and evaluation will help to determine if these objectives are attainable. The Purpose and Need for Change (Ch. 1.3 in the EIS) outlines the driving issues in Forest Plan revision.

The Selected Alternative represents what Forest managers believe to be the best balance of outcomes and rate of change in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The Regional Forester looked at all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The ROD also discusses how the issues are addressed by the Alternatives, including the Selected Alternative.

PC# 1.0.6-3
Public Concern: The Plans should manage vegetation within the range of natural variability.

- To assure that management does not exceed the ecosystems capability to be sustainable.
-Because ecosystems within RNV are more resilient and health.
-Because managing outside RNV presents a high risk of loss of viability for wildlife species.
-Because it is necessary for the Forest Service to fully commit to these goals to achieve the desired future forest condition of the larger landscape.
-Because the forest condition will eventually result in an increase in tourism for the area.
-Because alternatives outside the range of natural variability do not have a scientific basis in sustainability.
-To respect forests as a natural system.
-To achieve biological integrity, increase jobs, economic growth, recreation, and beauty.
-To manage with an enlightened, ecological approach.

Agency Response:
The Regional Forester selected a preferred alternative that he believes best balances multiple needs from the National Forests. Managing Forests to be within RNV would have other associated trade-offs that, in combination, the Regional Forester felt would result in a less desirable blend of outcomes. Some growth stages of Native Plant Communities would be represented within RNV, while others are above or below RNV. The Regional Forester believes that this combination of conditions is sustainable.

PC# 1.0.6-9
Public Concern: The Plans should bring RNV management direction into the standards and guidelines section.

Agency Response:
We considered this suggestion, but felt that the LE based vegetation objectives were the correct driver for compelling change on each National Forest. Other limits to management (standards and guides) are in the Plans that limit certain kinds of changes to stand structure, composition, or size. These are placed in the context of moving the Forests towards the LE based vegetation objectives. Moving the Chippewa and Superior to be within RNV is not the goal of the selected alternative.

PC# 1.0.6-12
Public Concern: The Plans should describe what the forests will look like under the RNV concept over the long term (100 years).

Agency Response:
We believe that the entire collection of goals and desired condition statements in each Forest Plan accomplishes what you are suggesting. The desired conditions in the Forest Plans may be different than what you describe as desirable, however the Regional Forester selected this alternative because he felt it strikes the right balance of multiple use considerations.

Vegetation concerns relating to Forest Plan Objectives (2.7.3)

PC# 2.7.3-3
Public Concern: The Superior NF should set LE objectives for the 150+ age class in the Forest Plan.

Agency Response:
Vegetation Age Class Objectives for each Landscape Ecosystem (Chapter 2 of the Forest Plan) do list age class objectives for old forest. Depending on the LE, this oldest age group may be 100 years or greater, or it may be 150 years or greater. These tables in the Forest Plan and the tables cited in the EIS (e.g. Table FAC-25) show decadal projections of what could be achieved by Decade 1 or 2 and the long term goal (Decade 10) for the management scenario (i.e. the alternative). In the short term it may be difficult to make significant gains in these oldest age groups of forest simply because there isn't much forest growing into the oldest age group in the next decade.

PC# 2.7.3-4
Public Concern: The Chippewa and Superior NFs should set measurable objectives for vegetation including tree species diversity and naturally disturbed areas.

-In order to achieve habitat protection and restoration.
-For tree species such as white pine
-In order to make measurable progress toward desired conditions
-These should be set at the ranger district level to target the largest gap in that work area
-For representation of naturally disturbed areas
-In order to identify how many acres of each forest type would be harvested and represented on the Forests in the future.

Agency Response:
The Regional Forester has chosen to take a strategic approach to land management planning, where desired conditions and objectives point the direction of change but usually do not state specific numbers to achieve. Objectives for habitat protection, restoration, white pine, natural disturbance, and other aspects of vegetation are contained in the Forest Plans. Interactions with other objectives at the project level will determine how much of these activities are appropriate in that project. Calculation made at a landscape scale may not be applicable at a Ranger District level. Implementation of the Forest Plans will also incorporate activities to meet objectives other than strictly vegetation objectives. An individual project may not move the Forest towards Landscape Ecosystem objectives, but it may contribute towards a riparian objective for instance. Cumulatively, though, projects across the Forests are expected to meet the full range of objectives during the life of the Plans. Monitoring and evaluation will determine if these objectives are attainable and if Forests are on track to meet projected outcomes.

PC# 2.7.3-6
Public Concern: The Forest Plans should not have objective O-VG-12, to have an adequate representation of naturally disturbed forest.

Agency Response:
Like other objectives in the Forest Plans, objectives O-VG-12 (CNF) and O-VG-11 (SNF), take a strategic approach and sets a direction for each Forest to go. At the project level, amounts that define 'adequate' would be identified and would be appropriate in the context of the other proposed multiple uses in that project area. This objective helps meet habitat requirements, and thus helps maintain viability, for species such as the black-backed woodpecker and the three-toed woodpecker (Biological Evaluation). Representative amounts of naturally disturbed forest also contribute to habitat for the Canada lynx, a threatened species. Guidelines G-WL-4 and G-WL-5 for lynx call for retaining portions of blow down and demonstrate that meeting objectives O-VG-12 (CNF) and O-VG-11 (SNF), would also meet habitat needs for the lynx. These guidelines define 'adequate' habitat for the lynx.

PC# 2.7.3-7
Public Concern: The Forest Plans should have objectives to achieve the desired condition of improving forest productivity, including growth or yield.

Agency Response:
The Forest Service manages Federal forest land under a multiple-use mandate. We believe that the objectives for vegetation and other resources identified in the selected alternative will result in improved productivity within forest communities by working towards conditions that are more representative of historic composition, age, and spatial patterns. Conditions desired from the Forest Plans are ecologically (e.g. D-WS-12, D-VG-2) and socially (e.g. D-VG-2, D-WL-2, D-SE-1) sustainable conditions which, in turn, would contribute to economically sustainable conditions within the National Forests and affected communities. Desired condition D-TM-1 states sustainable and consistent harvest levels as the condition the Chippewa and Superior National Forests wish to achieve. Objective O-TM-1 states that sustainable harvest levels will result in a variety of forest products coming from the National Forests.

PC# 2.7.3-8
Public Concern: The Forest Plan vegetation objectives should factor in the additive disturbances of harvest, wind, fire, and insects/disease because the additive impact has the potential to shift the Forests even further from RNV.

Agency Response:
The Forest Service would likely consider amending a Forest Plan if an extensive disturbance substantially changed the condition of forest vegetation. For example, the Superior addressed the large blow-down event in the BWCAW with an EIS. Other smaller scale natural disturbance events would be considered additive to the disturbance planned through achieving vegetation objectives. Monitoring and evaluation would determine if disturbances, in total, are within expected amounts.

PC# 2.7.3-9
Public Concern: The Forest Plans should ensure that positive steps are made toward long-term desired conditions during the life of the plans (the next 15 to 20 years) rather than allow declines during this time period.

-For large mature upland forest patches

-For age class distribution
-For restoration of rare plant and animal habitat

Agency Response:
The Forest Plans have a large array of objectives that they are attempting to meet within the implementation periods for which they apply. The Regional Forester has selected an alternative that makes varying progress towards age class objectives for mature or older forest, large mature upland forest patches, and habitat restoration depending on the Forest and the landscape ecosystem examined. Overall, he feels that this alternative strikes the right balance of multiple use outcomes.

On the Chippewa analysis of Modified Alternative E in the Final EIS shows, with the Landscape Ecosystem vegetation objectives for forest type composition and forest age, Objective O-VG-19 to increase large mature/older upland patches and O-VG-21 to increase interior forest can be met within the implementation period for the Forest Plan. This analysis recognizes that some decreases may be realized in these indicators in Decade 1 of implementation, but at the end of 15 years existing amounts are exceeded. Amounts of forest over 100 years old increases during implementation. While other alternatives may increase large patches, interior, or restore rare plant and animal habitat to a greater degree than the selected alternative, all species are expected to remain viable under this scenario. This alternative provides a coarse filter that at least maintains minimal conditions to sustain all species.

On the Superior revisions to Modified Alternative E established objectives for Spatial Zones 1, 2, and 3 for large mature/older upland forest patches and interior forest. The Spatial Zones account for the contributions of the BWCA acres and setting, or other unmanaged lands within the same ecological setting and proximity, in management direction. In Spatial Zones 1 and 2 the overall objective is to maintain or increase the number and acres in large patches and interior forest during implementation of the Plan. In Zone 3, the emphasis is on meeting composition and age objectives for the landscape ecosystems and allow for but strive to minimize decreases in these spatial elements. Analysis based on modeling of forest vegetation objectives and spatial patterns shows that numbers and acres of large mature/older upland forest patches will decrease during implementation of the Forest Plan on the Superior National Forest. Amounts of forest over 100 years old increases during implementation. This alternative provides a coarse filter that at least maintains minimal conditions to sustain all species. Other management strategies were considered by the Regional Forester. However, he feels that the selected alternative best balances the range of multiple uses on the Superior National Forest.

PC# 2.7.3-10
Public Concern: The Forest Service needs to demonstrate a stronger commitment to making the forest type changes indicated in the Forest Plans.

-Because other opportunities to make similar forest type changes have not been acted upon and converting from aspen to pine species will require more intensive work.
-Current objectives in the Plans propose changes that are too gradual during implementation period.
-Funding levels to accomplish such work have generally been inadequate.

Agency Response:
Our analysis and experience projects that the activities used to achieve forest type objectives are realistic. Some sites may require multiple treatments to achieve the site objective. We have incorporated the costs of achieving forest composition shifts in our modeling and these will aid in project planning to achieve Forest Plan objectives. As with all activities, priorities and our ability to accomplish the work are set by budget direction. The Regional Forester believes that the objectives set the right trajectory for change in the context of other uses.

PC# 2.7.3-11
Public Concern: Forest Plan objectives for forest vegetation need to be clear and accountable by providing clearer rationale or assumptions used for the 100 year goals.

Agency Response:
We believe that we have clearly stated the ecological assumptions for successional pathways in Appendix G of the Final EIS. These are based on Frelich (1999, 2000). The objectives for forest vegetation (Chapter 2, Forest Plan) for the selected alternative set age class, forest type, and tree species diversity changes that would occur during implementation of the Forest Plans. Achieving the objectives during implementation sets each forest on a trajectory to meet the 100 year goals. Modeling of forest vegetation in DualPlan indicates that these long-term goals can be met. There are a number of trajectories (short-term implementation strategies) that can be taken to reach the long-term goals. Monitoring of Forest Plan implementation will determine if short-term objectives and long-term goals are attainable.

PC# 2.7.3-12
Public Concern: Forest Plans need to clarify if timber volume or harvest acres is the goal in meeting objectives in the Plans, in order to better show the relationship of the objectives to ASQ.

Agency Response:
We believe it is important to be able to achieve the vegetative objectives in the plan, and in doing so to produce the estimated outputs and products. Therefore, achieving the vegetative objectives outlined in the Forest Plans is closely tied to the Allowable Sale Quantity figure. Based upon public comments received, we have re-looked at the yield figures and constraints used in modeling. As a result of this analysis, we have adjusted the volumes upward to more closely reflect expected timber outputs. We believe this will minimize the likelihood of not being able to achieve vegetative objectives as a result of timber sale ceiling constraints.

PC# 2.7.3-13
Public Concern: Forest Plans should set measurable objectives for structural and species diversity.

-To include a component of longer-lived species in shorter lived forest for 2-3 cutting cycles.
-In thinnings by retaining 5-30% of stands in an un-thinned condition.

Agency Response:
The Regional Forester selected a strategic approach for the Chippewa and Superior Forest Plans. Specific components and conditions are generally not addressed. However, desired condition D-VG-6 promotes diverse structure in native vegetation communities that have been harvested, salvaged, or prescribe burned, or have undergone natural disturbance. We believe this could compel consideration of reserving a component of longer-lived species and retaining a portion of stands in an un-thinned condition in the context of other multiple use consideration.

PC# 2.6.4-37
Public Concern: The Plans should clarify vague O-VG-22 to:

- **Define characteristics of mature or older native upland forest vegetation.**
- **Reference Draft EIS or planning record descriptions of growth stages and native plant communities.**

- **Explain how it will monitor and evaluate success at achieving this Objective.**

Agency Response:
We can provide additional information and direction to other clarifying information within the Plans for this objective. Objectives O-VG-22 (CNF), and O-VG-18 (SNF) refers to large (300 acres plus) forest patches of mature or older upland forest. In the context of this objective, mature or older forest can be determined by examining Table APP-C2 in Appendix C of the Forest Plan. This table identifies by forest type when a stand becomes mature or is in an old, old growth, or multi-aged condition. Since different forest types develop conditions that characterize older forest stands at different ages, we make this distinction by forest type. While every forest stand that fits within these age categories may not contain all of the characteristics we desire, forest stands that are mature or older will contain larger trees and contain more woody debris than younger forest stands. These stands often have closed canopies and may begin to show multiple age cohorts of later successional forest species. These dynamics are discussed in the Draft EIS in sections 3.2.1 and 3.2.2. Spatial indicators and affected environment discussions on p. 3.2-50 through 3.2-52 in the Draft EIS provide more detailed information and literature citations. Appendix G of the Final EIS contains descriptions of growth stages by Landscape Ecosystem (LE). The older growth stages by LE coincide with the mature or older aged forest by forest type. Many forest tree species are found on every LE, others predominate on certain LEs. We set minimum conditions with standards and guides for large mature/older upland patches to maintain patch acres, patch numbers, and within patch conditions. At a minimum, canopy closure must be at least 50% within forested patches. Objectives O-VG-22 (CNF) and O-VG-18 (SNF) would compel the Forest Service to manage for more than these minimum conditions.

PC# 2.6.4-63
Public Concern: The Plans should clarify O-VG-3 for the Superior NF because it seems to contradict the objective shown in Table NSU-2.

Agency Response:
Objective O-VG-3 was eliminated for the Superior National Forest rather than to have forest-wide management direction that could conflict with the LE specific objectives. With this change, each LE's objectives for paper birch would dictate the appropriate action. Table NSU-2 does indicate a decrease in paper birch in Decades 1 and 2 based on model projections, and a desire to slightly lower the amount of paper birch forest type in the long term. Table NSU-2 represents a forest-wide melding of the LE based forest type objectives. The LE vegetation objectives for the paper birch forest type variably maintain, slightly increase, or slightly decrease the amount of the paper birch forest type for the selected alternative. Within-stand paper birch objectives by landscape ecosystem are variable (tables JPB-3, DRW-3, MRW-3, MBA-3, SMA-3). Monitoring and evaluation of forest conditions will help us evaluate if the Forest is meeting this objective.

PC# 1.0.6-8
Public Concern: The Plans should continue to include the goal of returning forests closer to RNV, but should reserve pine stands and clumps of pines in other stands from harvest until new pine plantings are close to maturity.

Agency Response:
The selected alternative analyzed in the Final EIS and displayed in the Forest Plans increased the amount of pine on the landscape over Alternative E displayed in the Draft EIS. We believe that we are increasing restoration of pine in the first decade. Desired condition D-VG-6 promotes diverse structure in native vegetation communities that have been harvested, salvaged, or prescribe burned, or have undergone natural disturbance. We believe this would compel consideration of reserving clumps and stands of pine in the context of other multiple use consideration.

PC# 2.3.3-3
Public Concern: The Plans should include first decade objectives that move the Forests at least 1/10th the way toward achieving the long term goals for vegetative composition and tree diversity to lessen the impact on future forest managers

Agency Response:
We recognize that the vegetation objectives for the selected alternative do not take a linear approach to achieving the long-term vegetation goals. The selected alternative provides a balance of meeting short-term forest and landscape conditions with meeting long-term goals. The Regional Forester feels this approach best balances multiple uses on the Chippewa and Superior National Forests. Other alternatives that were examined set different trajectories for change on each forest. Some alternatives would change the Forests in a shorter amount of time or to a greater degree from existing condition as you suggest. The effects of these alternatives were analyzed in the Final EIS.

Vegetation concerns relating to Fire, Insect, Disease, and Forest Health (2.7.4)

PC# 2.7.4-2
Public Concern: The Chippewa NF should focus primarily on growing healthy trees.

Agency Response:
The Forest Service believes that it is and will continue to grow healthy forests on the Chippewa National Forest in the context of managing for many other uses of the National Forest. Accomodating multiple uses is the legal mission of the Forest Service. The Forest Plan provides the strategic guidance to accomplish what you propose for healthy trees, but also for healthy watersheds, viable wildlife populations, healthy and sustainable ecosystems, and to contribute to healthy communities and economies.

PC# 2.7.4-3
Public Concern: The Forest Plans need to consider techniques that will reduce the risks of budworm and shoot blight diseases.

Agency Response:
We recognize that the indicators for budworm and shoot blight may increase for the selected alternative. We have added additional language to the desired condition statements for Insect, Disease, Fire and Disturbance Processes to distinguish between expected levels of insect and disease outbreaks as had occurred in the historic range and epidemic levels of infestations or outbreaks. We recognize that insects and diseases play a role in forest ecosystems that includes creation of habitat and contributing to ecosystem function. When levels of insects and disease reach epidemic proportions, other forest uses or functions may be compromised. Our intention is not to fight every infestation. A full range of management options would be available to address epidemics. We believe that the desired conditions and objectives in the Forest Plans for insects/diseases (D-ID-1, D-ID-2, D-ID-3, O-ID-1) and forest vegetation management (D-VG-1, D-VG-2, D-VG-3, D-VG-4, D-VG-8, O-VG-1, O-VG-12 (CNF), and O-VG-11 (SNF)) compel the Forest Service to address epidemics of these or other insect or disease pests. Individual projects would identify the extent of the need and best methods for addressing an epidemic in the context of other multiple use needs and objectives including watershed health, plant communities, wildlife habitat, or recreation interests.

PC# 2.7.4-5
Public Concern: The Forest Service should manage the Chippewa and Superior NFs for forest health and should proactively manage lands to achieve this goal.

> **-By having the flexibility to manage the entire National Forest land base for forest health**
> **-Including Shipstead-Newton Nolan lands.**

Agency Response:
Certain land classifications within a National Forest are precluded from scheduled timber harvest because of their origin in Federal law. These include Shipstead-Newton Nolan lands, wilderness, and RNAs. As such, the management options for pro-active management on these lands are more limited. Forest health would need to be addressed in the context of the primary purpose and limitations for these land designations.

Forest Plans for the Chippewa and Superior National Forests are outcome based. Each forest has a set of LE based vegetation objectives that compel management of the forest to meet these objectives. We believe that the forest-wide desired conditions and objectives for vegetation along with the LE based objectives will result in healthy forests and address the many other uses of the National Forests.

PC# 2.6.4-84
Public Concern: The Final EIS should explain the discrepancy on the use of prescribed fire on lowland conifer sites between the Minnesota Forest Guidelines and the Plans.

Agency Response:
It is not clear that there is a discrepancy on the use of prescribed fires on lowland sites between the MN Forest Guidelines and the Forest Plans. The Chippewa and Superior Forest Plans recognize, at a minimum, all of the guidelines contained in the Voluntary Site-level Forest Management Guidelines volume (Forest Plans page 1-6). In the case where Forest Plan standards and guidelines are more stringent, these will be followed.

PC# 1.4.1-2
Public Concern: In the Final EIS, the model should assume that there would be future loss of cover types or timber volume to fire, disease, wind, or climate change to prevent the model from overestimating or underestimating outcomes.

Agency Response:
We recognize that stochastic events will occur within the life of the Forest Plans and within the planning horizon. We anticipate that small scale natural disturbances will be accounted for, but may be additive to the proposed disturbances in the Landscape Ecosystem based vegetation objectives. In the event of a large, landscape scale disturbance event Forests would likely revise or amend their Forest Plans to account for the changed condition. The Forest Service examined rates of natural disturbance under historic conditions for the Chippewa and Superior landscapes (Frelich 1999, 2000) and set disturbance rates in reference to RNV for the selected alternative. Through the Forest Plans, the Forest Service would work towards meeting the vegetation objectives (including rates of disturbance) using timber harvest as the primary tool. Modeling projections are estimates of possible ways that a Forest Plan could be implemented on the ground, however we recognize that it is unlikely that implementing the Forest Plan will exactly reflect modeling projections. The Forest Service must comply with all existing and applicable laws, including NFMA. We expect that monitoring and evaluation of Forest Plan implementation will help the Forest Service determine how realistic the objective-based outcomes and related outputs are for the selected alternative.

Vegetation concerns relating to Old Growth (2.7.5)

PC# 2.7.5-2
Public Concern: The Forest Service should place greater emphasis on and protect old growth forest in the Forest Plans.

-Because there is only a small amount of old growth
-Because creating young forest can be done more easily than old growth forest.
-To increase the amount of old forest conditions than what is proposed in Alternative E.
-To make up for the lack of old growth on other ownerships
-To provide trees to make oxygen
-To protect Minnesota's most important heritage
-In the context of mixed ownership, young forest habitat can be provided by state, county, and private lands.
-It is unlikely that the economy would be affected by any decrease of game populations and revenues due to hunting because habitat can be provided by state, county, and private lands.

AND

PC# 2.7.5-11
Public Concern: The Forest Plans should include a goal, objective, and standard to inventory, designate, and protect old growth stands to prevent further losses of Old Growth and large patches due to harvest fragmentation.

AND

PC# 2.7.5-15
Public Concern: The Forest Plans should designate more old growth to be protected than identified in the Minnesota Generic EIS.

AND

PC# 2.7.5-30
Public Concern: The Plans should provide for quality old growth.

AND

PC# 2.7.5-22
Public Concern: The Chippewa and Superior NFs should protect "primary forest".

Agency Response:
Tables FAC-1 and FAC-2 in the FEIS display the forest-wide existing amounts of upland forests, outside the Boundary Waters Canoe Area Wilderness, by vegetation growth stage and compares them to the range of natural variability amounts. The existing percentages in the age classes which would be expected to provide old-growth conditions are considerably lower than the amounts as they would have been when the Chippewa and Superior landscapes were functioning within the range of natural variability. The Chippewa and Superior National Forests understand the value and importance of the remaining old-growth stands which meet the old-growth definitions for northern Minnesota. Many of these exhibit the stand characteristics found in high quality examples of the old-growth forest types.

Under Vegetation Management, the revised Forest Plans provide specific Desired Condition statements (D-VG-1, D-VG-2, D-VG-3 and D-VG-6) and Objectives (O-VG-14 (CNF), O-VG-13 (SNF), O-VG-15 (CNF), O-VG-14 (SNF), O-VG-16 (CNF), O-VG-15 (SNF), O-VG-17 (CNF), O-VG-16 (SNF), O-VG-22 (CNF) and O-VG-18 (SNF)) regarding the forest-wide emphasis, direction, distribution, and stand characteristics related to old-growth forests. The Landscape Ecosystem Objectives section provides quantified increases, by landscape ecosystem, in the vegetation growth stages expected to provide stands with old-growth forest characteristics. For both Forests, the amount of forest in the oldest two age classes is expected to double by the end of the second decade (Table DLP-3 for the Chippewa and Table NSU-3 for the Superior). Based upon the need to achieve these objectives, the existing old-growth and primary forest stands are expected to be a part of these forest-wide increases in these oldest age classes. See also, responses to PC# 2.7.5-6, PC# 2.7.5-20, and PC# 2.7.5-29.

PC# 2.7.5-3
Public Concern: The Chippewa and Superior NFs should restore vegetation diversity to pre-1900's or RNV conditions.

> **-By placing commercial timber production as a secondary management objective to restoration.**
> **-By having quantified objectives for multi-aged older forest patches and more restoration in the first decade of the plan.**
> **-To improve forest health**

Agency Response:
The Forest Service used forest conditions as they occurred under the range of natural variability (RNV) as a set reference conditions for developing vegetation objectives for forest composition and forest age structure including old, old growth, and multi-aged forest. Restoring the forested landscapes on the Chippewa or Superior National Forests to those conditions which occurred within RNV is not the expressed goal of future national forest management. The Regional Forester selected a preferred alternative that increases the amounts of the oldest growth stages in landscape ecosystems, but not to those amounts expected to occur within RNV. Commercial timber harvest is the primary tool used by the Forest Service to accomplish the vegetation objectives in the Forest Plans. Under the preferred alternative, a variety of timber harvest methods are available to achieve the desired condition. In the context of the landscape ecosystem based vegetation objectives for forest type composition, age, and stand-level tree species diversity, the objectives are a combination of quantified elements and strategic direction. Monitoring and evaluation will determine if the desired shifts are happening as expected.

PC# 4.1-59
Public Concern: The Chippewa and Superior NFs should not restrict harvesting in large areas for old growth.

Agency Response:
With the exception of management area allocations such as wilderness, Research Natural Areas, and Unique Areas, the preferred alternative generally allows tree harvest to occur on most lands capable of producing commercial timber products. Additional considerations for where timber harvest may or may not be appropriate to meet stated objectives will be made at the project level.

PC# 2.7.5-24
Public Concern: The Chippewa and Superior NFs should manage stands to create old growth conditions.

Agency Response:
The proposed Forest Plans provide specific Desired Condition statements (D-VG-1, D-VG-2, D-VG-3 and D-VG-6) and Objectives (O-VG-14 (CNF), O-VG-13 (SNF), O-VG-15 (CNF), O-VG-14 (SNF), O-VG-16 (CNF), O-VG-15 (SNF), O-VG-17 (CNF), O-VG-16 (SNF), O-VG-22 (CNF) and O-VG-18 (SNF)) regarding the forest-wide emphasis, direction, distribution, and stand characteristics related to old-growth forests. Included in these is direction for restoring various components of the native plant communities on the two Forests. Forest-wide Standards and Guidelines allow for a variety of timber harvest practices along with prescribed fire, in certain situations, to achieve desired vegetation objectives.

PC# 2.7.5-6
Public Concern: The Chippewa and Superior NFs should not allow harvesting old growth.

> **-Because management changes the structure of old growth stands.**
> **-Some lichen and fungi species require hundreds of years since disturbance for adequate habitat conditions.**

Agency Response:
Outside of the Boundary Waters Canoe Area Wilderness, neither Forest has an abundance of existing old-growth forest. Under Vegetation Management, the proposed Forest Plans provide specific Desired Condition statements (D-VG-1, D-VG-2, D-VG-3 and D-VG-6) and Objectives (O-VG-14 (CNF), O-VG-13 (SNF), O-VG-15 (CNF), O-VG-14 (SNF), O-VG-16 (CNF), O-VG-15 (SNF), O-VG-17 (CNF), O-VG-16 (SNF), O-VG-22 (CNF) and O-VG-18 (SNF)) regarding the forest-wide emphasis, direction, distribution, and stand characteristics related to old-growth forests. The Landscape Ecosystem Objectives section provides quantified increases, by Landscape Ecosystem, in the vegetation growth stages expected to provide stands with old-growth forest characteristics. For both Forests, the amount of forest in the oldest two age classes is expected to double by the end of the second decade (Table DLP-3 for the Chippewa and Table NSU-3 for the Superior). Based upon the need to achieve these objectives, the existing old-growth and primary forest stands are expected to be a part of these forest-wide increases in these oldest age classes. A considerable amount of the remaining upland mature forest has been altered, either through timber harvest or fire suppression, so that the existing composition and/or structure is not what would be expected in the native plant communities inherent on those sites. In these cases, the Forest-wide Standards and Guidelines in the proposed Forest Plans provide for a variety of management activities, such as timber harvest, prescribed fire and under-planting to achieve the Desired Conditions and Vegetation Objectives as identified above.

PC# 2.7.5-7
Public Concern: The Chippewa NF should manage a portion of the "Lost 40" for old-growth red and white pine.

Agency Response:
The "Lost Forty" area is an old-growth red and white pine stand on the Chippewa. In the proposed Forest Plan for the Chippewa, it will be allocated to the Unique Biological, Aquatic, Geological, or Historical Areas Management Area. As such, it will be managed to protect, maintain or enhance the special features for which it was designated. The Lost Forty is surrounded by General Forest Management Area. However, Standards and Guidelines for Vegetation in the Unique Areas Management Area specify that measures designed to protect old-growth values will generally be implemented when stands near and adjacent to a Unique Area are subject to vegetation management activities (G-UB-3).

PC# 2.7.5-8
Public Concern: The Chippewa and Superior NFs should reduce the emphasis on old-growth.

AND

PC# 2.7.5-27
Public Concern: The Plans should strive for a balance of old growth and timber harvesting.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying Management Area allocations for addressing the plan revision issues. These issues included the amount, distribution, and management approach to providing for old-growth forest conditions. The Dualplan model runs were completed for all alternatives to aid in further ecological, economic, and social analyses provided in the EIS. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior National Forests. The Regional Forester looked at all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The ROD also discusses how the issues are addressed by the Alternatives, including the Selected Alternative.

PC# 2.7.5-14
Public Concern: The Forest Plans should account for losses of old growth to natural disturbances.

AND

PC# 2.6.4-113
Public Concern: The Chippewa and Superior NFs should compensate for lost old growth.

AND

PC# 2.7.5-20
Public Concern: The Chippewa and Superior NFs should increase the amount of old growth by designating stands in all sub-sections and all landscape ecosystems.

Agency Response:
The Chippewa and Superior National Forests recognize the important ecological functions and social value of old-growth forests. The EIS analyzed a wide variety of alternatives with different outcomes and with varying Management Area allocations for addressing the plan revision issues. These issues included the amount, distribution, and management approach to providing for old-growth forest conditions.

Under Vegetation Management, the revised Forest Plans provide specific Desired Condition statements (D-VG-1, D-VG-2, D-VG-3 and D-VG-6) and Objectives (O-VG-14 (CNF), O-VG-13 (SNF), O-VG-15 (CNF), O-VG-14 (SNF), O-VG-16 (CNF), O-VG-15 (SNF), O-VG-17 (CNF), O-VG-16 (SNF), O-VG-22 (CNF) and O-VG-18 (SNF)) regarding the forest-wide emphasis, direction, distribution, and stand characteristics related to old-growth forests. The Landscape Ecosystem Objectives section provides quantified increases, by landscape ecosystem, in the vegetation growth stages expected to provide stands with old-growth forest characteristics. For both Forests, the amount of forest in the oldest two age classes is expected to double by the end of the second decade (Table DLP-3 for the Chippewa and Table NSU-3 for the Superior). The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent

of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior National Forests, including old-growth forests.

PC# 2.7.5-29
Public Concern: The Plans should set aside areas for future old growth.

AND

PC# 2.7.5-35
Public Concern: The Final Plans should include the Old Growth SMCs included in Alts B and G

AND

PC# 2.7.5-38
Public Concern: The Superior and Chippewa National Forests should designate a network of old growth reserves using the procedures developed by the Minnesota Department of Natural Resources

AND

PC# 2.7.5-21
Public Concern: The Chippewa and Superior NFs should consult the existing inventories for candidate old growth stands/areas.

AND

PC# 2.7.5-12
Public Concern: The Forest Plans should manage old growth as transient on the landscape.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying Management Area allocations for addressing the plan revision issues. Among the issues addressed were several options for providing for old-growth forest conditions at the site and landscape levels. These options provided alternative approaches to the size, amount, distribution, and management approach to providing for old-growth forest conditions on the Chippewa and Superior National Forests in the future. The options analyzed included those that allocated designated areas to old-growth objectives, such as Special Management Complexes, Research Natural Areas, and Unique Areas; and those which did not make these kinds of allocations and assumed that it would be more transient on the landscapes. The Selected Alternative represents an approach which will increase the acreage in vegetation growth stages expected to provide old-growth forest conditions (Tables DLP-3 in the proposed Forest Plan for the Chippewa and Table NSU-3 in the proposed Forest Plan for the Superior). These increases are realized primarily through vegetation age class objectives, rather than through a network of designated allocations. The proposed Forest Plans do provide some designated allocations which are expected to provide old-growth forest conditions, such as wilderness, Research Natural Areas, and Unique Areas. Additionally, Desired Conditions (D-VG-7), Objectives (O-VG-19 thru O-VG-22 (CNF) and O-VG-17 thru O-VG-19 (SNF) and Standards and Guidelines (G-VG-1, S-VG-2, and S-VG-3) in the proposed Forest Plans provide forest-wide direction for maintaining and managing upland mature and older forest patches greater than 300 acres in size. These areas are expected to provide some old-growth forest characteristics as the stands within them age.

We did not specifically consult all of the existing inventories listed. We did utilize the inventories for potential RNAs, Old Growth Complexes, and Special Management Complexes.

The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior National Forests. The Regional Forester looked at all of the alternatives,

and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The ROD also discusses how the issues are addressed by the Alternatives, including the Selected Alternative.

PC# 2.7.5-39
Public Concern: The Final EIS should analyze the cumulative effects on long-lived tree species for two rotations (of long lived trees).

Agency Response:
The effects analysis provided in the EIS is based upon a planning horizon of 100 years. Composition and age objectives for forest vegetation, including old-growth, assigned to all the alternatives were projected out 100 years into the future. This 100-year timeframe provides an adequate biological context for assessing the effects to forest vegetation from past management practices and management activities proposed in the revised Forest Plans. Planned monitoring and evaluation of these vegetation objectives during implementation of the revised Forest Plans will aid determining whether or not the projected results and effects are valid. The life of the revised Forest Plans is expected to be approximately 15 years, at which time the goals, objectives, and management direction in these plans will be reviewed in light of the issues and concerns of that time. That review will determine the need for change to the land and resource management currently proposed in the revised plans.

PC# 2.7.5-40
Public Concern: The Final EIS should define and prioritize management of old growth stands by stand age and human disturbance characteristics.

AND

PC# 2.7.5-17
Public Concern: The Final EIS and Forest Plans should improve and/or retain definitions to define "old growth" differently.

AND

PC# 2.7.5-16
Public Concern: The Forest Plans should be consistent with the Minnesota Generic EIS definition, designation and reservation to protect old growth through Potential Wilderness Areas, Unique Biological/botanical areas, or special management complexes.

Agency Response:
Because most old-growth stands that existed prior to European settlement have been harvested in northern Minnesota, very little actual old-growth forest, especially on upland landforms, remains on either the Chippewa or Superior National Forests. Under the revised Forest Plans, the objective for the amount of forest to occur in the two oldest age classes is expected to double by the end of the second decade (Table DLP-3 for the Chippewa and Table NSU-3 for the Superior). The projected increases in these oldest age classes will be spread among the landscape ecosystems and are expected to be contributing to old-growth conditions on both Forests. The current challenge facing the Forests, relative to old-growth forest resources, will be the restoration of old-growth characteristics to maturing second growth forests. This will require a more detailed definition and description of old-growth forests and old-growth characteristics for individual forest types or forest type groups.

Vegetation concerns relating to the Final EIS (2.7.6)

PC# 2.7.6-1
Public Concern: The Final EIS (Vol. 1, tables FAC-1 through FAC-12) should list acreages in the landscape ecosystem.

Agency Response:
Appendix G of the FEIS provides information on the Range of Natural Variability and Landscape Ecosystems. Tables GEIS-1 and GEIS-2 in this appendix provide acreage figures for each of the landscape ecosystems within the Northern Minnesota Drift and Lake Plains Section (Chippewa National Forest) and the Northern Superior Uplands Section (Superior National Forest), respectively. We have included a reference to this information in the Landscape Ecosystem Scale portion of the Affected Environment for Forest Vegetation in the FEIS.

PC# 2.7.6-2
Public Concern: Age class tables by Landscape Ecosystem in the Final EIS should use uniform age groups.

Agency Response:
The age class breakdowns given for each landscape ecosystem (LE) in Tables FAC-3 thru FAC-12 are primarily based upon disturbance modeling developed by Dr. Lee Frelich of the University of Minnesota. His models were used to predict the percentage estimates (amounts) in each vegetation growth stage for a LE as would have occurred under the natural range of variability. The age classes provided in the tables reflect the various vegetation growth stages determined by this modeling effort. The age categories for individual vegetation growth stages may vary from one LE to another and are primarily dependent of the disturbance regime(s) regulating that LE.

PC# 2.7.6-3
Public Concern: The Final EIS (Table FAC-14) and Forest Plans should more clearly state the ownership context of the Forest Service within the ecological sections in order to better demonstrate the role the Forests play in impacting overall section-wide conditions.

Agency Response:
Appendix G of the FEIS provides information on the Range of Natural Variability and Landscape Ecosystems (LE). Tables GEIS- 1 and GEIS-2 in this appendix provide a percentage breakdown by ownership of each LE within the Northern Minnesota Drift and Lake Plains Section (Chippewa National Forest) and the Northern Superior Uplands Section (Superior National Forest), respectively. The relative role that a landowner within a particular LE might play in managing for forest vegetation conditions within that LE could be derived using a variety of factors including landowner objectives, percent ownership in the LE, ownership patterns, etc. We have included a reference to this information under the Affected Environment for Forest Vegetation, Indicator 4 – Size, Amount, and Distribution of Old-Growth Forest in the FEIS.

It is true that the scoring process for evaluating how each proposed alternative compares to the age and composition values under RNV is done for National Forest System lands only. However, the Cumulative Effects portion for Forest Vegetation provides some larger landscape context for how resulting forest vegetation conditions from each of the proposed alternatives responds to the existing conditions and the Minnesota Forest Resources Council Landscape Committee goals for the relevant ecological Section. It is here where each alternative is evaluated as to how it contributes to the overall landscape goals for the Northern Minnesota Drift

and Lake Plains Section (Chippewa National Forest) and the Northern Superior Uplands Section (Superior National Forest). Additionally, Appendix H provides a Cumulative Effects Overview that includes the landscape goals provided for each of the ecological Sections by the Landscape committees.

PC# 1.0.6-5
Public Concern: The Final EIS should display RNV as a true range, rather than using a single point or average.

Agency Response:
How the vegetation objectives for forest age and forest types projected to occur under each alternative compared to the range of natural variability values (RNV) was one of the indicators used to analyze forest vegetation in the DEIS. The disturbance modeling developed by Dr. Lee Frelich at the University of Minnesota primarily defined the amounts of forest vegetation expected to occur within the mix of seral stages (vegetation growth stages) for forests in a landscape ecosystem. These amounts were presented as a range of values that would have occurred on those landscapes when it was operating within RNV. The RNV values for forest type were not solely derived from the disturbance modeling. Historical data and ecological capability information were also used to inform these values, and so the ecological thresholds for forest type were not expressed as a range. For purposes of the forest vegetation analysis in the DEIS, the RNV values for both forest type and age class were used to make relative comparisons among the alternatives and to existing conditions. A methodology was devised to assign consistent departure scores to the differences between the vegetation objective for an age class and the high or low end of its RNV value, and to the differences between the vegetation objective for a forest type and the RNV value for that forest type. This methodology was consistently applied to each landscape ecosystem for each proposed alternative to determine how each alternative responded to this indicator. In the example presented by the commenter, the difference between the vegetation objective for the northern hardwood forest type and the RNV value was 30%, which constituted a major departure for forest type.

PC# 1.0.6-20
Public Concern: The Final EIS should correct the misleading information in the Draft EIS with regard to the Minnesota Forest Resource Council's position on RNV.

Agency Response:
For the purposes of the forest vegetation analysis in the EIS, the range of natural variability (RNV) is used for comparative purposes only. Restoring the forested landscapes on the Chippewa or Superior National Forests to those conditions which occurred within RNV is not the expressed goal of future national forest management. The RNV values identified for forest composition and forest age structure are compared to existing forest conditions and to the long term vegetation objectives for each alternative. This analysis allows for a relative comparison of all the alternatives to each other and to the existing conditions in light of certain RNV values.

The Forest Service agrees that the language used in the DEIS on pages 3.2-46 and 3.2-48 may overstate the intent of the Landscape Committee goals. We understand that some of these goals were expected to move certain forest conditions towards RNV, but did not state how far or how fast. We have edited the language on these pages to more clearly reflect these intentions.

PC# 2.7.6-4
Public Concern: The Final EIS (pp. 3.2 18-33 in the Draft EIS) should provide details on major departures from RNV.

-By showing all six major departures for Alternative E for the Superior NF.

-By providing summary departure information for current conditions.
-By providing summary departure information for a point in time between now and the 100-year horizon, such as the end of the current planning period.

Agency Response:
The evaluation process used to quantify the differences between the vegetation objectives for each landscape ecosystem (LE) for an alternative and the range of natural variability (RNV) values for each vegetation component within a particular LE required multiple steps. Due to the complexity, length, and number of tables associated with the analysis, this process and most of the steps taken to arrive at the summary departure information displayed in the DEIS is found in the project record. The project record can be accessed by the public. Most of the major departures from a particular RNV value are discussed in general under each alternative. This should provide the reader with an adequate understanding of how an alternative compares to the existing conditions, the RNV values, and to the other alternatives.

Tables FAC-16 thru FAC-29 provides percentage values for the existing amounts, RNV values, and vegetation objectives for each alternative. This analysis did not calculate major departures scores for the existing conditions, but rather focused this evaluation on the vegetation objectives for each of the proposed alternatives. Though there are some differences, Alternative A most closely resembles an extension of the current conditions and as such provides some insights into the departures that could have been calculated for them.

Based upon dualplan model outputs, this set of tables also provides information as to how quickly an alternative moves toward the desired vegetation objective. The decadal information projected by dualplan can be used to derive departure information for decades 1 and 2. See also, the response to PC# 1.0.6-5.

PC# 2.7.6-6
Public Concern: The Chippewa and Superior NFs should analyze the state-wide cumulative changes to forest cover types and assess how Forest Plans impact these state-wide trends (Draft EIS p. H-4).

-In order to identify those forest cover types that continue to decline state-wide.
-So the Chippewa and Superior can better identify their role in compensating for negative ecosystem trends at the state scale.

Agency Response:
Appendix H is meant to provide a Cumulative Effects Overview for a variety of resource areas. The table referred to is a summary of table 5.8 (page 5-15) of the Minnesota Generic Environmental Impact Statement on Timber Harvesting and Forest Management. Portions of the cumulative effects information provided in this appendix are used throughout the EIS to provide clearer understanding or context for deriving cumulative effects analysis for various resources. For some of the major forest types on the respective Forest, the FEIS provides a general comparison between the trends under an alternative to those projected in the GEIS. The vegetation composition and structure objectives of the revised Forest Plans (O-VG-2, O-VG-3, and O-VG-4 (CNF)) seek to increase acreage of Jack Pine and spruce/fir, cover types which are expected to decrease state-wide. The Plans also seek to increase the acreage red and white pine and northern hardwoods, acreage is anticipated to increase state-wide. The Plans will maintain acres of lowland conifer and hardwood types. Plans will decrease the acres of aspen vegetation communities, which state-wide are expected to increase.

PC# 2.7.6-7
Public Concern: The Final EIS should clearly state how the conclusions on p. 3.2 – 27-28 of the Draft EIS are reached.

Agency Response:
For the purposes of the forest vegetation analysis in the EIS, the range of natural variability (RNV) is used for comparative purposes only. Restoring the forested landscapes on the Chippewa or Superior National Forests to those conditions which occurred within RNV is not the expressed goal of future national forest management. The RNV values identified for forest composition and forest age structure are compared to existing forest conditions and to the long term vegetation objectives for each alternative. This analysis allows for a relative comparison of all the alternatives to each other and to the existing conditions in light of certain RNV values.

The RNV trend statements for each alternative are based primarily on how the percentages for individual forest composition or age components move from their existing amounts towards, or away from, their RNV values over the 100-year period, as projected by the Dualplan outputs. These trends are not based upon if or when these components arrive at the identified RNV values. Rather, they are based upon the overall summary of the forest type and age class trends relative to the RNV values evaluated in this analysis. Consideration was given to the percent change made in the 100-year timeframe. A positive trend was associated with those existing percents that move half way to the RNV value in that timeframe. A negative trend was associated with those that moved away from the RNV value. No trend was generally associated with those that remained relatively the same or moved slightly towards RNV. Consideration was also given to the relative amounts of certain components within the upland landscapes. For instance, because aspen is currently such a large percentage of the total upland forests, how it responded to the RNV value carried additional weight in describing the trend for forest composition. The Dualplan model was rerun for the Selected Alternative (Modified E) for both National Forests. These runs resulted in some slight changes to Tables FAC-24 and FAC-25 in the Final EIS. The changes to the decadal outputs to the model result in somewhat different trends. These trend changes do not alter the overall results of the RNV analysis in terms of the relative response of this alternative to RNV when compared to the other alternatives.

PC# 2.7.6-8
Public Concern: The Final EIS should more completely address problems with Alternative G by providing critical missing information.

Agency Response:
Lowland conifers communities are discussed in the DEIS under Management Treatment of Lowland Conifers within Upland Landscapes (DEIS, pages 3.2-34 and 3.2-35). The vegetation analysis of lowland conifer communities and ecosystems was not based upon the range of natural variability values. As discussed in this section of the analysis, there is considerable difficulty in predicting stand replacement events in these landscape settings. Discussions among ecologists reveal a lack of consensus on the distribution of acreage amounts in the various vegetation growth stages for these communities. As stated in the DEIS, it is assumed that the age class distribution of lowland conifers would be more unbalanced and would tend to be heavier to the oldest age classes due to the combination of environmental factors needed to cause a stand replacement event. For these reasons, the vegetation analysis for these community types focused more on comparing the projected amounts in the 0-9 age class for each alternative to the existing amounts.

PC# 2.7.6-9
Public Concern: The Final EIS should accurately characterize Alternative C with regard to the progress it makes to RNV.

Agency Response:
The RNV trend statements for each alternative are based primarily on how the percentages for individual forest composition or age components move from their existing amounts towards, or away from, their RNV values over

the 100-year period, as projected by the Dualplan outputs. These trends are not based upon if or when these components arrive at the identified RNV values. Rather, they are based upon the overall summary of the forest type and age class trends relative to the RNV values evaluated in this analysis. Consideration was also given to the relative amounts of certain components within the upland landscapes. For instance, because aspen is currently such a large percentage of the total upland forests, how it responded to the RNV value carried additional weight in describing the trend for forest composition. The Final EIS revisited the alternatives as to the trend statements for the RNV analysis. This resulted in changes to the trend statements for some of the alternatives. These trend changes do not alter the overall results of the RNV analysis in terms of the relative response of the alternatives to RNV when compared to each other. See also, response to PC# 2.7.6-7.

PC# 2.7.6-11
Public Concern: The Final EIS should include additional analyses.

> **-On within-stand seed sources that allow succession to later growth stages.**
> **-On how much planting would be required to reintroduce tree species that have been "managed out" of stands.**

Agency Response:
The revised Forest Plans for the Chippewa and Superior National Forests include an overall vegetation objective to move the relative diversity of tree species composition to conditions that are more representative of native plant communities (D-VG-1, 6, and 8; O-VG-7, O-VG-6(SNF), O-VG-8, O-VG- 7(SNF), O-VG-17, and O-VG-16(SNF)). They further provide for the use of a variety of harvesting methods and prescribed fire applications to aid in achieving this overall objective on a particular site. The average size of regeneration harvests on the two Forests has been relatively small (20-40 acres) over the past 15-20 years. Thus, in many cases, the potential for natural seeding from the edges or from existing seed banks on site still remains today. However, the achievement of the appropriate tree species composition for a particular area can be accomplished through several management techniques. Manipulating the over story and altering light conditions to the forest floor may allow existing seeds, seedlings, or saplings to advance and become part of the eventual canopy cover as forest succession progresses. Where existing sources are non-existent or lacking, supplemental seeding and/or planting may be required to achieve stated objectives.

The need for supplemental tree seeding or planting will vary from site to site and from one native plant community to another. At the Forest Plan level it is extremely difficult to predict the amount and extent of these activities required to attain the vegetation goals. This can best be determined as projects are planned and implemented under the revised Forest Plans.

PC# 2.7.6-12
Public Concern: The Final EIS should include similar RNV references found in table FAC-5 in tables FAC 16-29 to include details on an LE by LE and Alternative by Alternative basis.

Agency Response:
The evaluation process used to quantify the differences between the vegetation objectives for each landscape ecosystem (LE) for an alternative and the range of natural variability (RNV) values for each vegetation component within a particular LE required multiple steps. Due to the complexity, length and number of tables associated with the analysis, this process and most of the steps taken to arrive at the summary departure information displayed in the DEIS is found in the project record. The project record may be accessed by the public. Although the major departures from a particular RNV value or category of RNV values, such as the youngest age classes, are not specifically tied to a LE in the summary departure information, they are discussed in general under each alternative. This should provide the reader with an adequate understanding of how an

alternative compares to the existing conditions, the concepts of RNV, and to the other alternatives. See also, the response to PC# 1.0.6-5 and PC# 2.7.6-4.

PC# 2.7.6-13
Public Concern: The Final EIS should include the acres by tree species within each Forest as found in the Forest Plans on page 2-34.

Agency Response:
The table referred to is one of several tables in the Landscape Ecosystem Objectives section of the revised Forest Plans providing Vegetation Composition Objectives for each landscape ecosystem (LE). Appendix G of the FEIS provides information on the Range of Natural Variability and Landscape Ecosystems. Included in this appendix is similar information to that provided and expanded upon in the Landscape Ecosystem Objectives section of the revised Forest Plans. Appendix G provides tables pertaining to the vegetation objectives, including forest types, by LE for each alternative. So, for example, the 53% objective for jack pine under Alternative E in the Stand Diversity Objectives for Dry Pine LE by Alternative table on page G-29 of the draft Appendix G corresponds to the Long-term Goal of 53% for jack pine in Table DRP-1 on page 2-34 of the Forest Plan.

PC# 2.7.6-14
Public Concern: The Final EIS should explain the reasoning for increasing or decreasing some tree species in the Tree Species Diversity tables.

Agency Response:
The Tree Species Diversity Objectives Tables are located in the Landscape Ecosystem Objectives portion of the Forest-wide Management Direction in the proposed Forest Plans. Although the relation between the percent of a tree species as it exists today to that which occurred historically was one of the primary factors in setting these objectives, it was not the only criteria considered. The objectives for individual tree species listed by landscape ecosystem (LE) varied somewhat among the alternatives analyzed in the DEIS. Based upon the emphasis of a particular alternative, other social, cultural, and economical factors also played roles in establishing the tree species objectives for a particular LE. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior National Forests. The Landscape Ecosystem Tables and tree species commented on were reviewed in light of these factors listed above and the overall goals and objectives of the Selected Alternative. Some adjustments were made to the tree species diversity tables in the proposed Forest Plans.

PC# 2.7.6-15
Public Concern: The Final EIS should consider the analysis in the GEIS (1994) on the effect of harvest scenarios on old forest, including the cumulative effects of old forest provided by other ownerships.

Agency Response:
While it is true that the GEIS shows an increase in “old forest” on a statewide basis, it is difficult to directly compare these trends to old-growth forest trends under each of the proposed alternatives in the EIS. The GEIS includes “stands of short-lived species that are over 70 years old” in its definition of old forest, while the EIS is primarily looking at long lived species that are generally greater than 120 years old. The definition for old-growth as used in the Forest Vegetation analysis and provided in the glossary is focused in long-lived species at an age that begins to provide old-growth characteristics. This definition generally does not include short-lived species which have reached an extended rotation.

PC# 2.7.6-17
Public Concern: The Final EIS should include the source of data cited in the Draft EIS H-6, Cumulative Effects of Logging on Recreation Opportunity Settings.

Agency Response:
Appendix H is meant to provide a Cumulative Effects Overview for a variety of resource areas. The information referred to comes from the Minnesota Generic Environmental Impact Statement on Timber Harvesting and Forest Management. We have added citations and page references for each of the sections in Appendix H-6.

PC# 2.7.6-18
Public Concern: The Final EIS should correct the amount of old growth shown for the BWCAW.

Agency Response:
Tables FAC-33 and FAC-34 display Management Area Allocations Contributing to Old-growth and Future Old-growth Forest Conditions on the Chippewa and Superior National Forests. It provides a relative comparison of the proposed alternatives with respect to the Management Area allocations they make which contribute to old-growth forest conditions now and in the future. As discussed in the narrative, the intent of this table is not to display only the acres that currently meet any standard definition for old-growth. Rather, this table provides management area allocations "within which certain old-growth forest characteristics would be expected to develop and occur over time". Many of the acres displayed in this table would not be considered to be in an old-growth condition at this time. The BWCAW falls into this category on the Superior. It does provide a mosaic of old-growth forest conditions at a scale which allows these conditions to develop and shift over time in response to what are primarily natural disturbances.

PC# 2.7.6-19
Public Concern: The Final EIS should improve the effects discussion on old growth.

Agency Response:
Appendix H is meant to provide a Cumulative Effects Overview for a variety of resource areas. The statement referred to comes from the Minnesota Generic Environmental Impact Statement on Timber Harvesting and Forest Management. The cumulative effects to old-growth are provided primarily within the context of the Landscape committee goals.

Among the issues addressed in the EIS were several options for providing for old-growth forest conditions at the site and landscape levels. These options provided alternative approaches to the size, amount, distribution, and management approach to providing for old-growth forest conditions on the Chippewa and Superior National Forests in the future. The options analyzed included those that allocated designated areas to old-growth objectives, such as Special Management Complexes, Research Natural Areas, and Unique Areas; and those which did not make these kinds of allocations and assumed that it would be more transient on the landscapes. The Selected Alternative represents an approach which will increase the acreage in vegetation growth stages expected to provide old-growth forest conditions (Tables DLP-3 in the proposed Forest Plan for the Chippewa and Table NSU-3 in the proposed Forest Plan for the Superior). These increases are realized primarily through vegetation age class objectives, rather than through a network of designated allocations. Forest-wide Standards and Guidelines (G VG-1, S VG-2, and S VG-3) in the proposed Forest Plans provide management direction for large mature and older upland forest patches which will contribute to future options for managing old-growth as larger blocks. See also, response to PC# 2.7.5-38.

The age classes for lowland conifer are derived largely from disturbance modeling developed by Dr. Frelich. There is considerable difficulty in predicting stand replacement events in lowland conifer settings. Discussions among ecologists reveal a lack of consensus on the distribution of acreage amounts in the various vegetation

growth stages for these communities. As stated in the DEIS, it is assumed that the age class distribution of lowland conifers would be more unbalanced and would tend to be heavier to the oldest age classes due to the combination of environmental factors needed to cause a stand replacement event.

Tables FAC-35 and FAC-36 display upland and lowland forests greater than 120 years old for decades 2, 5, and 10. The percent of forested acres greater than 120 years old in 100 years for Alternative E is projected to be approximately 32% for the Chippewa and 30% for the Superior outside the Boundary Waters Canoe Area Wilderness (BWCAW). However, these percentages are projected to be 9% on the Chippewa and 9% for the Superior outside the BWCAW. The commenter is correct about different forested communities reaching "old-growth" forest conditions at somewhat different ages or length of time since last replacement event. However, based upon minimum age guidelines developed by the Chippewa and Superior National Forests and the Minnesota Department of Natural Resources, 120 years of age is the minimum age at which most upland and lowland forest type groups in northern Minnesota acquire the potential for developing old-growth characteristics (See Table FAC-13). These old-growth conditions are attributed to forests dominated by long-lived tree species. Species such as aspen, balsam fir, and jack pine are not long-lived tree species and so forested stands dominated by these species are not considered old-growth. They may reach an age when they could be considered old forest. (See the Glossary in the revised Forest Plans for definitions of old-growth and old forest).

PC# 2.7.6-20
Public Concern: The Final EIS should not over emphasize the amount of old growth by Alternative.

Agency Response:
For purposes of evaluating and analyzing the proposed alternatives, Tables FAC-33 and FAC-34 display information on Management Area Allocations Contributing to Old-Growth and Future Old-Growth Forest Conditions on the two National Forests. In terms of Management Area allocations, Modified Alternative E does rely heavily on management areas with recreation and riparian emphasis. Management Area allocations which contribute to old-growth forest characteristics are but one of the ways in which the revised Forest Plans will provide for old-growth forest conditions in the future. The revised Forest Plans provide forest-wide vegetation desired conditions and objectives regarding distribution and stand characteristics of forested stands exhibiting old-growth characteristics (D-VG-6, D-VG-7, O-VG-1 for both forests and O-VG-14 through O-VG-18 for the Chippewa and O-VG-13 through O-VG-16 for the Superior). In addition, the Landscape Ecosystem Objectives (Tables DLP-3 and NSU-3) in the Revised Forest Plans also show increases in the percentages of age classes with the potential for being old-growth. Forest-wide vegetation management standards and guidelines are designed to require consideration of old-growth and future old-growth development during project planning.

PC# 1.0.6-22
Public Concern: The Final EIS should categorize the age at which old forest is achieved as forests beyond rotation age, not as forests greater than 100 years old, because most of the tree species in Minnesota do not live beyond 100 years.

Agency Response:
Forested landscape conditions that occurred during the time period referenced (1600-1900AD) were used to characterize landscape conditions as they existed under the range of natural variability (RNV). Restoring the forested landscapes on the Chippewa or Superior National Forests to those conditions which occurred within RNV is not the expressed goal of future national forest management. The Introduction to Appendix G provides a brief summary of RNV and how it was used during the Forest planning process. One indicator of vegetation condition under Vegetation in Tables 2-10 and 2-11 is the percent of upland forest that is 100+ years old in the second and tenth decades. The percentages displayed for this indicator allows the reader to compare the relative

amounts of upland forest 100+ years old projected under each alternative. The 100+ year mark for this indicator is not intended to represent the minimum age for old forest or old-growth forest. Based upon minimum age guidelines developed by the Chippewa and Superior National Forests and the Minnesota Department of Natural Resources, 120 years of age is the minimum age at which most upland and lowland forest type groups in northern Minnesota acquire the potential for developing old-growth characteristics (See Table FAC-13). Old forest is a separate term indicating that a particular stand has reached an age beyond what is considered to be mature for that forest type (See the Glossary in the revised Forest Plans for definitions of old-growth and old forest).

Vegetation concerns relating to Tree Species (2.7.7)

PC# 2.7.7-1
Public Concern: The Forest Service should manage for commercially viable tree species, because climax (late successional) forest species are not commercially viable.

Agency Response:
The Forest Service manages federal forest land within the mandates of federal law through a range of multiple use objectives. The Forest Service is planning to provide for a range of forest conditions on the Chippewa and Superior National Forests, including late successional forest and other forest land that currently may be more commercially viable. We do so to provide diverse recreational opportunities, to maintain habitat and viable populations of all species, but also to maintain sustainable forest ecosystems. One of the results of planning for sustainable forest ecosystems is a sustainable flow of forest wood products from the forests into the future. The Forest Service believes that this will maintain and sustain communities and individuals making a living on the National Forest.

PC# 2.7.7-15
Public Concern: The Chippewa and Superior NFs should not convert productive aspen areas to softwoods because it is detrimental to wildlife, is costly, and seldom successful.

AND

PC# 2.7.7-2
Public Concern: The Forest Service should manage appropriate tree species on appropriate sites.

Agency Response:
The Selected Alternative and the proposed Forest Plans represent what current Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior National Forests. The forest-wide vegetation objectives for forest type composition are provided in Tables DLP-2 (Chippewa) and NSU-2 (Superior) in the proposed Forest Plans. Although both Forests show a 17% and 14%, respectively, decrease in aspen over the 100-year period, relatively small declines are expected to occur in this forest type during the 15-year life of the revised Forest Plans. The acreage amounts in the red pine forest type remain relatively stable on both Forests. The site-level ecological conditions based upon soils, topography, disturbance influences and surrounding landscape conditions along with other Landscape Ecosystem Objectives will aid in determining the management direction for existing and future forested stands.

PC# 2.7.7-3
Public Concern: The Forest Plans should have a stated policy on how pine and spruce plantations will be managed.

Agency Response:
Forest-wide direction in the proposed Forest Plans include Desired Condition statements (D-ID-5, D-VG-1, D-VG-2, D-VG-3, D-VG-5, and D-VG-6) and Objectives (O-ID-2, O-VG-7 thru O-VG-9 (CNF) and O-VG-6 thru O-VG-8 for the snf,, O-VG-16 (CNF) and O-VG-15 (SNF)) that provide direction for improving the within-stand complexity features associated with forested stands, including conifer plantations. Forest-wide Standards and Guidelines (G-TM-7) provide a variety of harvest cutting methods to achieve management objectives.

PC# 2.7.7-4
Public Concern: Forest Plans should better address increasing the conifer component.

-By using creative silviculture.
-By providing a more descriptive vision of what treatments will accomplish in stand structure and composition to aid in meeting goals and objectives.

Agency Response:
Appendix B in the EIS discusses the Analysis Process including the Treatment Methods used in Modeling. Within this portion of this appendix is a discussion of the proposed harvest treatment types, the general objective of the treatment type, and the forest types where a treatment type may typically be used. The implementation of one of these treatments on a particular site will be primarily based upon the landscape ecosystem the site is found in and its associated vegetation objectives. It will also be dependent on the site, the existing stand conditions and the desired stand conditions for the future. Forest-wide direction in the proposed Forest Plans includes Desired Condition statements and Objectives that provide direction for vegetation management. Additionally, Landscape Ecosystem Objectives provide quantified amounts of acreages in all forest types as well as expected trajectories for individual tree species that make up a forest type or a component of other forest types. In general, the tree species diversity objective tables call for an increase in conifer tree species. Forest-wide Standards and Guidelines (G-TM-7) provide a variety of harvest cutting methods to achieve management objectives.

PC# 2.7.7-5
Public Concern: The Forest Service should utilize stewardship contracts for red pine plantation management.

Agency Response:
The Forest Service agrees that there may be more opportunities for utilizing stewardship contracts in the future as the revised Forest Plans are implemented. The Plans do not specify how forest management activities are to be accomplished. The use of stewardship contracts or other implementation methods will be decided at the project level and will consider a number of factors, including the type(s) of activity(s) to be accomplished, the objectives of the activity(s), the amount and cost of the work to be done.

PC# 2.7.7-6
Public Concern: The Chippewa NF should maintain amounts of mixed (evergreen and deciduous) forest.

-By cutting no more than 50% of trees on any acre.
-By minimize mechanical disturbance
-By reducing aspen regeneration

Agency Response:
The proposed Forest Plans include Desired Condition statements (D-ID-5, D-VG-1, D-VG-2, D-VG-3, D-VG-4, D-VG-5, D-VG-6 and D-VG-8) and Objectives (O-ID-2, O-VG-7 thru O-VG-9 (CNF) and O-VG-6 thru O-VG-8 for the snf, O-VG-16 (CNF) and O-VG-15 (SNF)) that provide Forest-wide direction for vegetation management. Additionally, Landscape Ecosystem Objectives provide quantified amounts of acreages in all forest types as well as expected trajectories for individual tree species that make up a forest type or a component of other forest types. In general, the tree species diversity objective tables for both National Forests call for an increase in conifer tree species. Vegetation management under the revised Plans emphasizes increased species diversity within forested stands. Forest-wide Standards and Guidelines (G-TM-7) provide a variety of harvest cutting methods to achieve management objectives. These include treatments which retain relatively large percentages of the over story during harvest operations. The use of the clear cut harvest treatment under the revised Plans is expected to be reduced considerably from its current use under the 1986 Forest Plans. Appendix D in the proposed Forest Plans provides two tables (APP-D2 and APP-D3) which display the proposed and probable management practices expected to occur during the first and second decades of implementation. See also, responses to PC# 2.7.7-4.

The proposed Forest Plans also include a Desired Condition statements (D-WS-12), Objective (O-WS-10), and Standards and Guidelines (G-WS-8 and G-WS-9(CNF)) that provide Forest-wide direction for protecting the soil resource.

PC# 2.7.7-7
Public Concern: The Superior NF Forest Plan should work towards 60% conifer / 40% deciduous forest cover rather 70%/30% projected in Alternative E to provide balance in the amount of change projected in the long term.

Agency Response:
The Selected Alternative and the proposed Forest Plans represent what current Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior National Forests. The percentage mix of conifer to deciduous forest will vary from one landscape ecosystem to another. These mixes can best be viewed in the Landscape Ecosystem Objectives section in the proposed Forest Plans. The forest-wide vegetation objectives for forest type composition are provided in Tables DLP-2 (Chippewa) and NSU-2 (Superior) in the proposed Forest Plans. The percentage of conifer forest types on the Superior ranges from 42% in decade one to 55% projected as the 100 year goal.

PC# 2.7.7-8
Public Concern: The Forest Plans should protect white pine stands and clumps from harvest until 50% of the 100 year goal for white pine cover type is achieved.

AND

PC# 2.7.7-9
Public Concern: The Chippewa and Superior NFs should add 20,000 additional acres of white pine with 1,000 stems per acre.

AND

PC# 2.7.7-10
Public Concern: The Chippewa and Superior NFs should increase white pine restoration.

Agency Response:
The Chippewa and Superior National Forests recognize the importance of white pine in all of the landscape ecosystems of northern Minnesota. For this reason, some adjustments were made to increase the amounts of

white pine restoration in the first two decades. The Landscape Ecosystem Objectives section of both proposed Forest Plans displays the long term goal for white pine as a forest type along with the projected amounts expected to occur after decade one and decade two of implementation. Nearly all of the upland Landscape Ecosystems show increases in white pine as a forest type. Additionally, all upland landscape ecosystems on both Forests show an increase in white pine as a component of other forest types. Tables DPL-2 (Chippewa) and NSU-2 (Superior) show the Forest-wide Vegetation Composition Objectives for the two Forests. Vegetation Desired Condition D-VG-6 and Objectives O-VG-7 (CNF), O-VG-6 (SNF), O-VG-9 (CNF), and O-VG-8 (SNF) specify that restoring and retaining tree species diversity, including white pine, is an expected outcome of forest management activities. Because of the recognized importance of white pine, it will continue to be a priority tree species for retaining during timber harvest.

PC# 2.7.7-11
Public Concern: The Forest Plans for the Chippewa and Superior NFs need to set a strategy for increasing the upland white cedar component.

> **-Because white cedar was common historically than the stated objective.**
> **-Because greater opportunities exist on the forest for cedar restoration than are recognized in the Plans.**

Agency Response:
The Landscape Ecosystem Objectives section of both proposed Forest Plans includes a Tree Species Diversity Objectives Table for each landscape ecosystem. The Chippewa and Superior National Forests recognize the importance of white cedar as a component in many of the upland landscape ecosystems of northern Minnesota. For this reason, some adjustments were made to the Tree Species Diversity Objectives for Chippewa Landscape Ecosystems in its revised Forest Plan. Now, all upland landscape ecosystems on both Forests show an increase in white cedar as a component of other forest types when it's existing amount is below historical levels. Vegetation Desired Condition D-VG-6 and Objectives O-VG-7 (cnf), O-VG-6 (SNF) specify that restoring and retaining tree species diversity, including white cedar, is an expected outcome of forest management activities. See also, response to PC# 2.7.6-14.

PC# 2.7.7-12
Public Concern: Forests Plans should more adequately address within-stand diversity by emphasizing and developing tree species, especially white pine (but also yellow birch, white cedar, tamarack, and white spruce) within stands.

> **-By establishing goals and measurable objectives for underplanting or other techniques.**
> **-By expanding opportunity acres available for prescribed fire for site preparation and habitat enhancement.**

Agency Response:
Desired Condition Statements (D-VG-1, D-VG-2, D-VG-3, D-VG-5, and D-VG-6) and Objectives (O-VG-7 thru O-VG-9 (CNF) and O-VG-6 thru O-VG-8 (SNF), O-VG-16 (CNF) and O-VG-15 (SNF)) for Vegetation Management are provided in the proposed Forest Plans. These, along with the Forest-wide Standards and Guidelines, provide the overall direction for improving the within-stand complexity features associated with forested stands. More specifically, D-VG-6, O-VG-7 (CNF), O-VG-6 (SNF), O-VG-9 (CNF) and O-VG-8 (SNF) provide clear direction for restoring tree species diversity and structural complexity within forested stands in order to meet the specified Tree Species Diversity Objectives displayed in the Landscape Ecosystem Objectives section of the proposed Forest Plans. Native plant community descriptions were used in the development of these objectives.

Site-level ecological conditions based upon soils, topography, disturbance influences and surrounding landscape conditions, along with other Landscape Ecosystem Objectives, will aid in determining the harvest treatment to be used, the appropriate application of prescribed fire, and the mix of tree species to be planted within treated stands.

Forest-wide Desired Condition D-ID-5 and Objectives O-ID-2, O-VG-11(CNF), and O-VG-12 (SNF) provide direction for the increased use of prescribed fire to achieve desired vegetation and ecological objectives. The amount of prescribed fire expected to be used for various purposes can be found in the Proposed Practices portion of Appendix D in the proposed Plans. See also, response to PC# 2.7.6-11, PC# 2.7.7-4, PC# 2.7.7-6 and PC# 2.7.7-10.

PC# 2.7.7-17
Public Concern: The Chippewa NF should manage for high quality hardwood species around Leech Lake and Lake Winnibigoshish.

AND

PC# 2.7.7-16
Public Concern: The Chippewa NF should manage more for a different selection of tree species.

> **-Because the Chippewa NF has appropriate sites for hardwoods and white pine.**
> **-Because jack pine is more valuable than other species, rotates at an early age and the Dry Pine LE is appropriate for jack pine.**

Agency Response:
The Selected Alternative and the proposed Forest Plans represent what current Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa National Forest. The Landscape Ecosystem Objectives associated with this alternative provide objectives for percentage amounts in each forest type expected to occur after the first decade and second decade of revised Forest Plan implementation. The forest-wide vegetation objectives for forest type composition are provided in Table DLP-2 in the proposed Forest Plan for the Chippewa National Forest. The amount of northern hardwood forest type remains stable to increasing in all of the landscape ecosystems on the Chippewa, including those around Leech Lake and Lake Winnibigosish. The jack pine forest type is expected to increase by 700 acres in each of the first two decades in the Dry Pine Landscape Ecosystem. It also increases substantially as a forest type in the Dry-Mesic Pine/Oak Landscape Ecosystem. See also, responses to PC# 2.7.7-1, PC# 2.7.7-2, PC# 2.7.7-6, and PC# 2.7.7-7.

Vegetation concerns related to Alternatives (2.7.8)

PC #2.7.8-1
Public Concern: The Regional Forester should select Alternative D to protect wildlife and large blocks of mature forest and compensate for management on other ownerships.

Agency Response:
The EIS analyzed a range of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed.

Alternative D would provide more large blocks of mature forest and would cumulatively provide for greater amounts of ecosystem elements that are increasingly rare on other ownerships. However, there are a wider range of multiple use objectives that need to be considered in combination to reach a decision. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

PC #2.7.8-2
Public Concern: The Regional Forester should not select Alternative E.

> **-Because fire fighting and controlling insects would be expensive.**
> **-Because it would not move toward landscape goals.**
> **-Because it calls for a low use of fire and high harvest rates including a high amount of clear-cutting that would result in a simplification of species and structural diversity.**
> **-Because it would produce two major departures from RNV for forest composition and six major departures in forest age.**

Agency Response:
Modified Alternative E does not propose to move each national forest to within RNV. However, the range of age classes, composition, and spatial patterns are representative of the historical condition. That is, the ecosystem components are represented on the forest but not in historic amounts. Fire would be represented as an ecosystem process and management tool. Other tools, including clear-cutting, may be more prevalent. Project level analyses would determine which tools are right for each project. The strategic framework exists in the Chippewa and Superior Forest Plans to address wildlfire and insect/disease issues.

The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

PC #2.7.8-3
Public Concern: The Regional Forester should not select Alternative E or he should modify Alternative E to prevent declines in wildlife

> **-o also consider the effects from other ownerships**
> **-Because Alternative E would result in increased edge density on the Chippewa and Superior NFs in the long run.**
> **-Because management direction in the proposed Forest Plans is inadequate to prevent negative impacts of logging on spatial patterns.**

Agency Response:

The Regional Forester considered the increased risks to some wildlife, including Regional Forester Sensitive Species, predicted under Modified Alternative E. While risk may be increased for some species, none are predicted to lose viability within either the Chippewa or Superior National Forest. Therefore, the Regional Forester determined that the risk is at an acceptable level in the context of other multiple use objectives.

Spatial modeling to analyze the feasibility of the spatial objectives for the Chippewa and Superior Forest Plans completed between the Draft EIS and the Final EIS determined that the spatial objectives for the Chippewa could be met and the modified objectives for the Superior would likely be met during the implementation period of the Plan. These objectives will result in improved spatial patterns during the implementation period. The spatial objectives for the Superior were amended to incorporate the contributions of the BWCAW and utilize a zone approach. The Forest Service believes that spatial patterns on the Superior as a whole (with consideration of the BWCAW) will be adequate for ecological sustainability and to maintain species viability. Meeting spatial objectives on both forests will require thoughtful management decisions that set each forest on the correct trajectory.

The EIS includes seven alternatives with different approaches to managing wildlife, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for wildlife management. The Regional Forester can further modify Alternative E for implementation in his decision, including changing wildlife management.

PC #2.7.8-4
Public Concern: The Regional Forester should select Alternative F.

> **-Because the Forests would move toward the range of natural variation most quickly**
> **-Because vegetation management would conform to Northeastern Landscape Committee Recommendations**
> **-Because it would take less time to make significant progress towards greater Forest Plan vegetation objectives for composition, structure, old forest, and large upland patches.**
> **-Because it would adequately address forest spatial measures analyzed in the EIS.**
> **-Because it would provide a number of outcomes and effects that provide better habitat conditions for viable populations of sensitive species and overall vegetation habitat diversity.**

Agency Response:
While Alternative F's goal is to move each National Forest to within RNV and the Forest Service recognizes the benefits of this alternative (including improved spatial patterns, contributions to regional landscape goals, and changes to habitats), the Regional Forester determined that Modified Alternative E provides conditions that adequately represent historical conditions for age classes, composition, and spatial patterns. That is, the ecosystem components are represented on the forest but not in historic amounts. The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

PC #2.7.8-5
Public Concern: The Regional Forester not should select Alternative E or he should modify Alternative E to prevent declines in wildlife because of the magnitude of fragmentation projected by Alternative E in the first two decades.

Agency Response:
Spatial modeling to analyze the feasibility of the spatial objectives for the Chippewa and Superior Forest Plans completed between the Draft EIS and the Final EIS determined that the spatial objectives for the Chippewa could be met and the modified objectives for the Superior would likely be met during the implementation period of the Plan. These objectives will result in improved spatial patterns during the implementation period.

For the Superior, the strategy selected by the Regional Forester would set Spatial Zones to account for the contributions of the BWCAW in management direction. Forest-wide, fragmentation of large mature or older upland forest patches will occur primarily in Spatial Zone 3. In Spatial Zones 1 and 2 the overall objective is to increase the number and acres in large patches during implementation of the Plan. In Zone 3, the emphasis is on meeting composition and age objectives for the landscape ecosystems. Impacts to the forest areas on the Superior that you list above would vary depending on the spatial zone that they are in and whether the forest patches fit the size and upland type requirements of the objectives.

On the Chippewa spatial zones were not identified and spatial management direction is applied forest-wide. The forest-wide objective on the Chippewa is to increase the number and acres in large mature/older upland patches during implementation of the Plan. Our analysis indicates that we can achieve the combination of vegetation age class, forest composition, and forest spatial patterns during the implementation period of the plan.

Meeting spatial objectives on both forests will require thoughtful management decisions that set each forest on the correct trajectory.

The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

PC #2.7.8-6
Public Concern: The Regional Forester should select an alternative that best manages the forests for their health and the health of property within and adjacent to the Forests and one that would not return to pre-settlement conditions.

Agency Response:
Modified Alternative E, the selected alternative, does not propose to move each national forest to within RNV or conditions that equate to pre-settlement condition. However, the range of age classes, composition, and spatial patterns are representative of the historical condition. That is, the ecosystem components are represented on the forest but not in historic amounts. Pre-settlement conditions are used as a reference point for comparisons among the range of alternatives. The strategic framework exists in the Chippewa and Superior Forest Plans to address forest health in the context of other multiple use objectives.

The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

PC #2.7.8-7
Public Concern: The Regional Forester should select an alternative that would move the Forests toward RNV faster than Alternative E in order to provide appropriate wildlife habitat, decrease fragmentation, and increase sustainability of ecosystems on the Superior National Forest.

Agency Response:
While some alternatives analyzed had a goal to move each National Forest to within RNV and the Forest Service recognizes the benefits of those alternatives (including improved spatial patterns, contributions to regional landscape goals, and changes to habitats), the Regional Forester determined that Modified Alternative E provides conditions that adequately represent historical conditions for age classes, composition, and spatial patterns. That is, the ecosystem components are represented on the forest but not in historic amounts. The strategic framework exists in the Superior Forest Plan to address wildlife habitat, fragmentation, and ecosystem sustainability.

The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

PC #2.7.8-8
Public Concern: The Chippewa and Superior NFs should modify all of the alternatives to maintain or increase the total number of large patches.

Agency Response:
All of the alternatives were designed to provide for large patches to some degree. Alternatives would take different approaches and have different outcomes in spatial patterns as a result. Alternative A and C would address large patches as limits to management in vegetation and wildlife standards and guidelines. Other alternatives would provide for large patches through forest-wide objectives on the Chippewa or by spatial zone on the Superior, in addition to also setting limits to management through standards and guidelines. Factors such as Landscape Ecosystem objectives which affect rates of disturbance, and MA allocations affect an alternative's potential to maintain or produce large patches on the forest.

Approaches for managing spatial patterns will be different on the Chippewa and the Superior because of differing existing conditions for forest spatial patterns, differing land allocations (eg. the BWCAW), and different ownership patterns.

For the Superior, the strategy selected by the Regional Forester would set Spatial Zones to account for the contributions of the BWCA in management direction. Forest-wide, fragmentation of large mature or older upland forest patches will occur primarily in Spatial Zone 3. In Spatial Zones 1 and 2 the overall objective is to increase the number and acres in large patches during implementation of the Plan. In Zone 3, the emphasis is on meeting composition and age objectives for the landscape ecosystems. Impacts to the forest areas on the Superior would vary depending on the spatial zone that they are in and whether the forest patches fit the size and upland type requirements of the objectives. This zone strategy would be consistent among alternatives for the Superior, though amounts and distribution of spatial elements would differ.

On the Chippewa spatial zones were not identified and spatial management direction is applied forest-wide. The forest-wide objective on the Chippewa is to increase the number and acres in large mature/older upland patches during implementation of the Plan. This approach would likely be similar for Alternatives F and G, but may not be needed for Alternatives B and D because of lower harvest intensity. Our analysis indicates that we can achieve the combination of vegetation age class, forest composition, and forest spatial patterns during the implementation period of the plan for the selected alternative.

PC #2.7.8-9
Public Concern: The Regional Forester should select Alternative C because it would emphasize aspen.

Agency Response:
Aspen forest has been one of the primary forest types managed on the Chippewa and Superior National Forests. The Forest Plans propose to continue emphasizing this species in the context the LE based forest vegetation objectives. We recognize the benefits of regenerating aspen for wildlife and also for local economies. We also recognize the need to maintain a representation of old forest and old growth for other wildlife species, for aesthetics, and for ecosystem functions.

The Regional Forester selected the alternative management scenario (planning alternative) that he felt best balanced an array of multiple use needs, including within stand complexity, species diversity, and amount of aspen forest.

Rates of removal of aspen growth (Leatherberry and Spencer 1996, Miles et al. 1995, Schmidt 1997) for the Chippewa indicate that the Chippewa has been aggressive about harvesting and regenerating aspen in recent years. Rates of removal for aspen on the Superior are near the state-wide average. Modified Alternative E (the selected alternative) will produce a predictable and sustainable amount of young aspen forest habitat during the implementation period of the Forest Plan.

PC #2.7.8-10
Public Concern: The Regional Forester should select Alternative D.

-To regenerate adequate white pine and old growth.
-Because it would move forests toward RNV.

Agency Response:
We recognize that Alternative D would restore white pine, retain and develop old forest, move each forest towards RNV at a quicker rate than other alternatives examined. The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Selected Alternative represents what Forest managers believe to be

the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs.

PC #2.7.8-11
Public Concern: The Regional Forester should not select Alternative E.

-Because it would favor converting aspen to conifer.
-Because it would not adequately move the Forests toward RNV.
-Because it would not repair damaged forests
-Because it would not adequately protect white pine.
-Because its positive attributes in relation to RNV are also common to all alternatives.

Agency Response:
The range of alternatives examined in the Final EIS presented seven different approaches for management of the Superior and Chippewa National Forests. Each had a different combination of amounts of forest types (including aspen and conifer species), movement towards RNV for various forest growth stages, forest restoration, and white pine restoration. The selected alternative does move some aspects of forest condition to within RNV while other aspects are maintained outside of this condition. Amounts of white pine restoration were increased in the Final Plan for the Chippewa and amounts for the Superior were maintained from the draft. Strategic language is included in the Final Plans that could drive forest restoration and repairing conditions within each forest. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

PC #2.7.8-12
Public Concern: The Final EIS should provide a better scientific explanation and justification for why Alternative E would decrease forest interior habitat.

Agency Response:
The Superior Forest Plan will manage forest spatial patterns through a combination of spatial zones, variable objectives by spatial zone, and variable standards and guidelines for forest-wide condition and by spatial zone. This strategy, selected by the Regional Forester, set Spatial Zones to account for the contributions of the BWCA in management direction. Forest-wide, fragmentation of large mature or older upland forest patches and associated decreases in interior forest will occur primarily in Spatial Zone 3. In Spatial Zones 1 and 2 the overall objective is to maintain or increase the number and acres in large patches and maintain or increase interior forest during implementation of the Plan. In Zone 3, the emphasis is on meeting composition and age objectives for the landscape ecosystems. Impacts to the forest areas on the Superior would vary depending on the spatial zone that they are in and whether the forest patches fit the size and upland type requirements of the objectives. This zone strategy would be consistent among alternatives for the Superior, though amounts and distribution of spatial elements would differ.

The Regional Forester will describe the rationale for selecting an alternative to implement in the Record of Decision (and hence the justification for reducing/maintaining/increasing forest interior space); whereas, the EIS is a document that discloses the potential environmental impacts of each alternative (EIS section 3.2.2). We have disclosed the effects of reducing interior habitat in modified Alternative E in the Draft and Final EIS. The Regional Forester believes that this approach best balances the range of multiple uses on the Superior.

On the Chippewa National Forest, the Preferred Alternative (Modified Alternative E) is projected to increase interior forest during implementation of the Forest Plan (EIS section 3.2.2).

PC #2.7.8-13
Public Concern: The Regional Forester should select Alternative F.

> **-Because it would be practicable and would meet the standard stated in the USDA Committee of Scientists Report.**
> **-Because it would reduce edge habitat while providing high quality timber.**

Agency Response:
We recognize the attributes of Alternative F with regard to sustaining ecological processes and effects on spatial diversity. Each alternative addressed these ecological outcomes in a different way. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative. The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed.

PC #2.7.8-14
Public Concern: The Regional Forester should select Alternative G because Alternative E makes little progress for older age classes of landscape ecosystems compared to Alternative G.

Agency Response:
We recognize that Alternative G would move the Forests more quickly to aspects of RNV including old or old growth forest. Modified Alternative E (compared to Alternative E in the Draft EIS) is more similar to Alternative G with regard to some indicators, including forest spatial patterns. Key differences, such as management area allocations for SMCs, still exist between Alternative G and Modified Alternative E. The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

PC #2.7.8-15
Public Concern: The Regional Forester should select Alternative B for the Chippewa NF to provide for maturation and development of large, older forest patches.

Agency Response:
For the Final EIS, Modified Alternative E for the Chippewa was examined with a spatial model in conjunction with the Dual Plan harvest model. It is projected that Modified Alternative E will maintain or increase large mature or older upland forest patches within the implementation period of the Forest Plan. We recognize that Alternative B would achieve those increases to a higher degree and this alternative would compensate for

activities on other ownerships. However, the Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa. The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed.

PC #2.7.8-16

Public Concern: The Chippewa and Superior NFs should develop and analyze a new alternative that would promote fiber production and at least maintain current levels of game species and aspen because aspen is very valuable to the economy of northern Minnesota and aspen is the only deciduous forest type routinely generated through clearcutting to create habitats similar to those that historically resulted after wildfire.

Agency Response:

The Forest Service considered several alternatives that would maintain or increase amounts of early successional habitat in the context of other multiple use objectives. Alternatives A and C would increase existing levels of game species and their habitats. Modified Alternative E would come close to maintaining current habitat. For grouse, Alternative A in decade two would come close to maintaining habitat on the Chippewa NF. On the Superior NF, grouse habitat would be increased from existing levels in all alternatives except Alternative D (Draft EIS section 3.3.6.5.b). For woodcock, Alternatives A and C would increase habitat and E would come close to maintaining habitat on the Chippewa. On the Superior NF, Alternatives A, C, and E would increase woodcock habitat (EIS section 3.3.6.3.b). Analysis of Management Indicator Habitat (MIH) 1a (young upland forest) also shows that Alternatives A and C would provide more upland young forest than the existing condition (EIS section 3.3.1.c).

Alternatives A and C would emphasize aspen-dominated forests. Under Alternative C fiber production would increase substantially from current levels. Please see Chapter 2 of the EIS (sections 2.4.1 and 2.4.3). Alternatives C would have an annual maximum timber sell volume that is higher than current levels (EIS section 3.4.2.b).

Rates of removal of aspen growth (i.e. aspen regeneration) for the Chippewa have been above the state-wide and Lake States regional averages, exceeds that of private industrial lands, and is exceeded only by the Ottawa National Forest regionally (Leatherberry and Spencer 1996, Miles et al. 1995, Schmidt 1997). This would indicate that the Chippewa has been aggressive about harvesting and regenerating aspen in recent years. Rates of removal for aspen on the Superior are near the state-wide average. Modified Alternative E (the selected alternative) will produce a predictable and sustainable amount of young aspen forest habitat during the implementation period of the Forest Plan.

The EIS includes seven alternatives with different approaches to managing game species and aspen, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for game species and aspen. Therefore, it is not necessary to develop an additional alternative to address these interests. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing the way game species and aspen would be managed.

Vegetation concerns relating to TES and Wildlife (2.7.9)

PC# 2.7.9-1
Public Concern: The Chippewa and Superior NFs should manage forest composition to stem the decline of certain bird species.

-By managing for forest cover preferred by these species rather than aspen.
-By increasing conifer forest.
-Because the Chippewa and Superior NFs are uniquely positioned to protect biological diversity.
-Because the Chippewa and Superior NFs provide crucial forested areas in a region that has experienced tremendous loss of forest.
-Because the Chippewa and Superior are globally important bird areas.

AND

PC# 2.7.9-2
Public Concern: The Forest Plans should manage for conditions that allow sensitive plant and animal species (species of concern) to thrive.

-By managing for less aspen/birch forest.
-By managing for more mature and diverse forest.
-By managing jack pine, black spruce, and red pine more towards RNV for amounts, age, fire disturbance, and less harvest disturbance.
-By increasing amounts of northern hardwood forest to a greater degree.
-By making immediate and greater progress during the 15 year implementation period of the Plans to habitat restoration than is projected in the proposed Plans.

Agency Response:
We believe that the Forest Plans are working towards the forest type composition that are proposed here. The Forest Plans for the Chippewa and Superior are projecting declines in amounts of aspen forest, maintenance or increase in northern hardwoods, and increases in all species of upland conifer forest during the implementation period of the Plans. Amounts of forest greater than 100 years old is projected to increase on both forests. The selected alternative would decrease the amount of mature forest (50 to 99 years old). Tables NSU-2, NSU-3, DLP-2 and DLP-3 in Chapter 2 of the Forest Plans show these forest-wide projections. The Forest Service examined rates of natural disturbance under historic conditions for the Chippewa and Superior landscapes (Frelich 1999, 2000) and set disturbance rates in reference to RNV for the selected alternative. Through the Forest Plans, the Forest Service would work towards meeting the vegetation objectives (including rates of disturbance) using timber harvest as the primary tool.

We recognize the roles of the Chippewa and Superior National Forests in conserving migratory bird species. We believe that the coarse filter management strategies detailed in the Forest Plans will accomplish conservation of migratory bird species.

In the context of other multiple uses, the Regional Forester feels that the rates of change towards long-term objectives and the coarse filter and fine filter conservation approaches for sensitive species are appropriate. Sensitive species are expected to remain at least minimally viable under the selected alternative on both forests. The Forest Service must comply with all existing and applicable laws, including NFMA for providing viability of species and to adequately restock harvested sites. We expect that monitoring and evaluation of Forest Plan

implementation will help the Forest Service determine if it is able to meet the objectives of the Forest Plans, including those affecting migratory bird species and sensitive species.

PC# 2.7.9-3
Public Concern: The Forest Plans need to consider strategies to retain aspen clones in non-aspen types.

> **-For ruffed grouse mixed conifer forest with aspen pockets can provide high grouse densities.**
> **-To mitigate the loss of aspen through conversion (succession) to other types predicted in Alt. E.**
> **-For white-tailed deer to provide deer browse proximate to prime wintering areas.**

Agency Response:
The Forest Plans primarily use a coarse filter approach to managing forest vegetation. The Plans set broad objectives for accomplishing the desired changes for the forests. Your suggested fine-filter considerations could be addressed most effectively at the implementation or project level of the Forest Plan. Amounts of aspen, either by forest type or by tree abundance comparisons (i.e. FIA plots vs. GLO bearing trees), is much greater today than what occurred historically. It is the most abundant species on each National Forest. We project that amounts of habitat for ruffed grouse and white-tailed deer will continue to be at levels greater than occurred historically. Continued monitoring of FIA plots will help determine if the issue of retaining aspen in non-aspen forest types is an issue. Amounts of thermal cover are projected to increase on both forests under the selected alternative.

PC# 2.7.9-4
Public Concern: **The Forest Plans, in the Analysis of the Management Situation for Wildlife, should cite the science to determine the greater demand for species needing older forest.**

Agency Response:
Putting this statement in context of the rest of the text of the AMS, the Forest Service in the new Forest Plans wishes strike a better balance between habitats of young forest, aspen forest, edge habitats and small patch sizes with habitats of older forest, older large trees, large continuous forest patches, conifer, areas with low road density, compositional and structural diversity, and unfragmented forest.
From our species viability evaluations we examined published and unpublished information, as well as expert opinion in the SVE expert panel process, to determine habitat conditions needed or preferred by over **130** species (SVE Process in Planning Record). Over 300 species were screened in this process. Conditions represented by mature, old, old growth, and late successional forest were found to be the most limiting compared to young and early successional forest. In addition, our examination of historic conditions of the forest shows that old and old growth forest is currently represented at a fraction of historic levels. We identified several species of lichens on the Superior National Forest that appear to be found only in certain old growth lowland conifer communities. Many other species will experience conditions that favor their viability in a landscape with more old forest versus a landscape dominated by young forest (FEIS).

PC# 2.7.9-5
Public Concern: The Forest Service should plant a variety of tree species to resemble that in older forests in order to benefit wildlife habitat.

Agency Response:

We agree. National Forests are required to reforest lands that are harvested, so the Forest Service will be doing what you suggest. Also, the Forest Service through the Forest Plans for the Chippewa and Superior National Forests plans to increase amounts of conifer species including red, white, and jack pine, amounts of old forest, and to have a better representation of habitat conditions once more common historically.

PC# 2.7.9-6
Public Concern: The Forest Service should maintain wildlife openings to provide early successional vegetation.

Agency Response:
Management objectives O-VG-6 (CNF) and O-VG-5(SNF) in the Forest Plans compels analysis at the project level to determine the need for wildlife openings in a particular area. The coarse filter, landscape level vegetation objectives (also listed in the Forest Plans) are projected to provide ample temporary openings (e.g. harvest areas) in the forested landscape for wildlife that need or prefer them. Historically, natural disturbances moved openings around the forested landscape over time. Our objectives strive to mimic natural processes in this regard.

PC# 2.7.9-7
Public Concern: Forest Plans should establish management direction that would maintain and protect stand level and within-stand habitat features for sensitive plant species such as rock outcrops, cliffs, and forest cover that maintains the microclimates adjacent to these features.

Agency Response:
Project level analyses would examine habitat and projected impacts of proposed projects when implementing Forest Plans. The over-arching objectives of maintaining species viability and well distributed habitats applies to situations described here, if not explicitly stated in the Plans species by species. Objectives O-WL-17 (CNF) and O-WL-18 (SNF) part b compels the Forest Service to maintain, protect, or improve habitat for sensitive species at the site-level or through fine filter management strategies. Again, these are not stated explicitly species by species, but depend on project level analyses to determine.

PC# 2.7.9-8
Public Concern: Forest Plans should adopt management prescriptions that reduce risk to the continued viability and are consistent with habitat needs of threatened, endangered, sensitive, and MIS species for species such as the Northern Goshawk and Black-throated Blue Warbler.

Agency Response:
The Regional Forester has considered this risk and uncertainty in the context of the other objectives of the Plans and feels that it is at an acceptable level.

Forest Spatial Patterns

Forest Spatial Patterns – General (2.8.1)

PC# 2.8.1-1
Public Concern: The Final EIS should explain why in Table FSP-2 the maximum number of potential patches is less the existing number of large patches.

Agency Response:
Given that there is a finite amount of federal land within the proclamation boundary of a National Forest, determining a maximum number of potential patches (a theoretical maximum) is an exercise in determining very large patches within that finite amount of land area. This creates fewer theoretical patches, but most of these potential patches are much larger than those existing. The total land area in each sample is the same.

The Regional Forester selected an alternative that he determined best balances the range of multiple uses on the Superior National Forest.

PC# 2.8.1-5
Public Concern: The Final EIS should use a target range of spatial patterns when analyzing environmental consequences of the alternatives.

Agency Response:
The Forest Plans for the Chippewa and Superior took a strategic approach in setting broad objectives for forest spatial patterns. On the Chippewa, the objectives would increase the area and number of 300 acre or larger mature upland forest patches and increase the amount of interior forest. On the Superior, in Spatial Zones 1 and 2, the objectives are to maintain or increase the area and number of 300 acre or larger mature upland forest patches and maintain or increase the amount of interior forest. In Spatial Zone 3 on the Superior, the objective is to minimize the decreases of these spatial elements. These are the target ranges for the Chippewa and Superior National Forests with regard to spatial patterns for the Selected Alternative. Standards and guidelines for forest spatial patterns set minimum conditions for spatial elements and conditions within elements. Objectives provide the desired direction for change for the selected alternative. Analysis used to determine spatial patterns objectives used research publications by Host and White and Wolter and White dealing with forest spatial patterns in the landscapes that include the Chippewa and Superior National Forests.

PC# 2.8.1-6
Public Concern: The Final EIS should consider why large forest patches are needed because there is little empirical data that habitat fragmentation is a concern within a forested mosaic.

Agency Response:
We examined the issue of habitat fragmentation and changed landscape patterns in the Habitat Fragmentation Reference Paper (USDA 1996) and recognized the disagreements on the significance of the issue in the EIS, section 3.2.2. We recognized the ways that different landscape patterns benefit different species or processes in the discussion of Affected Environment (FEIS section 3.2.2.a). The Forest Service recognizes the inherent condition of the Chippewa and Superior landscapes (DEIS section 3.2.2) and the limitations this places on spatial

management objectives. It is clear that the Chippewa and Superior landscapes have changed greatly from historic conditions. Having a representation of spatial patterns that better reflects historic conditions will, in combination with other multiple use objectives, result in healthier ecosystems and sustainable management.

PC# 2.8.1-7
Public Concern: The Final EIS should address foreseeable spatial impacts.

-The degree of fragmentation that will result from the proposed Plans
-Cumulative impacts of logging
-The relationship between fragmentation and biological diversity and the loss of plant and animal communities

Agency Response:
The FEIS (section 3.2.2) discusses the likely spatial patterns that will result from the range of management alternatives. These directly reflect the level of vegetation management projected by each alternative (directly and cumulatively) primarily resulting from timber harvest. We discuss the potential effects to plant and animal communities in this analysis and cite scientific literature we feel is significant to this topic. We analyzed four indicators for spatial patterns that we feel differentiate the alternatives sufficiently for the decision at hand.

PC# 2.8.1-12
Public Concern: The Final EIS should include spatial analysis of old growth, not just Large Mature/Old Patches.

Agency Response:
The FEIS analyzed patches of old growth in the analysis for forest vegetation. The FEIS (section 3.2.1, tables FAC-35 and 36) displays old-growth and multi-aged upland forest patches greater than 300 acres. These are a subset of large patches analyzed in section 3.2.2 for Forest Spatial Patterns.

PC# 2.8.1-15
Public Concern: The Final Plans should keep the desired conditions for vegetation spatial patterns.

Agency Response:
You will find the desired condition statements for vegetation spatial patterns in the final Forest Plan.

PC# 2.8.1-16
Public Concern: The Final Plans should explain how large forest patches would move across the landscape.

AND

PC# 2.8.1-17
Public Concern: The Final Plans should acknowledge that in order to have large, old patches in the future there needs to be a strategy to create large, young patches. .

Agency Response:
The Forest Service recognizes that increasing the size of forest patches is a long term process that needs to be accomplished by a combination of increasing harvest block size (O-VG-2, O-VG-20 (SNF), O-VG-24 (CNF), O-VG-21 (SNF)) and managing existing large mature/older forest patches (O-VG-18 through 22). In the short term (10 to 20 years) it is difficult to regain mature/older forest patches that are fragmented because it may take 50 or

more years to replace the patch. Thoughtful management (e.g. clustering of harvests) can begin to establish the large patches of the future. Over the next 50 to 100 years large patches can be moved around the landscape, but through a combination of managing current patches and those of the future.

PC# 2.8.1-21
Public Concern: The Forest Plans should have an additional guideline to address openings and open land ecosystems.

Agency Response:
Objectives O-VG-5, O-VG-6, O-VG-8 for the Chippewa and O-VG-4, O-VG-5, O-VG-7 for the Superior compel the Forest Service to examine conditions of non-forested land. Temporary openings imply that these are areas that represent early successional stages of forested communities, not a non-forested community. As such, management direction for temporary openings wouldn't be applicable.

PC# 2.8.1-22
Public Concern: The Final EIS should have a map of each alternative for each forest that shows existing large mature/older upland forest patches so the public and decision maker can better evaluate the alternatives.

Agency Response:
The existing conditions for the Chippewa and Superior National Forests are recorded in corporate data bases (e.g. GIS) for the forests and are also contained in the Planning Record for Forest Plan Revision. The planning project record may be accessed by the public. Monitoring of the Forest Plans will periodically examine the landscape changes you discuss by looking at the degree to which the Forests are progressing towards the objectives for Forest Spatial Patterns. Other management area designations will also be examined in this context. Project level analyses will conduct relevant analysis, including spatial analysis, at the scale of the project. In combination, projects should be moving the Forests toward the stated objectives.

PC# 2.6.4-93
PC: The Plans should include a discussion of patch dynamics.

Agency Response:
The FEIS (section 3.2.2) discusses forest spatial patterns. This analysis examined four indicators for spatial patterns for all 7 planning alternatives and into the future 10 decades. The details of the analysis are not carried forward into the Forest Plans, but are reflected in the range of management direction that affects forest spatial patterns.

PC# 2.6.4-44
Public Concern: The Chippewa NF should maintain white/bur oak trees and stands associated with lake points and other existing locations because they are:

- **Highly valuable or irreplaceable from an historical, research, aesthetic, and cultural legacy prospective.**
- **Very rare on the landscape.**

Agency Response:
Forest Plans generally set management direction for a National Forest at a broad programmatic level. Project level analyses are better able to deal with resource elements at the scale you describe here. In that context, most of the areas you list are within a Riparian Emphasis Management Area. One of themes of this MA is to maintain

and restore native vegetation communities. Corporate data bases are able to track the acres and locations of these old forest stands. At the project level, an analysis and a decision would consider this information.

PC# 2.6.4-104
Public Concern: The Final EIS should elaborate further on the rationale used for increasing the allowable size of temporary openings and the potential impacts to biological resources.

Agency Response:
Rationale can be found the analysis in Chapter 3.2.2 and, in greater detail, in the planning record. In short, harvest areas had been limited under the 1986 Forest Plans to 40 acres on the Chippewa and 200 acres on the Superior unless additional analysis and Regional review is completed. This was an administrative constraint on harvest area that had nothing to do with the potential area available or historic patterns of disturbance. The result of this policy has been to create a landscape of fragmented habitat and small patch sizes. Our intent with O-VG-23(CNF), and O-VG-20(SNF) is to increase the size of harvest areas to as much as 1,000 acres to have a better representation of patches to what occurred historically. Overall, we believe that this will be beneficial to biological resources. At the project level, proposals for large patches would need to analyze the effects specific to that area of the forest.

PC# 2.6.4-105
Public Concern: The Final EIS should analyze the forest outside the BWCAW separately to ensure that landscape concerns for habitat presence, connectivity of habitat, and patch configurations are adequate across the landscape.

Agency Response:
Data tables such as FSP-2 in the FEIS section 3.2.2 do list indicators for the area outside of the BWCA (listed as 'Indicator') separate from the forest as a whole (listed as 'Forest-wide'). Forest-wide indicators include the area within the BWCA. Depending on the question being asked, either indicator may be relevant. The Regional Forester has chosen a management strategy that relies on the contributions of the BWCA for spatial patterns in ecological units and areas that overlap with the wilderness or are immediately adjacent to the wilderness. National Forest lands outside the BWCA in this area would place less emphasis on forest spatial patterns because of the contributions of the nearby wilderness.

PC# 2.8.2-1
Public Concern: The Superior Forest Plan should clarify the spatial zone map.

Agency Response:
An introductory paragraph explaining the Spatial Zone Map and context for setting objectives within each zone was added. The map on page 2-79 in the draft Forest Plan shows a large white area that is now labeled as Spatial Zone 3. The objective for Spatial Zone 3 is primarily to achieve the age and composition objectives for forest vegetation, but also to strive to minimize the decrease in the acres and number of large mature/older upland forest patches. Large patches will not be entirely eliminated through forest management, but decreases are expected while achieving the forest vegetation objectives.

PC# 2.8.3-4
Public Concern: The Plans should have long term goals for large old patches that lie between those proposed for Alternatives E and F.

Agency Response:

The Regional Forester selected Modified Alternative E because he determined this alternative would better balance the range of multiple uses for each National Forest. The goal of Modified Alternative E was not necessarily to move the Forests within RNV, including forest spatial patterns. Analysis in the FEIS included spatial modeling for Modified Alternative E. This indicates that large mature and older upland forest patches and interior forest can both be improved on the Chippewa. On the Superior this will likely occur within Spatial Zones 1 and 2 by thoughtful management of disturbances on the landscapes in the context of disturbance rates proposed for Modified Alternative E.

PC# 2.8.3-5
Public Concern: The Final EIS and Forest Plans should address the inconsistency between goals for maintaining mature older upland forest in the Plans and the effects of Alternative E disclosed in the EIS.

Agency Response:
The 85,000 acres in large mature/older upland forest patches is in reference to a lower limit standard that the Forest will not go below. The objective for the Forest is to increase the acres and number of large patches from existing conditions. Revised analysis in the FEIS for the Chippewa National Forest projects that the forest will be able to increase the number and acres in large mature/older upland patches and interior forest by the end of the implementation period of the Forest Plan. A drop is predicted for acres in large mature/older upland patches during the first decade of implementation, however this is regained within 5 years as other forest land grows into large patches. Interior forest, another measure of spatial quality, is projected to increase steadily during implementation. Monitoring and evaluation will determine how well the Forest is meeting these objectives.

PC# 2.8.6-4
Public Concern: The Plans should identify the source for the patch direction and compare with existing condition.

Agency Response:
The management direction in the Forest Plans established both accomplishable objectives for the Forests to work towards and constraints in the form of standards and guides to maintain at least a minimum condition on each Forest. The starting point in the spatial analysis was to determine the existing condition of each Forest. Subsequent standards and guides set minimum numbers of patches or acres within patches to be maintained during the implementation period of the Forest Plans in relation to the existing condition. The Superior set Spatial Zones to account for the contributions of the BWCA in management direction. In Spatial Zones 1 and 2 the overall objective is to increase the number and acres in large patches during implementation of the Plan. In Zone 3, the emphasis is on meeting composition and age objectives for the landscape ecosystems and allow decreases in spatial elements.

On the Chippewa spatial zones were not identified and spatial management direction is applied forest-wide. The forest-wide objective on the Chippewa is to increase the number and acres in large mature/older upland patches during implementation of the Plan. Analysis indicates that the combination of vegetation age class, forest composition, and forest spatial patterns can be achieved during the implementation period of the plan.

Forest Plan Standards, Guidelines, and Spatial Zones (2.8.2)

PC# 2.8.2-2
Public Concern: The Superior Forest Plan should not have a Spatial Zone 1 area that is mostly in the Kabetogama Purchase Unit.

Agency Response:
Spatial Zones 1 and 2 were designed to maintain forest spatial patterns on federal forest land that is not proximate to the BWCAW as a means of maintaining adequate distribution of those habitat features on the landscape. The future status of the area that includes the Kabetogama Purchase Unit is outside the scope of the analysis for the EIS.

PC# 2.8.2-3
Public Concern: The Superior Forest Plan should modify direction for spatial zone 3.

-Add minimum patch size
-Add a retention standard

Agency Response:
The intent for spatial patterns within Spatial Zone 3 is to take into consideration the contribution of the BWCAW acres and setting, or other unmanaged lands within the same ecological setting and proximity. Vegetation management is primarily responsible for landscape patterns in this zone. The Forest Service accomplishes most vegetation management through timber harvest. Analysis based on modeling of forest vegetation objectives and spatial patterns shows that numbers and acres of large mature/older upland forest patches will decrease during implementation of the Forest Plan on the Superior National Forest. Other management strategies were considered by the Regional Forester. However, he determined that the selected alternative best balances the range of multiple uses on the Superior National Forest.

PC# 2.8.2-4
Public Concern: The Superior Forest Plan should clarify S-VG-6.

Agency Response:
You are correct that this is an error. This error will be corrected in G-VG-4 and S-VG-5 in the final Superior Forest Plan and will require that one patch and a minimum of 11,700 acres in patches 10,000 acres or greater be maintained in Zone 2. Standard S-VG-6 will maintain at least 90% (11,700) of the acres in this existing patch to provide a degree of flexibility.

PC# 2.8.2-5
Public Concern: In G-VG-1, the Superior Forest Plan should indicate how many patches there are now.

Agency Response:
Patch numbers and acres for large patches of red and white pine represent all that currently existing forest-wide outside of the BWCAW. A revised existing condition shows that there are currently 8 patches greater than 300 acres that are red and white pine forest types. The Planning Record contains this information, and the FEIS and Forest Plan was amended to reflect this information.

PC# 2.8.2-6
Public Concern: The Chippewa Forest Plan should modify S-VG-2.

-It should close loophole
-It should be a standard

Agency Response:
It is helpful to examine management direction that affects spatial patterns in combination to determine the overall intent. Standards and Guides, including S-VG-3, often represent minimum conditions that the Forest Service will maintain on the forest or that could result from management activities. The intent is not to manage to the minimum condition, but to work towards the desired conditions and objectives. The leading desired condition and objective that apply here are D-VG-7 and O-VG-22(CNF) or O-VG-18(SNF). The desired condition is to restore landscape patterns to be more representative of natural disturbances. The objective compels the Forest Service to manage patches to maintain characteristics of mature or older native upland forest vegetation communities and promote the maintenance or development of interior forest habitat conditions. Decisions at project level implementation of the Forest Plan would balance where standards, such as S-VG-2, come to limit management in the pursuit of other multiple use objectives and where a project's purpose works towards O-VG-22(CNF), O-VG-18(SNF), or other objectives. Monitoring and evaluation will periodically track the Forest's progress toward meeting the objectives set forth in the Plan.

PC# 2.8.2-6a
Public Concern: The Superior Forest Plan should clarify S-VG-2 on whether it includes the BWCAW.

AND

PC# 2.6.4-71
Public Concern: The Superior NF Plan should adopt a modified version of S-VG-1 that clarifies that it applies only outside the BWCAW.

Agency Response:
These standards and others for red and white pine patches (i.e. G-VG-1, G-VG-2, S-VG-3(SNF)) apply outside of the BWCAW. The assessment of existing condition, used as a basis for these standards and guidelines was only done for outside of the BWCAW. We have added clarifying language for these standards and guidelines to reflect this.

PC# 2.8.2-7
Public Concern: In the Superior Forest Plan, G-VG-3 to G-VG-6 should be changed to standards.

AND

PC# 2.8.2-12
Public Concern: The Final Plans should change the guideline for a minimum of 92 patches of mature and older red and white pine forest type in patches of 100 acres (G-VG-2) to a standard.

Agency Response:
Standards and Guides are similar in that they both set a limit to management to mitigate the effects of an activity. Standards are mandatory and can only be exceeded if the Forest Plan is amended. Guides are almost always met, but can be exceeded if a project analysis and decision provide a rationale for not following the management direction. These are appropriate as guidelines because they will almost always be met but there is a degree of flexibility added with them as guidelines.

PC# 2.8.2-8
Public Concern: The Superior Plan should indicate if, in G-VG-3, the measure of the patch size allows for the consideration of roads, private in-holdings, clear-cuts, and off-site plantations.

Agency Response:
We took a simple generalized approach in defining forest patches for analysis in the EIS. They represent contiguous upland forested stands of federal ownership that are mature or older. In-holdings and stands that do not meet the criteria were not included in the patch area. Roads were not subtracted from patches in this coarse forest-wide approach. Our measures of interior forest, edge density, and large young patches help to determine other qualities of the landscape. Patches of equal size may have very different amounts of interior forest as we define it. This may represent harvest areas or changes in ownership. Roads and road density were not examined, but obviously roads do contribute to fragmentation and decrease patch quality. Management direction to improve spatial patterns along with management direction to reduce road density would need to be considered together at the project level to meet forest-level objectives.

PC# 2.8.2-13
Public Concern: The Final Plans should clarify the definition of "mature" and "older" forest.

Agency Response:
Table APP-C2, Management Indicator Habitats: Age groupings for forest types in Appendix C of the Forest Plans defines the age by forest types for mature or older forest. Because of the ecology of the different forest types, age grouping depended on forest type and was selected to best typify vegetative growth stages. For red and white pine mature or older stands are those that are 50 years old or older.

PC# 2.8.2-14
Public Concern: The Final EIS and Plans should indicate how many patches currently exist that are mature or older upland forest with a patch size ranging from 5,000-10,000 acres or greater.

Agency Response:
Some standards and guides maintain the existing condition, others maintain a percentage of the existing condition. This guideline would maintain the one existing 5,000 to 10,000 acre forest stand. The planning record does contain more detailed existing condition information. However, for brevity, these data were not included in the Forest Plans.

PC# 2.8.2-15
Public Concern: The Final Plans should address interior forest habitat with standards that would prevent further fragmentation, that delineate wildlife corridors, and that reduce ASQ.

AND

PC# 2.8.2-16
Public Concern: The Final Plans should increase the objective and standard for large upland patches.

AND

PC# 2.6.4-115
Public Concern: The Plans should set standards to achieve theoretical maximum acres in large mature upland patches in 90% of the Superior NF and 80% of the Chippewa NF.

Agency Response:
It is likely not possible to achieve the theoretical maximum for large mature/older upland patches nor interior forest on either forest. Even in a landscape free of human-caused effects, other disturbances such as fire or wind will create patterns that have fewer and smaller patches and less interior forest than the theoretical maximum. Combine multiple use management with forest disturbance ecology and the results are forest spatial patterns that have fewer large patches and much less interior forest than the theoretical maximum. Even so, the Preferred Alternative for the Chippewa has an objective to increase the amount of interior forest from existing condition during the implementation period of the Plan. On the Superior, the objective is to maintain or increase interior forest in Spatial Zones 1 and 2. The Forest Service's intent is not to manage to the minimum condition, but to work towards the desired conditions and objectives. Decisions at project level implementation of the Forest Plan would balance where standards come to limit management in the pursuit of other multiple use objectives and where a project's purpose works towards objectives. Monitoring and evaluation will periodically track the Forest's progress toward meeting the objectives set forth in the Plan.

PC# 2.8.2-17
Public Concern: The Chippewa Forest Plan should have standards for large forest patches.

Agency Response:
Analysis included in the Planning Record showed that the one forest patch 10,000 acres or larger on the Chippewa would be retained under the Preferred Alternative, that is, vegetation management would not fragment this patch below the 10,000 acre size. In addition, guide G-VG-1 would maintain 19 (all existing) patches greater than 1,000 acres – of which this largest patch is included. We believe this additional standard would be redundant and unnecessary.

PC# 2.8.2-18
Public Concern: The Final Plans should have standards for very large (10,000 acres) blocks of interior forest.

Agency Response:
We agree that very large blocks of interior forest are important on the Chippewa and Superior, however we do not currently have 10,000 acre blocks of interior forest on either National Forest and it may not be possible to achieve such a condition. Each forest has few forested blocks in this size class much less having interior forest blocks in this size. Interior forest is determined through a process of buffering inward from a block edge for a chosen distance, resulting in an interior forest block that is always smaller than the actual block size. On the Chippewa the Forest Plan objectives are to increase the number and acres in large upland forest patches and to increase the amount of interior forest. In combination, these will increase the size of blocks of interior forest. On the Superior, similar Forest Plan objectives apply to Spatial Zones 1 and 2. In the remainder of Superior Forest, the contributions of the BWCAW would serve to mitigate management effects proximate to the wilderness.

PC# 2.8.2-19
Public Concern: The Plans should have Standards and Guidelines for younger forest patches, similar to those for mature and older upland forest.

Agency Response:
The Forest Plans have objectives to increase the acres and number of patches of temporary openings up to and including 1000 acres (O-VG-23(CNF), O-VG-20(SNF)) and to increase the average size of temporary forest opening (O-VG-24(CNF), O-VG-21(SNF)). In the context of the Landscape Ecosystem vegetation objectives that include regeneration to young forest, more large patches of young forest would be produced through the

aggregation of harvests in an area. Because maintaining or increasing large mature and older upland patches is much more difficult than creating young patches, standards and guides are necessary to limit their reduction.

PC# 2.8.2-20
Public Concern: In the Superior Forest Plan, the ASQ should be reduced so the Forest can move toward the desired condition for the Northern Superior Uplands Ecological Section.

Agency Response:
The Regional Forester selected a Preferred Alternative that he determined would balance the range of multiple uses on the Superior National Forest. The desired outcomes for forest vegetation that would be achieved by the LE based objectives will contribute to NSU desired conditions to the degree possible in the context of other multiple uses. The ASQ represents a legal maximum, a ceiling to harvest levels, rather than an objective that a Forest tries to achieve. That said, the Draft EIS did predict that with achieving this maximum level of harvest, it would be difficult to meet some other objectives – including spatial objectives. The final Forest Plan for the Superior has redefined objectives for forest spatial patterns to only increase interior forest and large mature/older upland forest patches in Spatial Zones 1 and 2, rather than forest-wide.

PC# 2.8.2-21
Public Concern: The Final Plans should clarify what an increase in temporary openings over the current condition means.

Agency Response:
The glossary for the Forest Plans defines a temporary opening as "areas of grass/forb and shrubs usually resulting from timber harvest that will be replaced by tree saplings over a period of a few years: in contrast to permanent non-forested openings." Objective O-VG-23(CNF) and O-VG-20(SNF) compels the Forest Service to increase temporary openings (generally due to timber harvest) to up to 1,000 acres. We believe that this objective is accurately stated.

Harvest areas had been limited under the 1986 Forest Plans to 40 acres on the Chippewa and 200 acres on the Superior unless additional analysis and Regional review is completed. The result of this policy has been the creation of a landscape that is fragmented into small patch sizes. Our intent with O-VG-23(CNF) and O-VG-20(SNF) is to increase the size of harvest areas to as much as 1,000 acres to have a better representation of patches to what occurred historically. Overall, this will be beneficial to biological resources. At the project level, proposals for large patches would need to analyze the effects specific to that area of the forest. Through thoughtful management (e.g. clustering of harvests) the Forest Service can begin to establish the large mature forest patches of the future.

PC# 2.8.2-22
Public Concern: The Final Plans should consider even-aged stands as patch edge, not as interior forest.

Agency Response:
Even-aged forest stands that met the age requirements for mature or older upland forest patches were included for interior forest calculations. Many mature forest stands are even-aged, it is just that biologically they have reached a height or structure that has peaked for the dominant tree species. The transition from mature to old/old growth is usually represented by trees dying and a greater diversity of age classes (the opposite of even-aged). However, both mature and old forest, whether even-aged or multi-aged, provide interior forest conditions and benefits to wildlife.

PC# 2.8.2-23
Public Concern: The spatial management direction in the Final Plans should be more specific than "maintain large diameter trees".

Agency Response:
Forest-wide management direction, such as S-VG-3 which includes a reference to large diameter trees, must be general enough to apply to multiple situations. Tree diameter changes based on site quality and tree species, therefore what is 'large' on one site may not be on another site. In applying this management direction, a judgment call must be made on a site by site basis based on the tree diameters that are available.

PC# 2.8.2-24
Public Concern: In the Final Plan, the BWCAW should not be used to meet temporal bottlenecks in habitat and an accurate inventory should be done.

Agency Response:
The Regional Forester determined that the BWCAW wilderness contributes significantly to the spatial diversity of the Superior National Forest and the ecological section it lies within. At this scale, it is believed that the BWCAW provides well distributed habitat. For the scale that forest spatial patterns are assessed native plant community and growth stage data are not needed in order to determine the spatial contributions of the BWCAW to the Superior National Forest.

PC# 2.8.2-25
Public Concern: The Final Plans should have quantified objectives for more multi-aged older forest patches.

Agency Response:
The Regional Forester has selected a strategic approach for management direction in the Chippewa and Superior Forest Plans. The objectives that affect forest spatial patterns call for increasing large mature/older upland forest patches and increasing interior forest conditions on the Chippewa and in Spatial Zones 1 and 2 on the Superior in the context of meeting Landscape Ecosystem vegetation objectives. Meeting these multiple objectives will increase the amount of multi-aged or old growth forest. Increasing amounts of older aged forest, shown for most landscape ecosystems by Decade 1, will in itself increase the opportunity for multi-aged conditions to develop. These objectives are quantified within Chapter 2, Landscape Ecosystem Objectives.

PC# 2.6.4-94
Public Concern: The Plans should consider that there is a need and a desire for small, young patch management.

Agency Response:
Our analysis and experience shows that Forest Service management has easily been able to create small young patches. In addition, other land owners have readily been able to create this habitat condition. Landscape Ecosystem Objectives (Chapter 2 in the Forest Plans) have objectives to create young forest. Project level analyses would determine what size and where these patches of young forest would be located. In this context, an adequate number of small young patches would be created without having management direction to do so.

PC# 2.8.2-27
Public Concern: The Final Plans should have another management indicator habitat that would measure the number and distribution of smaller high quality patches to understand quality across the forest

Agency Response:
You are correct in that smaller patches can help to maintain connectivity, diversity and other habitat or ecosystem attributes. It is difficult to design management direction for every contingency. Our approach in the Forest Plans was to address the rarest spatial elements at a coarse filter landscape level in order to begin to change forest spatial patterns. Smaller patches could be addressed at a project level in order to meet management objectives such as O-VG-14, 15, 16 or 17 for the Chippewa; O-VG-13, 14, 15 or 16 for the Superior. These objectives could be met with forest stands of any size.

PC# 2.8.2-28
Public Concern: The Final EIS and Plans should summarize the principles that will guide the spatial distribution of patch types.

Agency Response:
The Final Forest Plans for the Chippewa and Superior will be arranged so that desired conditions, objectives and standards and guides for each resource area will be located in the same section. This should better communicate the principles that will guide spatial management of the Chippewa and Superior. Large patch management and simulation of natural disturbance events will be done in combination with and in the context of the Landscape Ecosystem Objectives for forest vegetation composition and age. The Chippewa and Superior set Landscape Ecosystem Objectives for the Preferred Alternative that move many aspects of forest vegetation towards RNV, though the goal of the Preferred Alternative was not to move the forest to within RNV. Historic rates of disturbance are a key reference point for RNV, though rates of disturbance of the Preferred Alternative are greater than would have occurred historically. The desired condition for vegetation spatial patterns (D-VG-7) including large patch management on the Chippewa and Superior is to restore conditions that more closely emulate landscape patterns that would result from natural disturbances and other ecological processes. In order to reach this desired condition each forest has examined its existing conditions and the Regional Forester has selected objectives that he feels are attainable during the implementation period of each Forest Plan.

Large young forest patches would be placed on the landscape in a way that would better resemble historic disturbance patterns and in the context of young forest objectives by each Landscape Ecosystem. Increasing the size of harvest areas will eventually improve the spatial diversity of each National Forest. Examining and appropriately managing existing large mature/older upland forest patches will help retain increasingly rare landscape elements.

PC# 2.6.4-70
Public Concern: The Superior NF Plan should adopt a modified version of G-VG-1 (patches of red/white pine over 300 acres).

> **-To make it a standard, remove “generally”, and to allocate minimum acreage by Ranger District.**
> **-To protect large patches in Decade 1 until their number has increased in quality and quantity.**

Agency Response:
Guidelines and standards are similar in that both set management minimums or maximums. While standards can not be violated without a Forest Plan amendment, exceptions to guidelines can be made with analysis and

rationale in a decision document. Exceptions to guidelines are rare events, but some flexibility is needed to address specific management issues. The Superior Forest Plan takes a strategic, coarse filter approach to address forest-wide issues. Allocating objectives down to a Ranger District may not make sense ecologically and may not be appropriate in the context of other multiple use objectives. Monitoring and evaluation at the forest level will determine if objectives are being met as Forest Plans are implemented.

PC# 2.6.4-90
Public Concern: The Plans should have stronger guidelines for maintaining interior forest to support bird populations and other wildlife.

Agency Response:
Objective O-VG-21 in the Forest Plan for the Chippewa National Forest will result in an increase of interior forest over what currently exists by the end of the implementation period for the Forest Plan, about 15 years. This coupled with objective O-VG-19, that would increase the acres and number of large mature/older upland forest patches, will result in better conditions for interior forest or large patch species on the Chippewa.

On the Superior National Forest objectives O-VG-23, O-VG-22, and a new management objective for Spatial Zone 3 would maintain or increase large mature/older upland patches and interior forest in Spatial Zones 1 and 2, while striving to limit decreases of these elements in Spatial Zone 3. Analysis based on modeling of forest vegetation objectives and spatial patterns shows that numbers and acres of large mature/older upland forest patches will decrease during implementation of the Forest Plan on the Superior National Forest. Conditions would be adequate to maintain at least minimally viable populations of all wildlife species. The contributions of the BWCAW are thought to mitigate management effects proximate to the wilderness in Spatial Zone 3. The Regional Forester determined that the BWCAW wilderness contributes significantly to the spatial diversity of the Superior National Forest and the ecological section it lies within. At this scale, it is believed that the BWCAW provides well distributed habitat. Other management strategies were considered by the Regional Forester. However, he determined that the selected alternative best balances the range of multiple uses on the Superior National Forest.

Habitat for ruffed grouse and woodcock is projected to be at levels well above historic levels during the implementation period of the Forest Plans. These analyses are covered in the draft EIS beginning on page 3.3.6-24 for woodcock and on page 3.3.6-37 for ruffed grouse. The cumulative effects analysis for ruffed grouse (draft EIS p. 3.3.6-40) states that State and private non-industrial ownerships may be trending towards providing more habitat for the ruffed grouse in the landscapes that include the Chippewa and Superior. These ownerships are trending towards having less interior forest and smaller patch sizes. This, combined with the proposed disturbance rates on the Chippewa and Superior, would result in habitat conditions that would continue to be well above historic conditions and would continue to provide ample hunting opportunities for the hunting public.

PC# 2.6.4-91
Public Concern: In the Superior Forest Plan, O-VG-20 should be changed.

-Specify in which communities it would apply
-Set a high objective

Agency Response:
Objective O-VG-22 (formerly O-VG-20) for the Superior National Forest would “Increase the amount of interior forest habitat. Provide interior habitat in a variety of upland and lowland vegetation communities.” This objective has been changed to only apply to Spatial Zones 1 and 2 on the Superior National Forest. The objective

for Spatial Zone 3 is to "strive to minimize the decrease of interior forest habitat in a variety of upland and lowland vegetation communities."

The analysis of forest spatial patterns in chapter 3.2.2 of the Final EIS points out that existing spatial patterns have greatly changed from historic conditions. Desired condition D-VG-7 will restore spatial landscape patterns to conditions that more closely emulate those of natural disturbances and ecological processes. Objective O-VG-22 and other spatial objectives provide adequate guidance to begin to move the Superior towards this desired condition. Restoration of the landscape to more closely mimic historic conditions is a long-term process. Each project to implement the Forest Plan will have different opportunities in different forest communities for maintaining or increasing interior forest. Opportunities will be different and all contingencies for interior forest cannot be planned for in a strategic forest plan. In ROD, the Regional Forester considers the degree of change in management for a National Forest. He determined that the progress that is projected to be made during implementation of the Forest Plan is adequate in the context of the other multiple uses for the Superior National Forest. Setting a higher objective would alter other desired outcomes on the forest.

PC# 2.6.4-89
Public Concern: In the Chippewa Forest Plan, O-VG-20 should be clarified and quantified.

Agency Response:
We recognize that objective O-VG-20 for the Chippewa is a strategic objective that points the direction for change. The Planning Record for the Forest Plan contains information on lowland forest patches as well as other patches specific to forest communities forest-wide. Project level analysis would examine the array of lowland forest patches for representation and to maintain in the context of what exists on the Forest. Lowlands across the Chippewa are fixed in place by hydrologic regimes and topography. We expect that patterns for forested wetlands will remain the same, while age classes would change to meet vegetation objectives.

PC# 2.6.4-95
Public Concern: In the Chippewa Forest Plan, S-VG-1 should be changed to maintain a minimum of 95,000 acres and should include an objective of 365,000 acres in 100 years.

Agency Response:
Standard S-VG-2 (maintain at least a minimum of 85,000 acres of mature or older upland forest in 300 acre or larger patches) allows some flexibility while working towards an objective to increase large patches (O-VG-19) during the implementation period of the Forest Plan. The Regional Forester determined that this approach best balances the range of multiple use objectives for the Preferred Alternative. Setting an objective of 365,000 acres, or the theoretical potential for large patches for the Chippewa, likely can not be achieved in the context of multiple use management nor in the context of natural disturbance processes which would contribute to patch size heterogeneity. l

PC# 2.6.4-96
Public Concern: In the Plans, O-VG-19 (Chippewa Plan) and O-VG-18 (Superior Plan) should state that a patch cannot cross roads, non-federal ownership, and other natural and management-caused patch edges.

Agency Response:
We agree that breaks in ownership and roads can serve to fragment forest patches. In addition each National Forest has natural features which are interspersed within the forested landscape and affect patch size. Our definition for mature/older upland patches does allow for patches to cross roads, but does not include non-federal

ownership. Limiting patch size by road corridors wouldn't allow the National Forests to recognize existing large blocks of otherwise contiguous habitat and work towards improving conditions within those blocks. With objectives to reduce road density on each forest, we believe that patch quality will eventually be increased.

PC# 2.6.4-97
Public Concern: In the Chippewa Forest Plan, G-VG-1 should be changed to a standard.

Agency Response:
This guideline is designed to maintain, at a minimum, all 19 of the existing largest patches (those over 1000 acres). The objective on the Chippewa is to increase the number and acres of large mature/older upland patches (O-VG-19). Rather than maintain a minimum condition, the Chippewa is working towards improving spatial patterns. Guidelines and standards are similar in that both set management minimums. While standards can not be violated without a Forest Plan amendment, exceptions to guidelines can be made with analysis and rationale in a decision document. Exceptions to guidelines are rare events, but some flexibility is needed to address specific management issues. Retaining this as a guideline would accomplish that need.

PC# 2.6.4-88
Public Concern: The Chippewa and Superior NFs should retain or restore large patches and their Plans should have objectives for more multi-aged older forest patches.

Agency Response:
The Chippewa Forest Plan has a forest-wide objective to increase the number and acres of large patches during the implementation period of the Plan. LE based vegetation objectives would also increase the amount of multi-aged forest during this time period. In combination, we believe it is likely that large mature/older upland patches would contain more forest in multi-aged conditions.

The Superior Forest Plan would increase the number and acres of large patches in Spatial Zones 1 and 2 while meeting LE based vegetation objectives during the implementation period of the Plan. In the remainder of the forest that is outside of the BWCA, vegetation age and composition objectives would be the primary drivers of landscape condition over any spatial objective. Amounts of forest old enough to develop multi-aged conditions are projected to increase during implementation of the Forest Plan and beyond (Draft EIS p. 2-34).

PC# 2.7.2-5
Public Concern: Forest Plan management direction on the Chippewa and Superior NFs should maintain greater canopy closure than is proposed in the following standards and guides:

> **-S-VG-3 should not allow removal of up to 40% of the canopy in the large mature forest patches because this would reduce the age of the patch, alter the composition and vertical structure, undermine benefits to wildlife, and make it difficult for them to serve as mitigation for additional logging.**
> **-In S-VG-2 on the Chippewa and S-VG-8 on the Superior, maintain at least 70% canopy closure.**

Agency Response:
It is useful to examine the desired conditions for vegetation and the objectives for patch condition, O-VG-22 on the Chippewa and O-VG-17 on the Superior, in combination with the minimum conditions set by the standards listed above. The Chippewa and Superior National Forest will manage toward this objective and desired conditions in the majority of situations rather than toward the minimums set by these standards. Our analysis

determined that the minimum crown closure percentages in these standards realistically provide at least a minimum habitat condition for species such as the northern goshawk (a management indicator) and provide connectivity to the remainder of the forest patch. Much of the stand structure would be retained in this situation and conditions leading towards multi-aged stands could be initiated.

PC# 2.8.1-18
Public Concern: The Forest Plans should have an additional standard for openings to not exceed 40 acres.

-Because clear-cutting up to 1000 acres would favor deer over moose.
-Because fragile soils are easily torn up and erode as a result of large-scale machinery.

Agency Response:
The draft EIS (p. 3.2-49 through 3.2-54) and the Final EIS Chapter 3.2.2 provides rationale and analysis parameters for forest spatial patterns. In addition, Appendix A, Analysis of the Management Situation, in the Forest Plans addresses wildlife habitat management. Other works are cited within these planning documents that support our approach for the Chippewa and Superior National Forests to manage forest spatial patterns. We believe that the 40 acres limit on the Chippewa (200 acres on the Superior) on harvest opening size in the 1986 Forest Plans has led to changes in landscape level patterns that affect forest communities, forest dwelling species, and disturbance processes. Increasing forest patch size on the Chippewa and Superior Forests should provide more resilient and sustainable plant and animal communities. Historical information shows that the size of disturbances (e.g. fires, blow down events) exceeded thousands of acres. Selection of as much as 1,000 acres for harvest area size works towards increasing the 'grain' or coarseness of landscape patterns to more resemble historic patterns. The 1986 Superior Forest Plan supported larger (200 acre) harvest areas to favor conditions for moose rather than the white-tail deer. Larger openings would continue to favor moose. Other factors such as the recent string of mild winters and forage conditions have allowed white-tail deer to increase in number. These factors could continue to work against the moose.

Standards and guides for soil disturbance, combined with the timing of harvests (e.g. winter logging), are expected to mitigate adverse levels of soil disturbance. We believe that these measures will be adequate to address this issue regardless of the harvest area size.

PC# 2.8.1-19
Public Concern: The Forest Plans should have an additional guideline to define what a stand is for temporary openings.

Agency Response:
The glossary for the Forest Plans defines a temporary opening as "areas of grass/forbs and shrubs usually resulting from timber harvest that will be replaced by tree saplings over a period of a few years: in contrast to permanent non-forested openings." A stand is defined as "a contiguous group of trees that occupies a specific area and is similar in species, age, and condition." These definitions should address your concern.

PC# 2.8.1-20
Public Concern: The Forest Plans should have an additional guideline to separate openings.

Agency Response:
The 1986 Forest Plans for the Chippewa and Superior utilized management direction similar to what you suggest. As with the limit on harvest area size (40 acres on the Chippewa and 200 on the Superior), requiring opening separations has contributed to landscape level fragmentation. Larger forest patches with greater amounts of

interior would be more resilient and would provide for greater sustainability of plant and animal communities. There may be situations where retaining a 10 acres manageable stand may be desired, though a guideline would not be necessary to achieve this. The desired condition for vegetation spatial patterns (D-VG-7) selected by the Regional Forester will have the Forests consider these issues and work towards landscape patterns that more closely emulate historic patterns and ecological processes.

Forest Spatial Patterns and Wildlife (2.8.4)

PC# 2.8.4-2
Public Concern: The Final Plan should capitalize on the large size and contiguous ownership of these national forests as well as the resources and expertise of the Forest Service to provide for rare native plant communities in interior and older forests

Agency Response:
The Forest Service recognizes the values of the Chippewa and Superior National Forests. The Regional Forester determined that the Forest Plans set forth a direction for management that is sustainable and in keeping with the multiple use mandate of the agency.

PC# 2.6.4-98
Public Concern: The Forest Plans should not allow fragmentation to increase and allow no loss of large patches of mature forest.

-Reduce logging and road building
-Prevent loss of species viability
-Add standards for very large blocks of interior forest

Agency Response:
The Regional Forester selected Modified Alternative E because he determined this alternative will better balance the range of multiple uses for each National Forest. Forest Plans are projected to achieve a range of objectives, including maintaining the viability of species and reducing road density. Changes in forest vegetation are expected to be attained primarily through timber harvest.

For the Superior, the strategy selected by the Regional Forester would set Spatial Zones to account for the contributions of the BWCA in management direction. Forest-wide, fragmentation of large mature or older upland forest patches will occur primarily in Spatial Zone 3. In Spatial Zones 1 and 2 the overall objective is to increase the number and acres in large patches during implementation of the Plan. In Zone 3, the emphasis is on meeting composition and age objectives for the landscape ecosystems.

On the Chippewa spatial zones were not identified and spatial management direction is applied forest-wide. The forest-wide objective on the Chippewa is to increase the number and acres in large mature/older upland patches during implementation of the Plan. Analysis indicates that we can achieve the combination of vegetation age class, forest composition, and forest spatial patterns during the implementation period of the plan.

We recognize the value of very large blocks of interior forest. Very large blocks of interior forest are accounted for in the standards and guides to maintain minimum numbers of 1000 acre or greater mature or older upland forest patches and in minimum acreage within 300 acre or greater mature or older upland forest patches. These are the rarest and largest spatial elements on the Chippewa and Superior and would contain the largest blocks of

interior forest available on either forest outside of the BWCAW. An additional standard for very large blocks of interior forest would be redundant.

PC#2.6.4-98a
Public Concern: The Final EIS should analyze wildlife corridors and the Plans should identify, map, and protect wildlife corridors in order to meet NFMA requirements.

Agency Response:
Our approach to analyzing effects to forest spatial patterns in the EIS was to look at changes in four rather broad indicators at the forest level. These are large upland mature or older forest patches, large young forest patches, interior forest in mature or older condition, and management induced edge density. We recognize that there are many more aspects of spatial patterns, such as connectivity, that are important to consider. However we believe that the indicators we considered provide the Regional Forester adequate information for the decision at hand. Project level analyses and implementation of the Forest Plans could consider corridors and connectivity. Desired condition D-VG-7 (Chapter 2 of the Forest Plans) would have the Chippewa and Superior work towards restoring connectivity between aquatic, terrestrial, and riparian ecosystems. The combination of objectives for each forest should move each forest's landscape towards this Desired Condition. Monitoring and evaluation of Plan implementation will determine how each forest is progressing towards Desired Conditions and in achieving objectives.

PC# 2.6.4-102
Public Concern: The Final EIS should consider the cumulative effects of the high level of logging on habitat connectivity.

Agency Response:
The Final EIS has more current information and changes to the Preferred Alternative, including the cumulative effects analysis to forest spatial patterns resulting from this alternative. The Regional Forester has considered the environmental effects of the proposed levels of forest disturbance to achieve the LE based forest vegetation objectives and determined that the Forest Plan based on the Preferred Alternative reaches the desired balance in multiple use objectives for the Superior National Forest.

PC# 2.8.1-3
Public Concern: The Final EIS and Plans should increase connectivity of critical habitat for threatened, endangered, and sensitive species.

Agency Response:
The Chippewa Forest Plan will increase connectivity by increasing large mature or older upland patch size and eventually improving landscape patterns by increasing the size of young forest stands on federal ownership and within the proclamation boundary during the implementation period of the Forest Plan. The Final EIS analysis reflecting the modified Preferred Alternative for the Chippewa shows that increasing large mature or older upland forest patches and increasing interior forest are both possible while meeting the LE based forest vegetation objectives. Riparian emphasis management areas will contribute to connectivity on the Chippewa.

The Superior set Spatial Zones to account for the contributions of the BWCA in management direction. Connectivity will increase in Spatial Zones 1 and 2 where the overall objective is to increase the number and acres in large patches during implementation of the Plan. In Zone 3, the emphasis is on meeting composition and age objectives for the landscape ecosystems. Connectivity is likely to decrease in Spatial Zone 3 because of the projected decrease in large mature or older upland forest patches and interior forest due to achieving disturbance

and composition objectives. The Regional Forester determined that the Preferred Alternative best balances the range of multiple uses for the Superior National Forest.

PC# 2.8.1-8
Public Concern: The Final EIS should explain the effects of increased edge on microclimate of interior forests.

Agency Response:
Additional explanation on the microclimate effects of forest edge was added to the Final EIS analysis to better communicate the potential environmental impacts of increased forest edge.

PC# 2.8.1-9
Public Concern: The Final EIS should acknowledge that management for interior species versus edge associates usually is a matter of human or intrinsic values.

Agency Response:
The approach that is proposed in the new Forest Plans accommodates both management for interior species and edge species as your citation suggests. Our analysis shows that we must account for rare landscape elements (e.g. large patches) in National Forest management. Otherwise, they can be quickly lost. Conversely, we can aggregate harvest areas or delineate larger harvest blocks to produce large young patches on the landscape. These will serve as large mature forest patches with high amounts of interior forest in the future. Forest vegetation spatial pattern objectives in Chapter 2 of the Forest Plans describe these combined approaches in objectives to increase large mature or older upland patches, increase interior forest, and to increase 1000 acre or larger temporary openings. Many small forest blocks will continue to be managed and provide for edge habitat, both on federal land and other ownerships within the National Forest. In addition, areas within each National Forest (e.g. hunter walking trail systems) could continue to have focused management for game species.

PC# 2.8.1-10
Public Concern: The Final EIS should use a wider buffer in the interior habitat analysis.

AND

PC# 2.8.1-11
Public Concern: The Final EIS should use a wider buffer, or should have analyzed interior habitat under a range of buffer widths.

AND

PC# 2.6.4-101
Public Concern: The Final EIS should reanalyze the indicator for forest interior habitat using a 200 meter buffer.

Agency Response:
We agree that there are different buffer widths that could be considered to evaluate interior forest depending on the resource or species being considered. We considered using and evaluating several buffer widths (Planning Record for Indicators), however we selected 100 meters as the buffer width to determine interior forest. This indicator does allow us to differentiate between the effects of the range of alternatives, even if it could be argued that another buffer width more correctly defines interior forest. Our approach was also simplified in that we did not consider the effect of roads (which results in overestimating the amount of interior forest) or the contribution of other ownerships to interior forest (resulting in an underestimation of interior forest within the proclamation boundary). Rather than providing an end-all definition for interior forest, our indicator simply helps us to

differentiate the likely effects of each alternative. Mid-level or project level analyses for Forest Plan implementation could and should consider more refined definitions of interior forest as you suggest.

Forest Spatial Patterns and Forest Health (2.8.5)

PC# 2.7.5-1
Public Concern: The Chippewa and Superior NFs should not reserve large areas as patches because they are not harvested and negatively affect forest health.

Agency Response:
The Forest Service is proposing outcome based Forest Plans for the Chippewa and Superior National Forests. The Plans put forth Landscape Ecosystem objectives that compel the Forests to work towards age and composition objectives at the LE level. Timber harvest and vegetation management are the primary ways that the Forest Service will achieve these objectives. The Forest Plans have additional objectives to compel the Forests to meet other multiple use conditions as well as those for forest age and composition. Objectives for forest spatial patterns compel the Chippewa and Superior to improve the spatial diversity of their respective landscapes. These areas are not necessarily removed from consideration for timber harvests, rather our analysis has determined that on the Chippewa or in the appropriate Spatial Zone on the Superior, our LE based vegetation objectives can be met without fragmenting large mature or older upland forest patches.

Forest Spatial Patterns and Timber (2.8.6)

PC# 2.8.6-1
Public Concern: The Chippewa and Superior NFs should create patches by harvesting adjoining stands as they mature.

Agency Response:
The Forest Plans for the Chippewa and Superior would use several approaches to improve the spatial diversity of each forested landscape including harvest aggregation that you propose but also management of large mature or older upland forest patches. The desired condition for vegetation spatial patterns (D-VG-7) including large patch management on the Chippewa and Superior is to restore conditions that more closely emulate landscape patterns that would result from natural disturbances and other ecological processes. Our analysis and experience shows that Forest Service management has easily been able to create temporary openings of young forest and can quickly change the number and area of remaining large mature or older upland patches. Therefore we determined that a combined approach is necessary.

Large young forest patches would be placed on the landscape in a way that would better resemble historic disturbance patterns and in the context of young forest objectives by each Landscape Ecosystem. Increasing the size of harvest areas will eventually improve the spatial diversity of each National Forest. Examining and appropriately managing existing large mature/older upland forest patches will help retain increasingly rare landscape elements.

PC# 2.8.6-3
Public Concern: The Chippewa and Superior NFs should not adopt the no-harvest treatment constraint of large patches of existing old forest for the next 30+ years.

Agency Response:
Large mature or older upland forest patches are not necessarily removed from consideration for timber harvests, rather our analysis has determined that on the Chippewa or in the appropriate Spatial Zone on the Superior, our LE based vegetation objectives can be met without fragmenting large mature or older upland forest patches. Through this type of planning we are able to meet a range of multiple use objectives from meeting age and composition objectives to meeting forest spatial patterns objectives. Species viability is a legal requirement. Lowered risk to species viability is one of the benefits of large forest patches, however we also recognized other benefits in the EIS such as improved ecosystem function. In addition to providing goods and services, the National Forest land base provides for many more uses that are non-consumptive and contribute to sustainable forest systems. Those untreated acres help the Chippewa National Forest meet its multiple use commitments.

PC# 1.0.7-6
Public Concern: The Final EIS should not claim that large old forest patches are necessary, because it is not supported by studies, and because it removes timberlands from harvest.

Agency Response:
In the Draft EIS (p. 3.2-50) we recognize that there are disagreements among managers and within the literature on the effects of having fewer large mature or older forest patches. However, we believe that a coarse filter land management strategy that includes consideration of large forest patches, addresses fragmentation, and addresses interior forest will be more successful at sustaining all species and will better reflect ecosystem processes and functions that were once more common (Draft EIS p. 3.2-49 through 52). Contrary to removing timberlands from harvest, the approach that is proposed in the new Forest Plans accommodates both large mature or older patches and meeting LE based forest vegetation objectives. We can aggregate harvest areas or delineate larger harvest blocks to produce large young patches on the landscape. These will serve as large mature forest patches with high amounts of interior forest in the future. Large young forest patches would be placed on the landscape in a way that would better resemble historic disturbance patterns and in the context of young forest objectives by each Landscape Ecosystem. Increasing the size of harvest areas will eventually improve the spatial diversity of each National Forest. Examining and appropriately managing existing large mature/older upland forest patches will help retain these increasingly rare landscape elements.

PC# 2.8.1-2
Public Concern: The Final EIS should determine the impacts of providing large forest patches to the timber program over the next decade and the next 100 years.

Agency Response:
Your citation of Dr. Hoganson's work illustrates the need to carefully examine existing spatial conditions of each National Forest because large mature or older upland forest patches are quite rare and because, as illustrated by recent and historic management, they have received little consideration. The projected outputs (Proposed and Probable Practices, Goods Produced, and Other Information, Forest Plan Appendix D) for the Preferred Alternative and the analysis in the Final EIS shows that the National Forests are able to meet LE based vegetation objectives (and the associated timber harvest to achieve these objectives) and to likely meet the stated forest spatial patterns objectives for the Preferred Alternative. This sustainable level of harvest along with meeting forest spatial pattern objectives would seem to illustrate that there is no impact on the timber program in the context of the Preferred Alternative. Additionally, objectives to increase the size of temporary opening size

(harvest area size) will create large mature patches in the future. In this way, the National Forests are managing for spatial patterns in the short term and in the long term.

PC# 1.4.2-3
Public Concern: The Final EIS should include an analysis of new maps that show the impact of high probability logging sites on interior forests.

Agency Response:
The Regional Forester has selected a Preferred Alternative that does not utilize SMCs as a Management Area. However, many of the existing large mature or older upland forest patches on both the Chippewa and Superior National Forests coincide with SMCs as identified in other planning alternatives. Large mature or older upland patches are a less comprehensive aggregation of forest stands containing only upland forest.

Analysis presented in the Draft EIS of large mature or older upland forest patches affected over time in each planning alternative accomplishes what you suggest for tracking impacts to interior forest. For the Preferred Alternative in the Final EIS we examined how these patches were affected within the Dual Plan/DP Space harvest model. With the added benefit of the spatial modeling, we could strive to achieve LE based vegetation objectives and spatial objectives at the same time. We are able to identify and map those stands that the harvest model chose to select for harvest to meet the objectives and constraints within the model. We expect that these are a fair representation of how a Forest Plan could be implemented, however we also recognize that each project area will have it own unique set of conditions and issues that will make strictly meeting model expectations not possible.

For the Superior, the strategy selected by the Regional Forester would set Spatial Zones to account for the contributions of the BWCA in management direction. Forest-wide, fragmentation of large mature or older upland forest patches will occur primarily in Spatial Zone 3. In Spatial Zones 1 and 2 the overall objective is to increase the number and acres in large patches during implementation of the Plan. In Zone 3, the emphasis is on meeting composition and age objectives for the landscape ecosystems. Impacts to the forest areas on the Superior that you list above would vary depending on the spatial zone that they are in and whether the forest patches fit the size and upland type requirements of the objectives.

On the Chippewa spatial zones were not identified and spatial management direction is applied forest-wide. The forest-wide objective on the Chippewa is to increase the number and acres in large mature/older upland patches during implementation of the Plan. Our analysis indicates that we can achieve the combination of vegetation age class, forest composition, and forest spatial patterns during the implementation period of the plan. Again, impacts to the forest areas on the Chippewa that you list above would vary depending on whether the forest patches fit the size and upland type requirements of the objectives.

Forest Insect and Disease (2.8.7)

PC# 2.8.7-1
Public Concern: The Plans' direction should refer to more than wildland fire suppression in Insects, Disease, and Disturbance Processes.

Agency Response:

The desired conditions (D-ID-1 through D-ID-6) and objectives (O-ID-1 through O-ID-4) for Insect, Disease, and Disturbance Processes in the draft Forest Plans do address insect and diseases, as well as fire. The limitations to management, or standards and guidelines, do primarily address fire in the draft Plan.

PC# 2.8.7-2
Public Concern: The Plans should include direction that prohibits use of herbicides in any ELTs.

Agency Response:
Herbicide use would be decided on a case by case basis on the Chippewa and Superior National Forests. Herbicide use is not specifically covered by either Forest Plan, but would need to be based on a project level decision and analyzed in an appropriate analysis document. Regardless of management direction (e.g. standards or guides) in Forest Plans, information such as soil types within the project area where herbicides would be used would be analyzed. Mitigations or prohibitions would be adopted and other applicable analysis would need to be completed to guide the decision.

PC# 2.8.7-3
Public Concern: The Chippewa and Superior NFs should only use biological agents as a last resort and it should be based on peer review.

Agency Response:
Similar to the use of herbicides within the National Forest, the use of biological agents would be decided on a case by case and analyzed in an appropriate analysis document (e.g. environmental impact statement). The most current scientific information would be considered in this analysis, including the likely risk to native species.

PC# 2.8.7-4
Public Concern: The Plans should include an objective that allows only non-chemical methods of pest management.

Agency Response:
The Regional Forester has selected a strategic management strategy in the Chippewa and Superior National Forest Plans. The use of chemical pest control methods are neither explicitly allowed nor are they excluded from use with each forest. Different tools may be applicable in different situations. It is expected that the appropriate analysis document and decision would examine the various tools available for pest management and select the best one for the job.

PC# 2.8.7-5
Public Concern: The Plans should not include D ID-2 (Integrated Pest Management) because it conflicts with D ID-3, would harm the ecosystem, and is not cost effective.

Agency Response:
We have added additional language to the desired condition statements for Insect, Disease, Fire and Disturbance Processes to distinguish between expected levels of insect and disease outbreaks as had occurred in the historic range and epidemic levels of infestations or outbreaks. We recognize that insects and diseases play a role in forest ecosystems that includes creation of habitat and contributing to ecosystem function. When levels of insects and disease reach epidemic proportions, other forest uses or functions may be compromised. Our intention is not to fight every infestation. A full range of management options would be available to address epidemics. Individual

projects would identify the extent of the need and best methods for addressing an epidemic in the context of other multiple use needs and objectives including watershed health, plant communities, wildlife habitat, or recreation interests.

PC# 2.8.7-6
Public Concern: The Final EIS should disclose the IPM techniques that would be used and their effects.

Agency Response:
The Forest Plans for the Chippewa and Superior National Forests take a strategic approach to directing management activities and working towards desired conditions. Addressing project level application and environmental effects of Integrated Pest Management (IPM) techniques would occur at that level, specific to the needs of that project. A range of options may be appropriate, while others may be precluded. The amounts and locations of those treatments are unknown at the Forest Plan level. We believe that disclosure of effects is more appropriate at the project level.

PC# 2.8.7-7
Public Concern: The Final EIS should define "mortality inducing agents" and disclose their effects.

Agency Response:
The reference to "mortality inducing agents" within the Draft EIS page 3.2-76 simply refers to past actions where such agents (e.g. insecticides, biological agents) have been used and their effectiveness in stemming an epidemic. There is no specific proposal to use such agents in the Forest Plans. Forest Plans are intended to be strategic programmatic planning documents and do not contain every potential tool that could be used to address a management problem. Any specific proposal to use insecticides to control an insect outbreak would need to be accompanied by a project specific environmental analysis and an appropriate decision document. The specific properties of any mortality inducing agent would be addressed in that analysis.

PC# 2.8.7-8
Public Concern: The Final EIS should discuss and acknowledge the Great Lakes agreement on pesticide use in silviculture on national forests.

Agency Response:
We recognize the Lakes States policy on herbicide use for silviculture purposes, though the Forest Plans do not specifically address herbicide use on the Chippewa and Superior National Forests. Therefore it isn't necessary to address out this policy in the Final EIS. Any specific proposal or need for herbicide use for silviculture purposes would need to be analyzed in a project specific environmental analysis.

PC# 2.8.7-9
Public Concern: The Chippewa and Superior NFs should make O ID-1 more specific and clearly define "forest health".

Agency Response:
The glossary for the Forest Plans does define forest health, but we agree that there could be many interpretations for this term. The Regional Forester has chosen to take a strategic approach to setting objectives within Forest Plans, rather than setting rigid acre specific objectives. Implementation of Forest Plans at the project level may

need to differentially meet the range of objectives in the Plans. However it is expected that all of the objectives will be met during the implementation period of the Forest Plans.

PC# 2.8.7-10
Public Concern: The Plans should include goals for improving overall forest health and reducing forest mortality.

Agency Response:
We believe that the desired conditions (D-ID-1 through D-ID-6) and objectives (O-ID-1 through O-ID-4) for Insect, Disease, and Disturbance Processes, the forest-wide desired conditions and objectives for vegetation, along with the LE based objectives for forest vegetation will result in healthy forests while addressing the many other uses of the National Forests. The Forest Service will also comply with all applicable laws that regulate management of the National Forest. With direction provided by the HFI and HFRA, Congress believes it has provided the Forest Service with the tools necessary to address hazardous fuels and risk of wildfire along with associated issues of salvage, forest health and stewardship contracting. This direction will be used during project planning. Project level analyses and decision documents could address project level issues of forest health and mortality as a project fits into the overall multiple use goals of the National Forest.

PC# 2.8.7-11
Public Concern: The Chippewa and Superior NFs should harvest old uncut species to prevent insect infestation on federal and adjacent lands.

Agency Response:
Aspen forest has been one of the primary forest types managed on the Chippewa and Superior National Forests. The Forest Plans propose to continue emphasizing this species in the context the LE based forest vegetation objectives. We recognize the benefits of regenerating aspen for wildlife and also for local economies. However, certain heart rot diseases are contained in virtually every mature aspen stand and can not be avoided. While deemed “unhealthy” by some, these conditions facilitate succession to other forest types and provide structures for many wildlife species. We recognize the need to maintain a representation of old forest and old growth for other wildlife species, for aesthetics, and for ecosystem functions. With direction provided by the HFI and HFRA, Congress believes it has provided the Forest Service with the tools necessary to address hazardous fuels and risk of wildfire along with associated issues of salvage, forest health and stewardship contracting.

PC# 2.8.7-12
Public Concern: The Plans should include more harvesting to prevent spruce budworm outbreaks and subsequent high potential for wildfire.

Agency Response:
The ROD also discusses how the issues are addressed by the Alternatives, including the Selected Alternative. The EIS analyzed a wide variety of alternatives. Table FID-1, under section 3.2.3b of the EIS, indicates that acres of mature spruce/fir will increase under all alternatives. The selected alternative shows the second slowest rate of increase for spruce/fir on the Superior, for the next 5 decades. Periodic outbreaks of spruce budworm will remain a factor in shaping the future forests and will contribute to fuel build-up and fire hazard. The plan provides a variety of management tools, including timber harvest, which can be used to manipulate and manage the amount of mature spruce/fir and reduce the fuel build-up as necessary. Additional tools are available to treat epidemic outbreaks of spruce budworm.

PC# 2.8.7-13
Public Concern: The Final EIS should not imply that eliminating the spruce-fir and multi-age red and jack pine components will improve "forest health" because that logic is inconsistent with MFRC landscape goals.

Agency Response:
We recognize that indicators and their levels among alternatives used in the analysis of effects in the EIS may lead readers to conclude that certain levels will lead to better or worse conditions (e.g. increased forest health, increased ecosystem structure) depending on the resource being considered. Indicators are not precise ecological models, but are merely a piece of information (among many pieces) that is considered in deciding on a Forest Plan management strategy or alternative. The Regional Forester selected an alternative that he feels best balances the range of multiple uses for each National Forest. The Forest Service is a strong supporter of Northeast and North Central Landscape goals and MFRC. We believe the selected alternative closely complements the landscape wide goals. The LE based forest vegetation objectives for the selected alternative show increases in the amounts of spruce-fir, red pine, jack pine, and white pine forest types. Along with these increases in forest types, the LE based forest vegetation objectives will result in increases in acreage of forest over the age of 100 years – where multi-aged conditions are likely to develop. In addition, treatment type 6 (Appendix B, table of Treatment Methods for modeling in Dualplan) was utilized for red pine, white pine, and spruce-fir forest types. This treatment method is designed to create multi-aged conditions in these types. Uneven aged and multi-aged conditions will increase during and as a result of implementation of the Forest Plans.

PC# 2.8.7-14
Public Concern: The Final EIS should accurately describe the relative importance of eastern spruce budworm (Indicator 1) and the two shoot blights (Indicator 2) compared to other forest insect and fungal species and avoid exaggerating the threats posed by the shoot blights. The Final EIS should not imply that the indicators of "forest health" are incompatible with other Forest goals for increasing stand structural diversity and representation of multi-aged and old growth conifer acres.

Agency Response:
Indicators are not precise ecological models, but are merely a piece of information (among many pieces) that is considered in deciding on a Forest Plan management strategy or alternative. We recognize that 2 or more layered red or jack pine stands do exist on each forest and were once more common. Amounts of spruce-fir forest were greater historically on each forest. We believe that a range of options for dealing with epidemics of insects and diseases are available to meet the Forest Plan desired conditions and objectives. While the indicator analysis discloses potential impacts, we believe that the Forest Plans are substantially addressing the composition, age class, and landscape level issues that you raise in your comment. The LE based forest vegetation objectives for the selected alternative show increases in the amounts of spruce-fir, red pine, jack pine, and white pine forest types. Along with these increases in forest types, the LE based forest vegetation objectives will result in increases in acreage of forest over the age of 100 years – where multi-aged conditions are likely to develop. In addition, treatment type 6 (Appendix B, table of Treatment Methods for modeling in Dualplan) was utilized for red pine, white pine, and spruce-fir forest types. This treatment method is designed to create multi-aged conditions in these types. Uneven aged and multi-aged conditions will increase during and as a result of implementation of the Forest Plans.

PC# 2.8.7-15
Public Concern: The Chippewa and Superior NFs should develop realistic mature spruce/fir and multi-storied red and jack pine stand goals that address insect and disease problems.

Agency Response:
We believe that the management direction in the Forest Plans compel the Forests to take appropriate actions in the context of other multiple uses to control epidemics of forest insects and diseases. We believe that the desired conditions (D-ID-1 through D-ID-6) and objectives (O-ID-1 through O-ID-4) for Insect, Disease, and Disturbance Processes, the forest-wide desired conditions and objectives for vegetation, along with the LE based objectives for forest vegetation will result in healthy forests while addressing the many other uses of the National Forests. Project level analyses and decision documents could address project level issues of forest health and mortality as a project fits into the overall multiple use goals of the National Forest.

Ecological information we consulted on disturbance rates and successional pathways (Frelich 1999, 2000) would appear to indicate that large acreage of multi-aged spruce fir can be sustained. One of the points of confusion may however, be that these multi-aged spruce fir types are really complex stands with numerous species and age classes present. While spruce and balsam fir were nearly always present, species such as red, white, and jack pine, cedar, tamarack, red maple, paper birch and aspen were frequently a component of these stands. We recognize that spruce budworm was and will continue to be present on the landscape and agree that future outbreaks are inevitable. Once stand reach the true mature multi-age state, it is unlikely that even epidemic outbreaks of spruce budworm would cause a stand replacement event. The older spruce and balsam trees may be killed, but the rest of the stand would remain in tact and the spruce fir component will usually reappear as a younger component in the multi-aged mixture of species. We believe Forest Plans have the management guidance and the tools to effectively manage potential problems while still progressing towards the vegetation objectives and the many other multiple use objectives.

Treatments proposed to develop multi-aged red pine stands would affect fewer than 6% of red pine on the Chippewa and about 3% on the Superior in the first decade of implementation. Frelich (1999, 2000) estimated a much larger percentage of multi-aged pine occurred on the landscape historically than is proposed in the selected alternative (Appendix D and G, Final EIS). Multi-aged red pine stands do exist on both forests. We believe we are proposing a modest level for these conditions, one that would allow us to address shoot blights if they progressed to epidemic conditions.

We believe the magnitude of the potential problem of multi-aged jack pine is adequately addressed. Proportionally, multi-aged jack pine stands would comprise a very small portion of the overall jack pine acreage. The selected alternative would provide less mature or older jack pine during the implementation period of the Forest Plans and significantly less than would have occurred historically (Appendix D and G, Final EIS). The majority of jack pine would be in stands where multi-aged conditions are unlikely to occur.

PC# 2.8.7-16
Public Concern: The Plans should recognize that spruce budworm is an important part of the ecosystem.

Agency Response:
We believe that the desired conditions (D-ID-1 through D-ID-6) and objectives (O-ID-1 through O-ID-4) for Insect, Disease, and Disturbance Processes, the forest-wide desired conditions and objectives for vegetation, along with the LE based objectives for forest vegetation do recognize the current role and the probable future role of this and other natural disturbances in the ecosystem. Forest Plans project increases in amounts of spruce-fir forest and other upland conifer forest during the implementation period of the Plans and into the future (Table NSU-2 Superior Forest Plan, Table DLP-2 Chippewa Forest Plan).

PC# 2.8.7-17
Public Concern: The Chippewa and Superior NFs should not use Indicator 2 (Sphaeropsis shoot blight) as a rationale for failing to restore intra-stand structural diversity in pine stands.

Agency Response:
We believe that the LE based vegetation objectives in Chapter 2 of the Forest Plans, forest-wide vegetation objectives also in Chapter 2, and Appendix D of the Forest Plans (Goods and Services and Probable Practices) demonstrate that our intention to increase intra-stand structural diversity in pine stands. We have also disclosed the potential effects of shoot blight in the Final EIS.

PC# 2.8.7-18
Public Concern: The Chippewa and Superior NFs should consider using Forest Tent Caterpillar and relevant indicators (such as edge density) to replace or in addition to Indicator 2 (acres of multiple aged red and jack pine capable of sustaining Shoot Blight Epidemics).

AND

PC# 2.8.7-19
Public Concern: The Final EIS should address the above-RNV aspen levels on affect on forest tent caterpillars and friendly flies and the resulting effects on tourism and the local economy.

Agency Response:
We agree that forest tent caterpillar is a valid indicator for certain forest patterns and conditions. The amount of hardwood (particularly aspen) verses softwood in the forest will gradually change the intensity and affect of forest tent caterpillar outbreaks. Total aspen acres and edge density have already been analyzed and considered within the Final EIS analysis. These were also summarized under a new indicator (forest tent caterpillar) in the analysis in the Forest Insect and Disease section. There is no question that forest tent caterpillar have been and will continue to be present within these forests. Outbreaks can be expected at a regular interval and when they occur, they will be a nuisance, they will affect short-term scenic quality, and they may affect some recreational experiences in the short term. Forest tent caterpillar was not originally chosen as a prominent indicator because it seldom causes direct tree mortality and its effects are usually short-term and temporary in nature. While these effects are very evident when an epidemic is ongoing, they are not the kind of effects that would weigh heavily in making long term strategic planning decisions.

PC# 2.8.7-20
Public Concern: The Final EIS should address the emerald ash borer and the Eurasian long-horned bark beetle.

Agency Response:
We share the commentor's concern for how these or other exotic insects and diseases may eventually impact the forests. However, they are not currently present and there is no certainty that they will get here. Including information in the analysis about how they might eventually affect the Chippewa or Superior NF would be highly speculative and not an appropriate basis for making current land management planning decisions.

We believe that the strategic framework for dealing with these or other yet unknown exotic species is included in the Forest Plans. In addition, national policies are in place that would compel the Forest Service to address these species if they threaten the National Forests in Minnesota. That said, State and Private Forestry of the USDA Forest Service is the first line in detecting insect and diseases and is taking the lead on early detection of these and other species in Minnesota, including survey traps on the Chippewa and Superior National Forests in 2004.

PC# 2.8.7-21
Public Concern: The Chippewa and Superior NFs should address insect and disease occurrences at an appropriate geographic scale.

Agency Response:
We have added additional language to the desired condition statements for Insect, Disease, Fire and Disturbance Processes to distinguish between expected levels of insect and disease outbreaks as had occurred in the historic range and epidemic levels of infestations or outbreaks. We recognize that insects and diseases play a role in forest ecosystems that includes creation of habitat and contributing to ecosystem function. When levels of insects and disease reach epidemic proportions, other forest uses or functions may be compromised. Our intention is not to fight every infestation. A full range of management options would be available to address epidemics. Individual projects would identify the extent of the need and best methods for addressing an epidemic in the context of other multiple use needs and objectives including watershed health, plant communities, wildlife habitat, or recreation interests.

PC# 2.8.7-22
Public Concern: The Final EIS should address specific current and future threats, their consequences on the forest ecosystem, and possible remedies.

Agency Response:
We recognize that there is a list of potential future threats to forest health and ecosystem integrity. Many of the consequences of these insects can not be known or anticipated. While the potential threats that you list are not listed or analyzed specifically in the Final EIS, we believe that the strategic framework for dealing with these threats is in the Forest Plans if they become real. The State and Private Forestry Branch of the USDA Forest Service is the lead for detection of insect and disease issues and would work with the National Forests to control new threats.

PC# 2.8.7-23
Public Concern: The Final EIS should address historic pests and expected mortality in large areas of over mature fir, oak, jack pine, and aspen.

Agency Response:
The Draft EIS addressed potential effects from spruce budworm and jack pine budworm. In the Final EIS we added indicators and analysis for forest tent caterpillar. We believe that the desired conditions (D-ID-1 through D-ID-6) and objectives (O-ID-1 through O-ID-4) for Insect, Disease, and Disturbance Processes, the forest-wide desired conditions and objectives for vegetation, along with the LE based objectives for forest vegetation do recognize the current role and the probable future role of this and other natural disturbances in the ecosystem. We believe that the strategic framework for dealing with these threats is in the Forest Plans.

PC# 2.8.7-24
Public Concern: The Final EIS should cite references to substantiate statements that increased forest age leads to increased incidence of pests and diseases.

Agency Response:
The statements in Appendix H, Cumulative Effects Overview, in the Draft EIS are paraphrased from the MN Generic Environmental Impact Statement (Jaakko Poyry Consulting, Inc.1994). We will add a citation to those applicable statements. This is further collaborated by communications with the Northeast Area State and Private branch of the Forest Service where our insect and disease specialist reside. Information from the State and Private

Forestry branch is contained in the project record. PC# 2.8.7-23 is derived from comments from this branch of the Forest Service.

PC# 2.8.7-25
Public Concern: The Final EIS and Plans should address the cumulative effect of gypsy moths on ASQ and how the moths will be managed if they become a problem.

Agency Response:
We recognize that there is a long list of potential future threats to forest health and ecosystem integrity. Many of the consequences of these insects can not be known or anticipated. While the threat of the gypsy moth is not listed or analyzed specifically in the Final EIS, we believe that the strategic framework for dealing with these threats is in the Forest Plans if they become real. The State and Private Forestry Branch of the USDA Forest Service is the lead for detection of insect and disease issues and would work with the National Forests to control new threats. Gypsy moth infestation has much broader implication that go beyond management of National Forest System lands.

We believe that the desired conditions (D-ID-1 through D-ID-6) and objectives (O-ID-1 through O-ID-4) for Insect, Disease, and Disturbance Processes, the forest-wide desired conditions and objectives for vegetation, along with the LE based objectives for forest vegetation do recognize and are flexible enough to address the probable role of this and other disturbances in the ecosystem. Epidemic insect invasions may change annual vegetation treatment plans, but would not normally affect long term vegetation treatment plans or harvest levels. This would happen only if the insect permanently removed a major component from the landscape. This does not appear to be the case with gypsy moth.

There is also some doubt as to just how impacting gypsy moth will be in Northern Minnesota. Very cold winter temperatures tend to mitigate their effects. If the effects to forest productivity and yields resulting from gypsy moth presence are great enough, Forest Plans could be amended.

PC# 2.8.7-26
Public Concern: The Forest Service should seek an independent review of potential insect and disease infestations, risk of fire, and volume losses due to mortality.

Agency Response:
We believe that we are able to provide a balanced perspective that covers the range of view points offered on these land management issues in the context of multiple use management. The Forest Service employed and contracted with recognized experts and seasoned professionals to complete the land management strategies in the Chippewa and Superior Forest Plans. Our process for public involvement, internal and external review, communication, and comment solicitation brings to light the majority issues and potential sources of error in the EIS analysis.

PC# 2.8.7-27
Public Concern: The Chippewa NF should address the LLBO concerns about IPM.

Agency Response:
We have added a new definition for IPM to the Forest Plan glossary: “An ecologically based process for selecting strategies to regulate forest pests to achieve resource management objectives. It is the planned and systematic use of detection, evaluation, and monitoring techniques; and all appropriate silvicultural, biological, chemical, genetic, and mechanical tactics needed to prevent or reduce pest-caused damage and losses to levels that are

economically, environmentally, and aesthetically acceptable. (FSH 2109.14-94-1)". We believe that this improved definition addresses some of the concerns in your comment.

We believe that the strategic framework for dealing with insect, disease, or invasive species threats is in the Forest Plans.

We believe that the desired conditions (D-ID-1 through D-ID-6) and objectives (O-ID-1 through O-ID-4) for Insect, Disease, and Disturbance Processes are flexible enough to address the probable role of these and other disturbances in the ecosystem.

Decisions to use herbicides, pesticides, or biological controls would be made at the project level and only after the appropriate analysis and decision document was completed. We will consider a full range of tools to address insect, disease, or invasive species problem. We recognize that great care is needed in the use of chemical or biological agents on the National Forest.

The Regional Forester selected the alternative management scenario (planning alternative) that he felt best balanced an array of multiple use needs, including within stand complexity, species diversity, and amount of aspen forest. The vegetation objectives for the selected alternative would increase within stand species composition of in the context of the ecology of each Landscape Ecosystem and reduce the area of aspen forest overall within the implementation period of the forest plan.

PC# 2.8.7-28
Public Concern: The Final EIS Forest Insect and Disease section should address effects on wildlife, especially cavity nesters.

Agency Response:
We will add additional discussion on the role of insect and disease in creating habitat features, and ultimately to contributing to viable populations of wildlife species and ecosystem sustainability.

PC# 2.8.7-29
Public Concern: The Chippewa NF should address the potential for insect infestation in the South Pike Bay Campground and adjacent areas.

Agency Response:
You are correct in that this area was not salvaged after the fire, in part to benefit the black backed woodpecker. The scale of the concern you express is best addressed at the project level, rather than at a programmatic level in the Forest Plan. We believe that the strategic framework to address your concern exists in the Forest Plan. The Forest Plan for the Chippewa has an objective to retain an adequate representation of naturally disturbed forest that is not salvaged (O-VG-12(CNF), O-VG-11(SNF)), but also to use fire or other treatments to treat hazard area and to restore forest vegetation (O-ID-1 through 4). These could compel the Forest Service to examine this project area and consider possible treatments in the context of other multiple use objectives or limitations that exist for this area.

PC# 2.8.7-30
Public Concern: The Final EIS and Forest Plans should improve and/or retain definitions.

-To define "integrated pest management" differently.
-To retain the definition of "forest health".

Agency Response:
We have added a new definition for IPM to the Forest Plan glossary: "An ecologically based process for selecting strategies to regulate forest pests to achieve resource management objectives. It is the planned and systematic use of detection, evaluation, and monitoring techniques; and all appropriate silvicultural, biological, chemical, genetic, and mechanical tactics needed to prevent or reduce pest-caused damage and losses to levels that are economically, environmentally, and aesthetically acceptable. (FSH 2109.14-94-1)". We believe that this improved definition addresses some of the concerns in your comment.

Decisions to use pesticides would be made at the project level and only after the appropriate analysis and decision document was completed. Pesticides are only one of the tools that could be considered in IPM. We recognize that great care is needed in their use in the forested environment.

We will retain the definition for forest health.

Non-Forested Vegetation (2.8.8)

PC# 2.8.8
Public Concern: The Plans should assess or plan for upland brush or low-density tree types for wildlife benefit.

Agency Response:
The Forest Plans base vegetative management on the ecological principles of disturbance regimes, community classification, and representation of habitats in the context of multiple use management. Management of upland brush or low density upland tree types is not precluded by the Forest Plans. Many upland brush and low-density upland tree types are controlled by specific site characteristics that would not change, and thus, perpetuate these communities under the Forest Plans. Where upland brush or low density upland tree types are the expected ecological condition, it is unlikely that these would be converted to another type. Objectives O-VG-6(CNF) and O-VG-5(SNF) would decrease managed upland openings except those needed for social reasons or for ecological needs. Objectives O-VG-23(CNF), O-VG-20(SNF), O-VG-24(CNF), and O-VG-21(SNF) have taken the approach of mimicking natural disturbances through the increase of average opening size overall and temporary forest opening size to as much as 1,000 acres.

We recognize the importance of these habitats to wildlife species. Assessment of upland brush and low-density upland tree types was completed in the Final EIS and supporting documents (i.e., Biological Evaluation). The planning record, including the Species Viability Evaluation records, contains detailed information on species that require such conditions. Evaluations were completed for the moose and woodcock, including current conditions and status. The woodcock was analyzed as a species of public interest in the Final EIS. We believe that the coarse filter vegetative objectives in the Forest Plans address and provide for more than adequate habitat for these species in the short and long term.

Transportation

Forest Transportation System General (Infrastructure) and General Access (2.9)

PC# 2.9-1
Public Concern: The Chippewa and Superior NFs should increase, not decrease, the number of roads and trails.

Agency Response:
There would be an increase in the number of roads for Forest Management purposes on the Superior NF and a decrease on the Chippewa NF. (EIS Appendix F) However, newly constructed roads would generally not be open for public use. There may also be an increase in the miles of motorized trails if the maximum additional designated trail miles are added within the Plan period. (Chippewa FP O-RMV-2 and Superior FP O-RMV-1) The total number of existing roads open to the public will decrease in order to address resource, social, and funding considerations. The number of higher maintenance level roads (OML 3, 4, and 5) would remain about the same on both Forests. The low maintenance level roads (OML 1 and OML 2) and unclassified roads will be evaluated for appropriate public uses. On the Chippewa NF, roads with current use may be closed. On the Superior NF, roads with current use and with mitigable resource and social concerns will generally remain open for public use. (EIS section 3.8.3.b, Indicator 3)

PC# 2.9-2
Public Concern: The Chippewa and Superior NFs should restrict or eliminate new road construction or reconstruction and reduce the total miles of trails and roads on the Forests.

-To reduce the potential for introducing exotic species
-To provide more opportunities to experience solitude
-To minimize effects on ecosystem integrity
-To minimize effects to fish and wildlife
-For future generations
-To minimize fragmentation
-To limit ATV use
-To reduce illegal garbage dumping
-To return as much area to native vegetation
-To protect lynx
-To prevent the risk of human-started fires

Agency Response:
The current transportation policy and rules for National Forests (36 CFR 212) require each Forest to maintain the minimum road transportation system necessary to provide access to the Forest for its management, and for recreation and rural access, and to use a science-based roads analysis process to determine the minimum system The policy also requires Forests to decommission unneeded roads, to coordinate road management with adjacent public road agencies, and to maintain a sustainable flow of goods and services while not compromising the health of the land and water.

Forest Plan direction has incorporated the policy and includes direction for managing the road system to minimize

introduction of exotic species, to protect threatened and endangered species, and to minimize impacts to fish, wildlife and other ecosystem values. Forest Plan guidelines in General Forest Emphasis, General Forest – Longer Rotation Emphasis, and Recreation Use in a Scenic Landscape Management Areas include direction to retain remote character in areas with inventoried semi-primitive Recreation Opportunity Spectrum (ROS) characteristics.

Project-level analysis will integrate all Forest Plan and agency direction when roads are evaluated for public motor use, when roads are planned for resource management, and when new trails are proposed.
Existing roads used by the public would be reduced during Plan implementation. The Chippewa NF plans to decommission 200 miles (Chippewa FP O-TS-8) and the Superior NF plans to decommission 80 miles (Superior FP O-TS-8). In addition, other low maintenance level roads will be reviewed for appropriate RMV uses and some roads will be closed to public motorized uses. Finally, newly constructed roads for forest management will be low level and closed to public use and/or revegetated. Even with the potential new miles of motorized trail, fewer roads and trails would be open for public motorized access during the Plan implementation period, as compared to the existing road opportunities. Plan direction emphasizes management of public motorized use, especially on low maintenance level roads. (EIS section 3.8.3.b and Appendix F) Refer to response for PC# 2.9-1.

PC# 2.9-11
Public Concern: The Regional Forester should select an alternative that would reduce the number of roads and minimize impacts from roads on wildlife habitat and quiet recreation, increasing revenue from tourism.

Agency Response: The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative. Also refer to response for PC# 2.9-2 and 2.9-3, and 5.2-3.

PC# 2.9-3
Public Concern: The Chippewa and Superior NFs should maintain existing roads and trails throughout the year.

-For public motorized recreation
-For a variety of recreational activities
-For hunting and fishing access
-For the local economy
-For emergency access
-For fire fighting access

Agency Response:
Refer to response for PC# 2.9-2.

The Chippewa and Superior National Forests conducted Forest-wide Roads Analysis Processes (RAP) to evaluate the higher maintenance level roads on each Forest. Higher maintenance level roads carry the majority of traffic on the Forests, connect rural communities, provide access to forest resources and recreation, and allow access to

private and other land holdings. The results of the RAPs were that existing higher maintenance level roads would continue to be open for public and administrative use.

Because of increasing RMV use with associated increases in resource damage, many existing low maintenance level roads will be evaluated for appropriate RMV use. Although some existing roads may be closed to public use, the roads would remain on the National Forest Road System and be available for administrative purposes such as law enforcement, emergency, maintenance, and firefighting access. (Chippewa and Superior FP D-RMV-3) Foot traffic on most closed roads would also be an option to hunters, anglers, berry pickers, bird watchers, and other recreationists. (EIS section 3.8.3.b and Appendix F)

PC# 2.9-4
Public Concern: The Chippewa and Superior NFs should coordinate road decisions with the State and other agencies.

-To establish and maintain a road inventory
-To minimize total miles of road on the landscape

Agency Response:
The Forest Plans include direction to cooperate with adjacent land managers and owners during project-level planning. (D-CM-1) We realize the importance to share inventory data with adjacent land management entities and do so during project-level analyses. We also realize the importance to include public input from adjacent land managers during project-level planning to address the roads needed per law for nonfederal access. Overall, continued coordination should provide a minimum transportation system throughout the Forests.

PC# 2.9-7
Public Concern: The Chippewa and Superior NFs should clarify statements about the number of existing OML 1 roads available for public use in the alternatives.

Agency Response:
Decisions for public use on OML 1 roads will be made at the project-level. (Chippewa FP O-RMV-1 and G-RMV-4, and Superior FP G-RMV-4) Because those site specific decisions are not made in the Forest Plan, we cannot quantify the number of OML 1 roads that will be open or closed to public use. However, because of the Forest Plan wildlife, transportation, and recreation direction along with the purpose of OML 1 roads, we can qualitatively describe the number of roads open for public use. By definition, OML 1 roads are closed to passenger vehicles. Many OML 1 roads are in low ground and designed only for winter use and seldom used for management and consequently become obscured with brush. Therefore, we can predict that fewer existing OML 1 roads would remain available for public use. Because of your concern as well as others, we have clarified descriptive information in the EIS (section 3.8.3.b, indicator 3).

PC# 2.9-8
Public Concern: The Chippewa and Superior NFs should improve communication and enforcement of road use and road closures.

Agency Response:
Public use information and enforcement of all recreation regulations are ongoing programs on both Forests. We continue to work towards improving regulatory information. We also continue to work with other public agencies to be as consistent as possible in signing and other user information strategies. During Forest Plan implementation, the Forests are proposing to more clearly define to the public allowed, restricted, and prohibited

uses, particularly for RMV users. (Chippewa and Superior FPs D-RMV-2) Improved public information should also help in enforcement of regulations.

PC# 2.9-9
Public Concern: The Chippewa and Superior NFs should specify a process and include Plan direction for allowing access across National Forest System land to nonfederal land.

-For private landowner access to their land
-For State agency access to private and State-owned minerals

Agency Response:
Public Law 96-487 Alaska National Interest Lands Conservation Act (ANILCA) requires the Forest Service to provide reasonable access across National Forest System land to non-federal land. Additional direction is found in Forest Service Manual 2730. Decisions for non-federal access are analyzed at the project-level using the law and policies and overall Forest Plan direction. Process direction is generally not included in the Forest Plan. Additional direction has not been added for land access.

The Chippewa and Superior Plan direction for access to minerals has not changed from the current Plans; therefore the EIS will not include additional information on effects. Refer to the Forest Plans desired conditions for minerals (D-MN-1 and D-MN-2).

The procedure on use of National Forest System land for mineral exploration is governed by reserved or outstanding rights indicated by title chain of ownership. Every effort is made to negotiate with the owner or operator of non-federal minerals to protect the land and resources.

PC# 2.9-10
Public Concern: The Chippewa NF should adopt Alternative E's policy on roads to maintain accessibility.

Agency Response:
Thank you for your comment. Refer to response for PC# 2.9-2.

PC# 2.9-12
Public Concern: The Chippewa and Superior NFs should modify Alternative E to keep closed roads in a condition that heavy equipment could use them in case of fire.

Agency Response: Classified roads under Forest Service jurisdiction are those that are necessary for the protection, administration, and use of National Forest System land (EIS Appendix F). When we add roads to the National Forest System of roads we consider the fire access needs. We believe the roads we already have in the system are adequate for fire protection. It is also important to note that we use aerial support and ATVs in fire management in addition to heavy equipment that would require maintained roads. Also refer to response for PC# 2.9-3.

The EIS includes seven alternatives with different approaches to managing roads, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for road management.

Therefore, it is not necessary to modify Alternative E to address this interest. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing the roads policy.

PC# 2.9-13
Public Concern: The Regional Forester should select Alternative F.

-Because it has fewer roads with associated impacts than Alternative E
-Because it has a more realistic number of new designated trails than in Alternative E

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative. Also refer to response for PC# 2.9-2 and 3.4.3-8.

Roads Infrastructure Management General (3.0)

PC# 3.0-1
Public Concern: The Chippewa and Superior NFs should clarify road and trail terminology.

Agency Response:
A trail is a commonly used term denoting a pathway for purposes of travel by foot, stock, or trail vehicles. National Forest System trails are designed and designated for specific uses. Some NFS designated trails are on old or existing roads but most trails were designed and constructed for their specific purpose such as hiking, cross-country skiing, hunter-walking, etc. Definitions and explanations relating to roads and trails have been clarified in the EIS and glossaries.

PC# 3.0-4
Public Concern: The Forest Service should not allow logging and road building in the National Forests for the benefit of commercial logging businesses.

Agency Response:
Roads are needed to accomplish timber sales and subsequent management activities. Timber sales are designed to meet specific resource management objectives such as for vegetation, wildlife, or recreation. The cost of the road is included in the cost of the timber sale. That is, the purchase is compensated for the road construction through the timber sale receipts. It is important to note that in the Forest Plans (O-TS-3), newly constructed roads would be temporary or OML 1 and closed to public use.

PC# 3.0-5
Public Concern: The Chippewa and Superior NFs should not have locked gates.

Agency Response:
Public use of roads is determined at the site-specific level and use may need to be restricted or prohibited for a variety of resource and administrative reasons such as to protect soil, water, and wildlife or to reduce maintenance costs. Locked gates are one of many tools used to manage roads. Other options for managing public use on roads (such as berms and rocks) will be evaluated at project-level analyses.

PC# 3.0-6
Public Concern: The Plans should include standards that require consideration of environmental impacts before adding new roads or trails.

Agency Response:
The Forests will conduct environmental analyses as required by NEPA for new road and trail construction using the Forest Plan direction. Refer to Chapter 1 of the Plans, Implementing the Plan, Site-level Projects. The Forest Plans provide a framework and context that guides the day-to-day resource management operations. The Plans are strategic, programmatic documents that do not make project-level decisions. Because environmental analyses are required for site-level projects as described in Chapter 1, additional standards will not be added to the Forest Plans.

PC# 3.0-8
Public Concern: The Chippewa and Superior NFs should use only temporary roads for logging activities.

Agency Response:
The reason for designating some roads as OML 1 is to be able to re-use the corridors for future resource management. This minimizes the total number of routes through the Forests in the long-term.
OML 1 roads are needed for future resource management access. Newly constructed OML 1 roads will generally be closed to public motorized use (Chippewa and Superior FPs O-TS-3) Temporary roads are not needed for future resource management access, are obliterated after use, and their locations become indiscernible over time.

PC# 3.0-9
Public Concern: The Chippewa NF should define "flood prone area" and remove road structures on OML 1 roads if the road is not used in 10 years.

Agency Response:
"Floodprone area" is defined in the glossary of the Plans and EIS.

Removal of structures on OML 1 roads within 5 years (G-TS-6), is preferred over removal of structures within 10 years because it reduces maintenance time and costs. For example, structures such as culverts must be checked to be sure they are not plugged; beaver may use structures as bases for their dams. Plugged culverts and beaver dams can cause resource damage. If the structures are removed and the road stabilized, the roads become nearly maintenance free with less potential for resource damage.

The Chippewa NF Plan emphasizes management of public use on roads and trails. The Plan also includes direction to provide public information on where it is appropriate to use motorized vehicles. (D-RMV-2) If people know where they can ride and have plenty of opportunity to ride, it will be easier to effectively close some roads.

PC# 3.0-10
Public Concern: The Plans should define and describe "effective road closure".

Agency Response:
Closure is defined in the glossary. Effective road closure is discussed in the EIS Appendix F. It is important to note that road closure is part of decommissioning but can also be used on OML 1 and OML 2 roads to keep motorized and/or non-motorized uses off roads.

The two examples cited are areas where Districts have taken additional enforcement and monitoring action. The July 19, 2002 letter referenced indicates active law enforcement in conjunction with signing and public notification. We were not certain what you referred to as your ATV fact sheet and assumed it was the page showing ATV tracks on an old road in the BWCAW. The District is aware that ATVs have used that area and have posted signs at the wilderness boundary and continue to conduct random enforcement patrols.

The Plans are strategic and do not list all techniques that may be used to effectively close and/or decommission roads. The following are some of the Chippewa and Superior FP standards and guidelines that provide strategic direction for closing and/or decommissioning roads: S-TS-3, S-TS-4, G-TS-15, and G-TS-16.

PC# 3.0-11
Public Concern: The Chippewa and Superior NFs should clearly define "temporary roads" and specify their time period for use.

Agency Response:
Temporary roads are defined in the glossaries. Temporary roads are also described in Appendix F of the EIS in the following sections: Chippewa and Superior National Forest Road Definitions and Road Decommissioning. Most temporary roads are built for timber sale access and are generally used for a one to five year period. The intent of the temporary road standards and guidelines was not modified for the Final Forest Plans. Because the Plans are strategic to allow the flexibility needed for implementation, the temporary road standards and guidelines were not made more specific.

PC# 3.0-12
Public Concern: The Chippewa and Superior NFs should define "unneeded roads".

Agency Response:
A sentence has been added to O-TS-7 for clarification. Roads that are not necessary for long-term resource management are considered "unneeded". Long-term resource management can include access for timber harvest, reforestation, recreation access, and other administrative uses. District Rangers would make decisions on whether or not to decommission roads at the site specific level following the appropriate level of environmental analysis.

PC# 3.0-13
Public Concern: The Plans should include specific objectives, standards, and funding for the amount of roads to decommission.

Agency Response:
The Chippewa NF Plan has an objective to decommission approximately 200 miles of road (O-TS-8) and the Superior NF Plan 80 miles (O-TS-8). These objectives considered the current road inventory and the number of miles of road that have been decommissioned recently on an annual basis. Funding is discussed in Chapter 1 of the Forest Plans, Implementing the Forest Plans, Budgets.

Standards and guidelines that address decommissioning were developed to meet the desired conditions and objectives for transportation management. Additional more specific direction was not added in order to maintain flexibility in implementation. The section on Road Decommissioning in Appendix F, Transportation System, contains definitions and descriptions of possible management techniques to implement the Forest Plan direction.

Per 36 CFR 295.5, areas with considerable adverse effects found during monitoring can and would be closed. The Plans do not repeat direction contained in laws, executive orders, policy, manuals, and handbooks. Monitoring as it relates to 36 CFR 295.5 and 219.21 is referred to in Chapter 4 of the Forest Plans.

PC# 3.0-14
Public Concern: Prior to road decommissioning decisions, the Chippewa and Superior NFs should fully evaluate roads on a case by case basis considering costs, effects to adjacent land access, and resource management needs.

Agency Response:
The Forests will conduct the appropriate level of environmental analysis when considering roads for decommissioning. The analyses for the objectives to decommission roads will be done on a case by case basis. Costs, adjacent land access needs, and recreational use would be considered along with all other Plan direction for other resources such as watershed health, wildlife, and timber.

As described in Chapter 1, Management Direction, of the Forest Plans, objectives are steps taken to move toward a desired condition. Objectives are generally achieved by implementing a site-specific project or activity. However, objectives are not targets. Targets for outputs are dependent upon budgets and may or may not reflect Forest Plan emphasis areas.

PC# 3.0-15
Public Concern: The Chippewa and Superior NFs should effectively exclude motorized use on roads and trails that are decommissioned.

Agency Response:
Part of decommissioning would include effectively closing the roads to public motorized access. Refer to Appendix F of the EIS, Transportation Systems, Road Decommissioning, for more information on road decommissioning techniques, especially those related to excluding public motorized access.

PC# 3.0-16
Public Concern: The Plans should include a guideline that requires consideration of non-motorized trail designation on roads considered for decommissioning.

Agency Response:
Throughout the national forests, foot travel is allowed and welcome unless restricted or prohibited in rare circumstances for specific resource reasons. Analysis for potential decommissioned roads can include deciding whether or not to designate the road as a trail or whether or not to allow or prohibit foot travel. An additional guideline is not needed to have foot travel considered. If foot travel on a road is a concern during site-specific analyses, such use can be addressed at that time within all other Plan direction.

Your comment along with other comments pointed out a need for the Plans to address non-motorized access on the Forests. O-REC-3, D-REC-9, D-REC-10, and D-REC-11 have been added and D-REC-1 was modified for the Final Plans.

PC# 3.0-17
Public Concern: The Chippewa and Superior NFs should not decommission roads.

-To maintain community stability
-To provide recreational opportunities

Agency Response:
The Forests currently have more roads than they can maintain to standard. We understand the need to provide public access and how it relates to community stability. Modified Alternative E will continue to maintain higher maintenance level roads and some of the lower maintenance level roads. (EIS section 3.8.3.b, Indicator 3) Also refer to response for PC# 2.9-1, 2.9-2, 2.9-3, and 2.9-4.

PC# 3.0-18
Public Concern: The Chippewa and Superior NFs should modify O-TS-8 to state that Forests will "propose" to decommission an established number of roads.

Agency Response:
We have not added the word "propose" to O-TS-8 or to any of the other objectives in the Plan. The appropriate level of analysis will occur prior to decisions on decommissioning roads and prior to other resource management activities that are associated with objectives in the Forest Plans. Also refer to response for PC# 3.0-14.

PC# 3.0-20
Public Concern: The Plans should include or reference road inventories and improve existing inventory and mapping of all forest access routes.

Agency Response:
Appendix F of the EIS, Transportation System, defines the FSM 7700 Infrastructure Travel Routes as the agency inventory database and includes the total mileage of the roads systems as of October 2002. The Infrastructure database is ties to a Forest GIS layer for roads and trails. Road and trail inventories, as well as other inventories such as vegetation, structures, and wildlife, are ongoing processes on the Forests. The inventories are dynamic due to updated information collected and decisions made during project-level analyses.

Inventory processes are not referenced in the Forest Plans because they are directed by policy, FS Manual, and Handbooks. Because agency direction on how to conduct and store inventory data can change, references are not made in the Plans to current inventory processes.

Based on updates in the road and trail inventories, the Forests periodically update Forest Visitor Maps to provide clearer information for public access and recreational opportunities.

PC# 3.0-21
Public Concern: The Final Forest Plans should include specific direction on determining the minimum road system needed for safe and efficient travel.

Agency Response:
As required by 36 CFR 212, the Forest-wide Roads Analysis Process evaluated the minimum system necessary for OML 3, OML 4, and OML 5 roads. The minimum system of OML 1 and OML 2 roads is determined at the project-level applying Forest Plan and other agency direction using the appropriate level of environmental analysis. In particular, the current Roads Analysis Process (Roads Analysis: Informing Decisions About Management the National Forest Transportation System, Miscellaneous Report FS-643) includes considerable direction for transportation planning.

Trails Infrastructure Management General (3.1)

PC# 3.1-1
Public Concern: The Chippewa and Superior NFs should not build any new trails.

AND

PC# 3.1-2
Public Concern: The Chippewa and Superior NFs should promote, and maintain their existing trails systems and include new trails in their Plans.

-For multiple uses
-For non-motorized recreation experiences
-For non-motorized access to wildlife viewing opportunities and related local economic benefits
-For motorized users
-For elderly and disabled persons
-For non-motorized hunting opportunities
-For hiking and cross-country skiing

Agency Response:
It would be very difficult for the average person to use every trail on each Forest. (681 miles on the Chippewa NF and 1962 total miles on the Superior NF) However, the trails provide a wide range of experiences in different Forest settings for a variety of Forest users and are not intended for everyone to use every trail.

Trails are generally managed for primary uses with secondary uses allowed that do not cause resource damage or social conflicts. Trails may be accessible for elderly and disabled people within the primary intent and setting of the trail. For example, wilderness trails would not be paved to provide accessibility. But, interpretive trails near administrative sites may have surfacing that provides accessibility.

The Trails program on each Forest emphasizes maintenance over new construction. However, new trails may be constructed following the appropriate level of site-specific environmental analysis.
In some cases, such as for ATVs, demand exceeds supply because there are only 20 miles on the Chippewa NF and 40 miles on the Superior NF available for such use.

The Forests are aware of the popularity of wildlife viewing recreation activities. However, demand for wildlife viewing, non-motorized hunting, hiking, and cross-country skiing trails was not specifically analyzed during Plan revision because there are currently many opportunities on the Forests for these activities. The Chippewa NF has 303 miles and the Superior NF has 1217 miles of non-motorized trail. Although non-motorized trail use was not identified as a need for change in the Plan revision process, additional trails are allowed within Plan direction (O-RTL-1).

The Forests do realize the benefits of trails to the local and regional economy. The Forests try to provide public information on trail opportunities and maintain all trails as much as possible within budgets. In some years when budgets are reduced, trail information and maintenance is also reduced.

PC# 3.1-20
Public Concern: The Chippewa and Superior NFs should modify Alternative E to allow for wildlife viewing trails to be established.

Agency Response:
Wildlife viewing trails are allowed under Alternative E; there is no management direction in the Forest Plans that would preclude them. We added the following management direction: Foot travel throughout the NFs is welcome for the wide spectrum of recreational activities and opportunities such as hunting, orienteering, hiking, and bird watching as well as spiritual and cultural pursuits (D-REC-9). In cooperation with other agencies and groups, the Forest enhances existing and provide additional wildlife viewing opportunities (D-REC-11). Also refer to response for PC# 3.1-2.

The EIS includes seven alternatives with different approaches to managing trails, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for trails management. Therefore, it is not necessary to modify Alternative E to address this interest. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing the approach to managing trails.

PC# 3.1-3
Public Concern: The Superior NF should coordinate with other public agencies along the Superior Hiking Trail and provide specific Plan direction for the trail.

-To protect the trail through MA designation and specific standard and guidelines
-To protect the trail from timber harvest and related activities
-To maintain scenic quality along the trail
-To protect the trail and surroundings from ATVs
-To meet the desired future condition agreed to with the North Country Trail Association
-For the local economy
-To provide specific protection for fragile ecosystems
-To protect the remote character of the trail

Agency Response:
The Superior NF coordinates with other agencies and entities on management of the SHT and realizes that the trail, along with many other Forest trails, has value to the local and regional economy.

Separate Management Areas were not made for any trails. The Superior Hiking Trail is a designated hiking trail and managed for non-motorized use. Use of ATVs is prohibited on the trail. Forest Plan trail standards and guidelines, implemented at the site-specific level, are designed to maintain the primary purpose for which a trail was designed. Adjacent harvest and related activities are addressed in Plan direction such as D-REC-7, G-REC-2, and G-TRL-2 (CNF) G-TRL-3 (SNF). Scenic quality would be maintained by meeting the designated High SIO (O-SC-1) in the trail corridor. All of the agency and Plan standards and guidelines along with the trail's primary purpose should protect the trail's remote character.

Additional trail standards and guidelines were not developed for the Superior Hiking trail or any other trails. Specific trail direction can be developed locally. A good example is the Memorandum of Understanding with the North Country Trail Association. Such direction is site-specific and not appropriate in Forest Plan strategic direction.

Information on the Superior Hiking Trail was added to the EIS section 3.8.1.a and Appendix B.

PC# 3.1-4
Public Concern: The Final EIS and Plan should include standards and guidelines and describe the existing condition of and effects to the North Country National Scenic Trail and other important hiking trails and canoe routes.

Agency Response:
In response to your comment, we have added existing condition information on the portion of the North Country National Scenic Trail on the Chippewa NF in the EIS section 3.8.1.a and Appendix B. We did not include additional information in the effects discussion because the trail would be managed in accordance with the Forest Plan, the NST Management Plan and the MOU in all alternatives.

Trail designations are not part of the strategic Forest Plan. Any potential future changes to uses on existing trails would be analyzed at the site-specific level. MOUs are also not mentioned specifically in Forest Plans because the MOUs are designed to meet the direction in the Forest Plan and add site level direction. The Forest Plan does not change the existing MOU and Management Plan for the NST.
The most site specific direction in the Forest Plan for the North Country National Scenic Trail would be for scenery where it has a High SIO. Overall, the Forest Plan direction, along with the trails primary purpose, the NCT Management Plan, and the MOU, would protect the trail's remote character and would enhance viewing long-lived forest types from the trail.

This response about management of the NST and the response for PC# 3.1-3 for the Superior Hiking Trail would also apply to other popular hiking trails and canoe routes. However, only routes with special designations were specifically discussed in the EIS.

PC# 3.1-5
Public Concern: The Chippewa NF should limit or eliminate mountain bikes from the North Country Trail.

Agency Response:
The Forest Plan is a strategic document that does not deal with site-specific implementation questions.
Whether or not to allow use of mountain bikes on the North Country Trail is a question that would be handled at the site-specific level. At this time mountain bikes are allowed and there are no plans to analyze whether or not to limit or eliminate such use.

PC# 3.1-7
Public Concern: The Chippewa and Superior NFs should work with volunteers and other public agencies to plan and maintain RMV or other trails and keep the forest clean from garbage.

Agency Response:

The Forests currently work with numerous volunteers and other agencies in trail planning and maintenance. The Forests will continue current partnerships and the Forests hope to expand cooperative working relationships during Plan implementation. Refer to Chapter 1 of the Forest Plans, Implementing the Plan, Basic Principles 2 and 3 of Management and D-CM-1.

PC# 3.1-8
Public Concern: The Chippewa NF should allocate appropriate staff and funding to groom and maintain Suomi Hills and Trout Lake Joyce Estate Trails.

Agency Response:
Funding and staffing allocations are not part of the Forest Plans. Refer to Chapter 1, Implementing the Forest Plan, Budgets. Your concerns for maintenance and improvements have been forwarded to the Deer River Ranger District for consideration when they make their annual work plans. At this time, the District plans to continue to authorize motorized grooming from the south access to the Joyce Estate Building Site, but does not plan to authorize additional grooming in the Trout Lake Tract.

PC# 3.1-9
Public Concern: The Chippewa and Superior NFs should permit motor vehicles for grooming and maintenance on cross-country ski trails.

Agency Response:
Motorized vehicles may be used for administrative purposes in places that are closed to public motorized use. In answer to your concern and for clarification, we have added maintenance to the examples mentioned in the Forest Plans' D-RMV-3.

PC# 3.1-10
Public Concern: The Chippewa and Superior NFs should clarify contradictions in O-RTL-1 relating to any new non-motorized trails.

Agency Response:
We have deleted reference to funding availability in the two objectives mentioned in your letter. The wording of the objectives in the Proposed Forest Plans was too restrictive. Chapter 1 of the Plans, Implementing the Forest Plans, Budget, addresses funding for all resources. A new objective, O-REC-4, provides direction that is similar but not so restrictive. It states that maintenance generally takes precedence over development of new facilities. This objective along with the information in Chapter 1 implies that maintenance is usually the priority in work planning, but that development of new facilities is possible within funding limitations.

PC# 3.1-11
Public Concern: The Chippewa and Superior NFs should gate, seed, mow and create loop hiking/hunting trails for grouse hunting and cross-country skiing.

Agency Response:
Thank you for your comment on how you are pleased with the existing hiking/hunting and cross-country skiing trails. These kinds of trails were not specifically analyzed during Plan revision because there are currently many opportunities on the Forests for these activities. However, additional hiking/hunting and cross-country skiing trails are possible if proposed and analyzed at the site-specific level within agency and Forest Plan direction. (O-RTL-1)

PC# 3.1-12
Public Concern: The Chippewa and Superior NFs should place hunter walking trails in General Forest MA or at a minimum managed for early succession forest even though they may be in other MAs.

Agency Response:
Separate management areas were not established for trail corridors in the Plans. However, hunter walking trails are specifically mentioned as opportunities in the General Forest and General Forest – Longer Rotation MAs as well as most of the other MAs. Hunter walking trails are designated trails managed for non-motorized hunting opportunities. Because the primary purpose of these trails deals with hunting opportunities, the vegetation along and in the vicinity of the trails would be managed for deer and grouse, regardless of the management area designation.

PC# 3.1-13
Public Concern: The Chippewa and Superior NFs should coordinate with the State and counties to expand the existing hunter walking trail system.

Agency Response:
Expansion of the existing hunter walking trail system was not identified as a need for change in the Forest Plan revision process and therefore the Plans do not include specific direction for such trails. However, additional trail may be designated if analysis at the project-level shows that the proposal addresses public concerns and meets agency and overall Forest Plan direction (O-RTL-1).

Many of the existing hunter walking trail systems are managed in coordination with the State and counties. We would anticipate that any future proposals would also be designed and managed in coordination with other agencies and entities.

PC# 3.1-14
Public Concern: The Superior NF should ban mountain bikes from the wilderness trails, including trails outside that BWCAW that lead into the wilderness.

Agency Response:
Use of mountain bikes is prohibited in designated wilderness. The agency does not make a practice of buffering wilderness with restricting or prohibiting adjacent mechanized or motorized uses. (FSM 2320.3, #5) Therefore, additional information on use of mountain bikes has not been included for management areas outside the BWCAW in the Superior NF Plan.

Trails that lead into wilderness may allow use of mountain bikes. When resource or social concerns cannot be mitigated, secondary trail uses such as mountain biking on hiking trails, may be restricted or prohibited. Your concerns about mountain biking impacts on the east end of the Kek trail have been forwarded to the appropriate District Ranger.

PC# 3.1-15
Public Concern: The Plans should prohibit the use of recreation trails as skid trails during logging.

Agency Response:

Standards and guidelines are similar in that they both set a limit to management to mitigate the effects of an activity. Standards are mandatory and can only be exceeded if the Forest Plan is amended. Guidelines are almost always met, but can be exceeded if a project analysis and decision provide rationale for not following the management direction. The Forest Service believes that G-REC-2 is appropriate as a guideline because it will almost always be met, but there is a degree of flexibility added with it as guideline. This guideline was not changed to a standard because there are situations where trails may be impacted by harvest activities. Such impacts would be addressed at the project-level and the necessary mitigation measures would be implemented to protect or restore affected trails.

PC# 3.1-16
Public Concern: The Chippewa and Superior NFs should designate "Hiking Trail Protection Areas" to exclude hiking trails from timber harvest and eliminate potential future conflicts.

Agency Response:
We did not develop separate management areas restricting harvest along hiking trails. Forest Plan direction along with the trail's primary purpose includes provisions to maintain each trail's intended recreation experience. Scenery is managed with the assigned SIOs. For the most part, trails with high use and with regional significance were assigned High SIOs.

Refer to response for PC# 3.1-3.

PC# 3.1-17
Public Concern: The Plans should address horse and mountain bike trail use and other traditional non-motorized activities.

Agency Response:
Horse, mountain bike, and other non-motorized trails were not addressed specifically in the Forest Plans because they had no specific need for change identified during the revision process. Nevertheless, new non-motorized trail may be designated if (O-RTL-1) analysis at the project-level shows that the proposal addresses public concerns and meets agency and overall Forest Plan direction.

PC# 3.1-19
Public Concern: The Chippewa and Superior NFs should improve all trail maps for recreational and seasonal use routes and make them available electronically.

Agency Response:
Decisions for how to provide public maps and other information is not included in the Forest Plans because such specific actions are parts of implementing Plan direction. The Forests continue to work to improve maps available for public use and are currently working on adding trail maps to their websites.

Recreation

Recreation Management General (3.3)

PC# 3.3-1
Public Concern: The Chippewa and Superior NFs should consider tangible ways to implement the recreation emphasis in the new Plans.

Agency Response:
The Forests will consider your suggestions during implementation. However, such specific practices are not included in the Forest Plan due to its strategic nature. Chapter 1 of the Forest Plans, Implementing the Forest Plan, Budgets briefly explains how implementation is dependent on the level of funding the agency receives.

PC# 3.3-2
Public Concern: The Plans should include recreation and access desired conditions and objectives that maintain current use and allow future recreation use.

Agency Response:
Plan direction allows most existing use to continue and provides resource management that would result in forest settings that recreationists prefer. In response to agency and public comment, the Forest Plans include a new desired condition and objective for both Forests (D-REC-9 and O-REC-4) and a new guideline on the Superior NF (G-RMV-4) that, in part, address allowing existing use to continue. This additional direction addresses motorized and non-motorized recreation, emphasizes maintenance of existing recreation facilities over new construction and, in particular on the Superior NF, generally allowing current use to continue on existing low maintenance level roads. With the knowledge that recreation use will continue to increase, much of the recreation related direction in the Plans focus on providing existing and future recreation opportunities in a manner that manages the use and minimizes resource impacts.

PC# 3.3-3
Public Concern: The Plan and EIS should encourage and acknowledge cooperation from individuals and organizations in enhancing the general environment of the Forest.

Agency Response:
Your part in trail maintenance on Star Island is one of many excellent examples of contributions to Forest management. The Forest Plans provide strategic direction for resource management on the Forests. Part of that strategic direction in implementation is to coordinate with local agencies, and collaborate with interested organizations (D-CM-1). That direction is found in many parts of agency direction and is also discussed in Chapter 1 of the Forest Plans, Implementing the Forest Plans, Basic Principles of Management.

PC# 3.3-4
Public Concern: The Chippewa and Superior NFs should acknowledge and emphasize non-motorized recreation (quiet activities) in the Plans and develop objectives for how to meet non-motorized recreation demand to benefit local economies

Agency Response:

Motorized recreation use was a primary issue in the Plan revision process because of the growth in demand locally. Although the national survey projected a small increase in off-road driving, State information (Genereux, 2001 and State-wide vehicle registrations) indicated a recent and projected demand for management of RMV opportunities. Public concerns about resource and social impacts from motorized recreation use along with agency desires to review current RMV policies were also contributing factors to including it as an issue in the Plan revision process. Because it was a major issue in Plan revision, motorized recreation has more specific direction than some other recreational uses.

The Proposed Plans included direction that addressed non-motorized recreation use. Proposed Plan G-GF-1, G-LR-1, and G-RU-1 provided direction to maintain semi-primitive non-motorized recreation opportunities where they currently exist. Motorized recreation uses will not always be allowed on every acre within areas having Roaded Natural and Semi-primitive ROS objectives. ROS objectives are maximums and lesser developed ROS class characteristics would be common, especially in areas with Roaded Natural ROS objectives. This direction was carried into the Final Plans.

In response to public comments, we have added direction to further address non-motorized recreation, added areas to the Semi-primitive Non-motorized Management Areas on the Chippewa NF, and added acres to the Semi-primitive Non-motorized Management Areas on the Superior NF. D-REC-1 was modified to include non-motorized recreation and O-REC-3 was added to encourage analysis of separate motorized and non-motorized recreation uses during project-level planning.

It is anticipated that the number of miles of road related recreation opportunities will be reduced during Plan implementation. The RMV policies are intended to manage and concentrate RMV use on roads and trails designated for their use. In the long run this could lead to more non-motor opportunities throughout the Forests than what currently exists. Additional information on non-motorized recreation has been included in the EIS section 3.8.1.

In brief, we did not include specific objectives for additional non-motorized recreation opportunities, but we did add and clarify some direction that relates to non-motorized recreation. Finally, it is important to note that non-motorized recreation facilities and opportunities may be designated if analysis at the project-level shows that the proposal addresses public concerns and meets agency and overall Forest Plan direction.

PC# 3.3-5
Public Concern: The Chippewa and Superior NFs should place higher priority on non-motorized recreation (silent sports) than on motorized recreation to provide a quiet recreation experience and to protect the environment.

AND

PC# 3.3-6
Public Concern: The Chippewa and Superior NFs should be managed primarily for non-motorized recreation, wilderness primitive recreation, and unique values.

AND

PC# 3.3-7
Public Concern: The Chippewa and Superior NFs should provide a range of recreational opportunities.

Agency Response:
The Code of Federal Regulations requires the Forest Service “to the degree consistent with needs and demand for all major resources” to provide a broad spectrum of outdoor recreation opportunities. (36 CFR 219.21) Therefore, both motorized and non-motorized forms of recreation are recognized as acceptable and valid uses of the National

Forests. Thus, completely eliminating one use or another throughout the Forests cannot be considered in the Plan revision process. Instead, the Forest Plans manage the competing demands of motorized and non-motorized enthusiasts by designating certain parts of the Forests as non-motorized such as the Semi-primitive Non-motorized Recreation and Potential Research Natural Areas Management Areas. In addition, non-motorized recreation may be designated during project-level planning. (O-REC-3)

The Forest Plans allow for a range of recreation opportunities that provide multiple local economic benefits from the variety of users. For example, the spectrum spans from non-motorized primitive recreation in the BWCAW on the Superior NF and in Semi-primitive Non-motorized Recreation Management Areas on the Chippewa NF to motorized driving for pleasure on roads in General Forest Management Areas on both Forests.

Also refer to response for PC# 3.3-4.

PC# 3.3-8
Public Concern: The Chippewa and Superior NFs should judge whether or not a recreational activity is appropriate using two principles: (1) the activity must not harm the environment and (2) the activity must not displace other users.

Agency Response:
Refer to response to PC# 3.3-4 for why motorized recreation use was an issue in Forest Plan revision.
The Forest Plan is a strategic document and the EIS discusses anticipated effects from implementation. Social and resource impacts are discussed throughout the EIS, such as in Recreation (3.8), Watershed Health (3.6.1, indicator 7, and Wildlife.(3.3.8, indicator 25) For example, motorized recreationists will be displaced from parts of some of the management areas such as Potential Research Natural Area MAs during Plan implementation and most, but perhaps not all, resource impacts will be mitigated.

The principles you suggest do not provide the flexibility needed during implementation of the Plan.
However, the two principles mentioned in your response would be addressed during project-level analysis for new or changed recreation opportunities on the Forests. Depending on the project-level analysis and decision, there may be times where users are displaced or impacts to the environment are not entirely mitigated but are within standards and guidelines. It is important to point out that the examples mentioned in your response would not meet Forest Plan standards and guidelines.

PC# 3.3-9
Public Concern: The Chippewa and Superior NFs should consider watershed protection and other environmental factors on an equal basis with recreation demand when evaluating proposals for more trail and water access in Alternative E.

Agency Response:
At least two laws and/or regulations direct Forests to balance recreation and environmental values: (1) 36 CFR 219.21 requires the Forest Service, “to the degree consistent with needs and demands for all major resources, to provide a broad spectrum of outdoor recreation opportunities and (2) the Federal Land Policy and Management Act of 1976, Section 102, (8) sets a policy that public lands be managed “in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archeological values.

The Forest Plan is a strategic document and its associated EIS discusses anticipated effects from implementation. Social and resource impacts are discussed throughout the EIS, such as in Recreation (3.8) and Watershed Health (3.6.1, indicator 7). The Forest Plan direction for RMV and water access is designed to better manage those

recreation uses. During project-level planning, watershed and environmental factors along with agency and Plan direction would be addressed and potential impacts mitigated.

PC# 3.3-10
Public Concern: The Chippewa and Superior NFs should protect trails, lakes, canoeable streams, system roads, highways, and wilderness buffer areas from negative effects of logging.

Agency Response:
Logging activities will be visible from some recreation viewpoints, but impacts will be reduced. Forest Plan scenic direction should result in harvest areas with a natural appearance, especially where visual sensitivity is high. For example, harvest units may be laid out to mimic low intensity fires. On most commonly used roads, trails, and lakes, implementation of the Forest Plan scenery direction using SMS provides for minimizing visual impacts from logging because such areas generally have High SIOs. Additional information on effects is included in the Final EIS Scenic Quality Section 3.8.2.b.

PC# 3.3-11
Public Concern: The Chippewa and Superior NFs should clarify the National Visitor Use Monitoring results in the Final EIS.

Agency Response:
The Draft EIS refers to the National Visitor Use Monitoring (NVUM) Report in sections 3.9.1.b. and 3.8.1.a. Additional information for total use measured in Recreation Visitor Days (RVDs) on each Forest has been included in 3.8.1.a. The numbers you quote in your response refer to "percent who said it was their primary activity". During the survey on the Superior NF, visitors could choose more than one primary activity and that accounts for the total in Table 13 adding up to over 150 percent. We surmise that the reasons the totals in Table 13 for the Chippewa add up to about 106 percent have to do with rounding and data collection. Perhaps some visitors indicated more than one primary activity. Further explanations on how data was collected and derived is found in the NVUM reports and in the Forest Plan revision project file. We thought that total use (RVDs) by Resource Planning Act (RPA) categories was the most meaningful information on recreation use to include in the EIS and that has been clarified. We did not think additional detail on how the data was collected or derived for analysis was necessary in the EIS.

PC# 3.3-13
Public Concern: The Regional Forester should select Alternative D.

-To preserve quiet sports
-To protect scenic quality
-To protect the Superior Hiking Trail

-Because it has an appropriate policy for water access development
-To stop logging on the Chippewa and Superior NFs
-To limit road and trail building
-To protect forests and watersheds from RMV impacts

AND

PC# 3.3-14
Public Concern: The Regional Forester should not select Alternative E.

-Because it caters to motorized recreation interests
-To avoid negative impacts from motorized recreation
-Because it does not have enough non-motorized areas
-Because it would decrease the number of roads and trails
-Because it is not compatible with a wilderness type of experience

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

Refer to responses for PC# 3.3-5, 3.3-6, 3.4.2-9, 3.1-3, 3.4.4-1, 3.4.4-2, 2.9-2, 3.4.3-3, 3.4.3-5, and 2.9-1.

Recreation Opportunity Class Objectives (3.4.1)

PC# 3.4.1-1
Public Concern: The Plans' ROS objectives should be revised to more closely reflect Minnesota's forest and non-motorized recreation patterns.

AND

PC# 3.4.1-3
Public Concern: The Chippewa and Superior NFs should reduce the amount of acreage available for motorized use to a percentage that more accurately reflects the proportion of Forest users who actually use ATVs.

AND

PC# 3.4.1-4
Public Concern: The Superior NF should establish non-motorized, semi-primitive recreation zones to reflect the popularity of non-motorized forest recreation.

AND

PC# 3.4.1-5
The Chippewa and Superior NFs should provide a better balance between motorized and non-motorized recreation.

Agency Response:
ROS objectives are maximums. ROS objectives were changed in the Plans only in association with changes in management area allocations. However, additional direction for non-motorized recreation was included in the Plans.

An ROS objective of roaded natural (RN) or semi-primitive motorized (SPM) does not mean that the intent is to have all of the affected management area (MA) developed to meet RN or SPM characteristics or that OHV use would be allowed throughout the MA. ROS is to be used in project level planning to guide proposed recreation

development or other forest management activities. Because the Forest's niche's are to provide recreation that is on the more remote end of the recreation spectrum, G-GF-1, G-LR-1, and G-RU-1 were developed for the Forest Plans. Areas that currently meet Minnesota National Forest semi-primitive motorized and non-motorized ROS inventory criteria will generally be retained for remote recreation opportunities. This in part addresses public concerns to reflect current uses on the Forests. Both Forests also modified a Desired Condition (D-REC-1) and added an objective (O-REC-3) and increased the acres of Semi-primitive Non-motorized Management Areas to address public concerns regarding non-motorized recreation. Finally, it is important to note that cross-country OHV use will be prohibited on both Forests, with that use managed on existing roads and trails.

Refer to response for PC# 3.3-4, 5, 6, and 7.

PC# 3.4.1-2
Public Concern: The Plans and EIS should include guidelines and address the need for significant separation and management between non-motorized and motorized trails to avoid use conflicts, noise, resource, or economic impacts.

Agency Response:
Additional Forest Plan direction has been included as described in the response for PC# 3.3-4 and 3.4.1-1. The Draft Plan made reference to use of existing trails for additional designated RMV trail. That reference has been removed because it was confusing and not strategic direction. We may consider allowing RMV use on some snowmobile trails; however, existing non-motorized trails will not be converted to motorized trails. We understand the need to have specific purposes for trails to avoid use conflicts and consequently have retained D-RTL-2 in the Plans.

The RMV policies on the Forests restrict motorized recreation use primarily to existing roads, snowmobile trails, and the few miles of existing trail open to ATVs. Because so few miles of trail are currently open to OHVs, the Plan includes objectives for new motorized trail construction. Overall, the Plan direction for RMVs is towards controlling and managing the use to avoid resource impacts and use conflicts. (Use conflicts are discussed in the EIS section 3.8.3.b.) Forest Plan direction has been changed to prohibit cross-country use of OHVs forest-wide; therefore S-LR-1 in the Proposed Plans has been deleted. Development of new motorized trails would take into consideration avoiding use conflicts on nearby trails or other recreation facilities. We also understand that managing for a variety of uses and maintaining a scenic forest environment should provide for a diverse local economy.

PC# 3.4.1-6
Public Concern: The Chippewa and Superior NFs should clarify the effects of the guideline that addresses retention of "remote character" throughout the Forests, along the Superior Hiking Trail, and present the current inventory information in the EIS.

Agency Response:
There will likely be areas of the Forests within Roaded Natural ROS that are managed for less developed ROS characteristics. The guidelines tie to meeting the Forest Plan Desired Conditions, in particular D-REC-2. Additional information has been added in the EIS 3.8.1.b to clarify the effects of G-GF-1, G-LR-1, and G-RU-1. The guidelines were also reworded for clarification but their intent remained the same.

Refer to the response for PC# 3.1-3 regarding the Superior Hiking Trail.

"Remote character" is not intended to be its own term separately defined in the glossary because the definition would be the same as the guideline. The most current ROS inventory of "remote character" is included in the

Plan section, 3.8.1.b Tables ROS-5 and ROS-6 using percentages and maps of the most current ROS inventories have been added to the EIS section 3.8.1. Nevertheless, application of the MN NF criteria is most accurate at project-level and inventories would generally be updated for site-level analyses. Project-level analyses could use the Forest Plan ROS inventory for cumulative effects analysis on areas outside the project boundary.

PC# 3.4.1-7
Public Concern: The Chippewa and Superior NFs should allow equal access on the forest without drawing lines on maps. Opportunities for non-motorized recreation can be found in General Forest MAs too.

Agency Response:
We could not validate your reference that FSH 1909.15 says opportunities for non-motorized recreation are forgone if portions of the Forest are not allocated for that purpose. We also looked through other manual and handbooks and could not find a similar statement. We agree that opportunities for non-motorized recreation can be found in General Forest MAs and the Plans include a new desired condition (D-REC-9) and objective (O-REC-3) and retain direction from the Proposed Plans (G-GF-1) direction to provide for such opportunities.

PC# 3.4.1-8
Public Concern: The Chippewa and Superior NFs should clarify or have ROS tables match in the Final EIS.

Agency Response:
Tables 2-4 and 2-11 in the Plans refer to two different kinds of information for Alternative D and both tables are correct. Table 2-4 shows acres in each management area (MA) and Table 2-11 shows percent of ROS class. Also refer to the Table ROS-7 in the EIS section 3.8 for a crosswalk showing the assigned ROS for each MA by alternative. Note that Recreation Use in a Scenic Landscape MA has a semi-primitive ROS class that would account for a large portion of the ROS class percent shown in Table 2-11. Also refer to the EIS Recreation Opportunities and Forest Settings section 3.8.1.b for further information on how ROS class objectives were assigned to MAs.

PC# 3.4.1-9
Public Concern: The Chippewa and Superior NFs should explain the recreation objectives in D-RU-7.

Agency Response:
Site-specific recreation objectives would be determined during project-level planning and be based on existing conditions, the project purpose and need, along with other agency and Forest Plan direction. After review of your comment and the desired condition referenced, a clarification has been made in D-RU-7. Project-level objectives mean what is to be achieved at a particular location. In contrast, a forest-wide objective would apply to all similar locations.

PC# 3.4.1-10
Public Concern: The Chippewa and Superior NFs should disclose the impacts of ROS on vegetation measured in acres, timber value, and approximate dollar value.

Agency Response:

Recreation management is required as part of National Forest Multiple Use management and is reflected across all alternatives. The Forest uses ROS to reflect overall recreation management. The impacts of recreation management were included as part of the model design and results are included within the outputs disclosed in the EIS. Impacts and the interrelationships were aggregated from all the different resources and included in the results disclosed in the EIS for timber, economics, etc. Separate figures for all the different resources such as scenery, wildlife, watershed, and vegetation objectives were not disaggregated.

PC# 3.4.1-11
Public Concern: The Chippewa and Superior NF should clarify how ROS allocated for Alternative E will affect federal requirements for accessibility, especially for the Gunflint Lake South East area

Agency Response:
The Roaded Natural ROS objective for Gunflint Lake SE in Modified Alternative E does not mean that the intent is to have the entire area developed to meet RN characteristics. ROS is to be used in project level planning to guide proposed recreation development or other forest management activities. Because the niche of the Forests is to provide recreation that is on the more remote end of the recreation spectrum, G-GF-1, G-LR-1, and G-RU-1 were developed for the Forest Plans. Areas that currently meet Minnesota National Forest (MN NF) semi-primitive motorized and non-motorized ROS inventory criteria will generally be retained for remote recreation opportunities. The current MN NF ROS inventory in that area includes Roaded Natural, Semi-primitive Motorized and Semi-primitive Non-motorized ROS classes. Therefore, a range of recreation opportunities, tending towards the lesser developed scale, may be appropriate in the Gunflint Lake SE area. What is offered will depend upon site-level planning.

Modified Alternative E can provide a wide range of recreation opportunities and still meet accessibility requirements. The Forests are required to address accessibility for public access. However, they do not have to change the intent of a program or activity to make them fully accessible. Accessibility must match the program or activity. For example, a highly developed campground may have paved trails and sites whereas a wilderness campsite would not have paved trails and sites. Providing trail and condition information at the wilderness trailhead would suffice to meet accessibility requirements.

PC# 3.4.1-12
Public Concern: The Chippewa and Superior NFs should address inconsistencies in the theme of Alternative E and the ROS objectives near Gunflint, Little North, and North Lakes.

Agency Response:
All of the areas you refer to are in the Roaded Natural ROS class and in the Recreation Use in a Scenic Landscape MA in Modified Alternative E. The motorized uses you refer to for ski trail grooming and motorized recreation fishing would not be affected by Modified Alternative E's ROS class objectives. We do not see an inconsistency with the theme of Modified Alternative E and the ROS objectives in the areas you refer to.

PC# 3.4.1-13
Public Concern: The Superior NF should allocate an ROS objective to the Superior Hiking Trail that protects its remote character and scenic qualities.

Agency Response:

Scenic Integrity Objectives (SIOs) address scenic qualities along the Superior Hiking Trail. Just like the North County Trail on the Chequamegon-Nicollet National Forest, scenic quality for the Superior Hiking Trail would be maintained or enhanced by meeting the designated High SIO along the trail corridor.

Separate Management Areas (MAs) were not allocated for any trails and, because ROS was assigned based on MA boundaries, separate ROS corridors were not assigned for trails or other areas. Nevertheless, the Superior Hiking Trail is a designated hiking trail and managed for non-motorized use. Forest Plan trail standards and guidelines implemented at the site-specific level are designed to maintain the primary purpose for which a trail was designed. Guidelines are generally expected to be carried out and deviations must be documented. All of the agency and Plan standards and guidelines along with the trail's primary purpose should protect the trail's remote character.

Also refer to response for PC# 3.1-3.

PC# 3.4.1-14
Public Concern: The Chippewa and Superior NFs should enhance Alternative E by moving some management areas into more primitive or non-motorized ROS classes because:

- **Significant threats to ecosystem integrity accompany trail development**
- **Increased access from roads and trails is a developing wildlife issue, affecting wildlife and the hunting experience for some hunters**

Agency Response:
The Chippewa NF added about 10,000 acres in the Semi-primitive Non-motorized Recreation MAs to Alternative E. The Superior NF added approximately 1,500 acres in the Semi-primitive Non-motorized Recreation MAs, 1500 acres in the Candidate Research Natural Areas, and 2,000 acres of Unique Biological Areas, which will have more semi-primitive non-motorized and motorized ROS classes. Also refer to response for PC# 3.4.1-3, 3.4.1-4, 3.4.3-50, and 3.5-9 and to the EIS section 3.3.8.b indicator 25.

The EIS includes seven alternatives with different approaches to managing recreation use, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for recreation management. Therefore, it is not necessary to modify Alternative E to address this interest. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing recreation management.

Scenic Quality (3.4.2)

PC# 3.4.2-1
Public Concern: The Chippewa and Superior NFs should use the visual management and other guidelines that were developed cooperatively for management of Minnesota's forests.

AND

PC# 3.4.2-24
Public Concern: The Regional Forester should not select Alternative E because it uses visual guidelines that conflict with state-wide guidelines developed in cooperation with the Forest Service.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

The Forests did not include the MFRC visual guidelines in the Forest Plans because the Forest Service national direction is to use the concepts and terms contained in Forest Service Agriculture Handbook Number 701, Landscape Aesthetics, A Handbook for Scenery Management (SMS). The scenery management system has been developed for application in all landscapes found across the all National Forests across the nation. SMS takes a comprehensive approach to scenery management and provides the Forests more flexibility than the MFRC guidelines. Refer to the Forest Plans, Chapter 2, Forest-wide Standards and Guidelines, All Resources, Visual Quality.

Information that was developed cooperatively was used in implementing SMS for the Forests. For example, the preliminary concern level assignments were based on the cooperative statewide Visual Quality planning process that included State and county personnel, local tourism, and forest products industry representatives.

PC# 3.4.2-2
Public Concern: The Chippewa and Superior NFs should not use the MFRC visual guidelines.

Agency Response:
The Forests will use SMS and not MFRC visual guidelines because of agency requirements. Refer to response for PC# 3.4.2-1.

PC# 3.4.2-3
Public Concern: The Chippewa and Superior NFs should make the scenic quality objectives, standards, and guidelines more specific, and in particular change G SC-1 from a guideline to a standard.

Agency Response:
We agree that scenery management is important to Forest communities and to the State as a whole. Application of the SIOs using the SMS handbook along with integration of all other Forest Plan direction during project-level planning will maintain or enhance the scenic quality of the Forests.

The scenery objectives, standards, and guidelines provide sufficient direction for scenic quality on the Forests. Management activities will move towards the desired conditions for scenery. The Forest Plans include Scenic Integrity Objectives (SIO) that are mapped with specific assignments of High, Moderate, and Low SIOS for all portions of the Forests.

Management actions will not result in an Unacceptably Low SIO. That concept will remain as a standard to ensure that scenic quality is not compromised on the Forests.

The guideline referenced, G SC-1, will remain a guideline because it will help the Forest reach desired conditions and objectives while permitting operational flexibility to respond to variations over time. Deviations from guidelines must be analyzed during project-level analysis and documented in a project decision document.

PC# 3.4.2-4
Public Concern: The Chippewa and Superior NFs should reduce or eliminate the proposed ¼ mile scenic buffers along roads, streams and lakes.

Agency Response:
There may be some confusion between assigned SIOs and information used in modeling. In short, the High SIO corridors are not removed from timber management and all silvicultural treatments may be used during Plan implementation as long as they meet the SIOs.

The Plans assigned SIOs to all areas on the Forests. High SIOs are common along well traveled public routes where scenery is of interest to most Forest visitors. These foreground areas often appear as corridors on the maps. Resource management activities should not reduce the scenic integrity below the assigned level for a given area. Again, the actual Forest Plan management direction allows all silvicultural prescriptions to be used as long as they meet the SIOs.

Refer to the EIS Appendix B for more information on the Modeling and Scenic Analysis Processes.

PC# 3.4.2-5
Public Concern: The Plans should include a guideline that stops timber sales in areas where the public objects to the harvest for scenic reasons.

Agency Response:
Public involvement is required during project-level analyses. The SIOs for an area, along with public input and all other Plan and agency direction, are considered in project-level analysis. This proposed guideline is too restrictive because it does not allow for consideration of other resource factors or of other public opinions that may be raised during project-level analysis.

PC# 3.4.2-6
Public Concern: The Chippewa and Superior NFs should maintain buffers along all permanent roads and other high public use areas for scenic quality.

Agency Response:
Permanent roads with heavy recreation traffic are usually assigned a High SIO. Site specific analysis would determine the management activities that would meet the High SIO along heavily traveled permanent roads. Lesser used roads may be assigned lower SIOs and results of harvest activities may be more evident. Also refer to response for PC# 3.4.2-4.

PC# 3.4.2-7
Public Concern: The Plans should not increase the scenic quality requirements beyond what was in the 1986 Plans.

Agency Response:

The Forests were directed to implement the SMS in Forest Plan revisions. One of the fundamental principles of SMS is summarized in the letter from the Chief of the Forest Service in the front of the handbook and it is: "There is no question….that the national forests are major contributors to an American sense of place, to an identity with the landscape that transcends economics for its own sake. The founders of the national forest idea…were consistent in their advocacy for landscape aesthetics. The forests not only should be functional, they should be beautiful as well."

The NVUM results do show that most Forest visitors to day use sites, developed overnight sites and in the general forest areas rate scenery good to very good. The point of contact for the visitors was generally in areas where activities under the current Plans would have been managed for High scenic quality. The additional areas managed for Moderate SIOs in Modified Alternative E are commonly in more remote areas where scenery is also important.

The cumulative effects scenery section of the EIS (3.8.2.b) has been revised somewhat to clarify scenery effects of non-federal land management in combination with National Forest System land management. Please refer to that section.

In summary, per national direction the Forests have adopted the Scenery Management System. The slightly greater emphasis on scenery in Modified Alternative E, as compared to Alternative A, is a result of the overall management themes of the respective alternatives and the changes that have occurred in recreation use patterns since the 1986 Forest Plans were written.

Also refer to response for PC# 3.4.2-4.

PC# 3.4.2-8
Public Concern: The Chippewa and Superior NFs should prohibit harvest in certain areas for scenic quality.

Agency Response:
Areas such as you have mentioned are generally assigned a High Scenic Integrity Objective. The SIOs for an area, along with public input and all other Plan and agency direction, would be addressed if projects are considered in areas with high public concern for scenery. This proposed guideline is too restrictive because it does not allow for consideration of other public opinions and circumstances that may be reviewed during project-level analysis. In some instances, harvest activities may provide a variety of public benefits such as reducing fire potential or creating a scenic vista.

PC# 3.4.2-9
Public Concern: The Plans should include more areas with High and Very High SILs, especially from viewsheds visible from or into the wilderness.

Agency Response:
Scenic classes were developed using concern levels from travel ways and use areas along with inherent scenic attractiveness. The assignment of Scenic Integrity Levels to the scenic classes was based on the theme of the alternative. Scenery is emphasized more in Modified Alternative E than in the current Plans. The emphasis on scenery is consistent with Modified Alternative E's theme of emphasizing a diverse economic base in local communities. The Regional Forester determined that Modified Alternative E provides the best balance of all resources, including scenery management.

Viewshed analysis would occur during project-level analysis. Analysis of views from the wilderness or into the wilderness would take into account the SIOs and would be integrated with public input and other Plan and agency direction.

Also refer to response for PC# 3.4.2-7.

PC# 3.4.2-10
Public Concern: The Plans should include scenic standards for Shipstead-Newton-Nolan zones and areas that rise 100 feet above their surroundings.

Agency Response:
Public Law 539, Shipstead Newton Nolan (SNN), allows only limited forest management within 400 feet of navigable streams. Separate scenic standards were not created for SNN areas, per se. But, the inventory phase of the Scenery Management System did recognize the scenic importance of the Forests' lakes and rivers and scenic classes were assigned accordingly.

It was not necessary to specify a standard for scenic management in areas over 100 feet for two reasons.
1.) Inherent scenic attractiveness was considered in the scenic class inventory process. Areas with more topography were considered "Distinctive" and that allocation generally lead to the area's inclusion into a scenic class where the public had more concern for scenic quality.
2.) During project-level analysis, viewpoints such as public use areas at higher elevations, popular turnouts along roads, lakeshores, etc., would be considered along with the SIO and other Plan and agency direction.

Also refer to response for PC# 3.4.2-7.

PC# 3.4.2-11
Public Concern: The Chippewa and Superior NFs should continue to do their good job of improving scenic quality along heavily traveled areas of the forest.

Agency Response:
Thank you for your comment. We will continue to manage for scenic quality on the Forests.

PC# 3.4.2-12
Public Concern: The Superior NF should designate Highway 1, at least between Ely and Isabella, as a Scenic Highway.

Agency Response:
Highway 1 is assigned a High SIO which is the same as for other scenic highways on the Forests. Therefore, management along Highway 1 will be managed similar to designated scenic highways. Recommendations for scenic highways to be designated as scenic byways were not a Forest Plan issue and were not included in the analysis. Highway 1 could be considered for recommendation as a scenic byway under the current or revised Forest Plan.

PC# 3.4.2-13

Public Concern: The Chippewa and Superior NFs should describe "natural appearing landscapes" in the scenic quality portion of the Final EIS to include historic natural disturbance regimes.

Agency Response:
The description of natural appearing landscapes and how the alternatives compare has been clarified in the Final EIS. The concept of natural appearance does take natural disturbance patterns, as well as the dynamic cyclic nature of particular forest types, into account.

PC# 3.4.2-14
Public Concern: The Chippewa and Superior NF should change the way they judge scenic quality to view natural tree mortality and disturbances as meeting high scenic quality and logging as harmful to scenic quality.

Agency Response:
Principles of SMS do include the viewing of natural occurrences such as tree mortality and disturbances as potential contributions to scenic quality. Timber harvest in a "tidy" way is not the intent of SMS. The scenery desired conditions relate to natural appearing landscapes.

PC# 3.4.2-15
Public Concern: The Chippewa and Superior NFs should disclose the scenery management impacts on vegetation measured in acres, timber value, and approximate dollar value.

Agency Response:
Scenery management is required as part of Multiple Use management and is reflected across all alternatives. The impacts of scenery management were included as part of the model design and results are included within the outputs disclosed in the EIS. Impacts and the interrelationships were aggregated from all the different resources and included in the results disclosed in the EIS for timber, economics, etc.
Separate figures for all the different resources such as scenery, wildlife, watershed, and vegetation objectives were not disaggregated.

PC# 3.4.2-16
Public Concern: The Final EIS Cumulative Effect Overview for scenery should provide an effective cumulative impact analysis and include scientific references and not rely on MFRC guidelines.

Agency Response:
The cumulative effects analysis considered the effects of management activities on National Forest System land as combined with past, present, and reasonably foreseeable future activities on adjacent land under other ownership. The effects of management activities on National Forest System land are analyzed using the Scenic Integrity Objectives and takes all Forest Plan standards and guidelines into consideration. On other lands, management activities are only guided by voluntary compliance with the MFRC guidelines. Objective quantifiable data is not available on other ownership for this complex situation. The cumulative effects discussion included observations of trends viewed on non-federal land. The Forest Plans include monitoring of all resources on National Forest System land.

PC# 3.4.2-17
Public Concern: The Plans should include photos of model vistas by scenic integrity level and define "natural opening".

Agency Response:
Due to time and funding constraints, photos will not be added to the Final EIS. The SMS handbook does include photos that will help in project implementation. In addition, the Forests plan to use local photos for training Forest staff in implementation of SMS. Additional clarification in descriptions of natural openings and natural appearing has been included in the EIS (section 3.8.2.b) and glossary.

PC# 3.4.2-18
Public Concern: The Plans should also treat related surface impact in relation to scenic prescriptions.

Agency Response:
Surface related impacts are addressed in the Plan direction for other resources such as wildlife, soil, watershed, and heritage resources. Project-level analysis integrates all Plan direction and would address surface related impacts.

PC# 3.4.2-19
Public Concern: The Plans should define "temporary openings" as a clearcut, a term that has meaning to the public.

Agency Response:
Please refer to the glossary for definitions of temporary opening and for clearcut. The term "clearcut" refers to the management prescription and the term "temporary opening" refers to the result of management activities.

PC# 3.4.2-20
Public Concern: The Plans should define the "aesthetic" values referenced.

Agency Response:
"Aesthetic" is a common term used in scenery management and is defined in the glossary. The Scenery Management System uses the term, aesthetic, to describe landscapes that give visual and sensory pleasure. Research shows that there is a high degree of public agreement regarding scenic preferences and that people value most highly the more natural appearing landscapes. The Scenery Management System recognizes that preferences may vary regarding this issue and the process attempts to incorporate these varied concerns into the standards and guidelines. During project-level analysis, SIOs would be used in conjunction with the SMS handbook and other Plan and agency direction.

PC# 3.4.2-21
Public Concern: For esthetic reasons, the Forest Plans should have an additional standard for openings to not exceed 40 acres.

Agency Response:
All proposed management-created openings, including those that are larger than 40 acres would be analyzed during project level planning. Scenic Integrity Objectives will guide the degree to which any management-created opening may deviate from the desired landscape character and to what extent it will be designed to mimic

natural occurrences.

PC# 3.4.2-22
Public Concern: The Chippewa and Superior NFs should be managed to preserve the beauty, scenery, and untouched character of the forests.

Agency Response:
Scenery management will be part of project implementation and will be guided by SIOs and Plan and agency direction. Some areas of the Forests may remain untouched and other areas may be managed to create a natural appearing landscape.

PC# 3.4.2-23
The Chippewa and Superior NFs should use timber management to address aesthetics in scenic areas.

Agency Response:
It will not always be possible to avoid effects of major events such as the 1999 Fourth of July storm that you refer to. Implementation of the direction in the Plans should contribute to overall forest health which in turn can contribute to scenic quality.

Mid-level inventories and analyses will address the existing condition of the scenic resource compared to the desired condition. Project-level planning and analyses will recommend methods and techniques to move toward the desired condition. Timber management may be recommended and used if deemed appropriate.

PC# 3.4.2-25
Public Concern: The Chippewa and Superior NFs should modify Alternative E to emphasize scenic integrity, especially along major travel roads and some lower level roads.

Agency Response:
When compared to the other alternatives, Modified Alternative E would place a moderate emphasis on a scenic, natural appearance featuring large trees (EIS section 3.8.2.b, indicator 2). However, the Forest Plans directs the Chippewa and Superior NFs to protect or enhance high scenic quality in areas with outstanding scenic value and in highly used recreation areas and corridors (D-SC-1). Many roads and trails in the Gunflint Trail corridor have a High Scenic Integrity Objective in the Forest Plan for the Superior NF (Figure SC-1). Also refer to response for PC# 3.4.2-9.

The EIS includes seven alternatives with different approaches to managing scenic resources, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for scenic management. Therefore, it is not necessary to modify Alternative E to address this interest. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing how scenic resources are managed.

PC# 3.4.2-26
Public Concern: The Final EIS should explain why Alternative E would allow clearcutting in scenic recreation areas such as along the Superior Hiking Trail and Highway 61.

Agency Response:
Clearcutting is allowed in the Recreation Use in a Scenic Landscape MA and within High SIO areas such as along the Superior Hiking Trail and Highway 61. However, scenic and recreational objectives would guide the design of the harvest activities; therefore we are confident that the scenic value of these areas will not be compromised. When choosing which tool to use, forest managers will consider both ecological and social considerations. Also refer to responses for PC# 3.4.2-5 and 3.4.2-6.

Recreational Motor Vehicles (3.4.3)

PC# 3.4.3-1
Public Concern: The Chippewa and Superior NFs should allow RMV use on the Forests.

-To accommodate the increase in motorized use
-For a variety of purposes
-For forest management work
-For local economic benefit
-To keep the trails and roads maintained
-To exercise Tribal gathering rights
-To maintain traditional lifestyles
-For commercial use such as bear baiting and picking boughs
-To provide motorized opportunities across the State

Agency Response:
The Forests will allow RMV use for a variety of public and administrative purposes. However, in order to address resource impacts and social concerns, RMV use will be more strictly managed under the revised Forest Plans. In brief, Plan direction allows most RMV uses on existing low maintenance level roads and on existing motorized trails designated for specific RMV uses. The Plans also include an objective to designate new motorized trails. However, cross-country travel with OHVs on both Forests would be prohibited. Cross-country travel with snowmobiles would be prohibited on the Chippewa NF and allowed in most management areas the Superior NF. Refer to Forest Plan direction for RMVs, wildlife, and transportation systems.

PC# 3.4.3-65
Public Concern: The Regional Forester should select Alternative A so the Forests would be open to all legal uses, such as ATV use.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative. Also refer to response for PC# 3.4.3-1.

PC# 3.4.3-2
Public Concern: The Forest Service should provide equal access for motorized use on the Forests.

-For all Forest visitors
-For persons with disabilities

Agency Response:
The Forest Plan recreation desired conditions, in particular D-REC-1, include direction to provide a range of quality recreation motorized and non-motorized recreation opportunities to satisfy diverse public interests while maintaining sustainable ecosystems. Satisfying diverse public interests does not result in completely equal numbers of facilities for each kind of user. However, when demand exceeds the opportunities available, such as designated motorized trails, the Forests responded by addressing the concern in the plan revision process. Refer to response for PC# 3.1-1.

The Forests are required to address accessibility for public access. However, they do not have to change the intent of a program or activity to make them fully accessible. Accessibility must match the program or activity. For example, motorized use can be restricted or prohibited in some management areas where non-motorized recreation is emphasized and motorized use may be enhanced in management areas where motorized recreation is emphasized. Motorized users will not be restricted to only one area on the Forests and many existing logging roads will remain available for ATV use.

PC# 3.4.3-55
Public Concern: The Chippewa and Superior NFs should decrease the amount of acreage useable for motorized recreation to a level below what's proposed in Alternative E because the Forests will not be able to adequately monitor ATV use at the levels proposed in Alternative E.

Agency Response:
Table 2-5 that you cite is in the Superior National Forest Trail Management Plan. The table is a summary of backlog in administration. The intent of noting the need for monitoring use levels refers to a Forest desire to have specific use information for actual use on all trails, motorized and non-motorized. The Forests do have visitor use information from the National Visitor Use Monitoring (NVUM) and that information works well for forest planning analyses. However, the Forests would like to gather more data on use at specific trails. Such information would be helpful during project-level planning.

The Forests learn of impacts from RMV use in many ways. Project areas are reviewed for RMV concerns that need to be addressed during the site-level analysis. District employees learn of concerns through observation in their routine field work. The public also brings concerns to Forest managers. Actions are taken as necessary to address impacts.

Modified Alternative E direction restricts OHV use more than under the 1986 Forest Plans. Managing the use by prohibiting cross-country OHV use, designating appropriate OHV uses on the low maintenance level roads, and providing designated trails will minimize impacts and make enforcement easier. Chapter 4 of the Forest Plans includes monitoring direction for RMV uses. RMV impacts will be monitored through the annual Monitoring and Evaluation Implementation Guide.

PC# 3.4.3-3
Public Concern: The Chippewa and Superior NFs should prohibit or greatly restrict motor vehicle use in most or all areas of the Forests.

-To protect the environment
-To provide quiet non-motorized recreation
-To limit impacts to global warming
-For local economic benefit
-For future generations
-With exceptions for a few groups
-To buffer the BWCAW

Agency Response:
The Code of Federal Regulations requires the Forest Service "to the degree consistent with needs and demand for all major resources" to provide a broad spectrum of outdoor recreation opportunities. (36 CFR 219.21) Therefore, both motorized and non-motorized forms for recreation are recognized as acceptable and valid uses of the National Forests. Thus, completely eliminating one use or another throughout the Forests cannot be considered in the Plan revision process. Forest Plan direction addresses the competing demands of motorized and non-motorized enthusiasts by designating certain parts of the Forests as non-motorized such as the Semi-primitive Non-motorized and Potential Research Natural Areas Management Areas. In addition, non-motorized recreation may be designated during project-level planning. (Refer to Chippewa and Superior FPs O-REC-3) In other areas of the Forests, the Forest Plans restrict RMV use more than what is in the 1986 Plans. The RMV policies of the Forest Plans were designed to provide motorized use while addressing social and resource concerns.

PC# 3.4.3-4
Public Concern: The Plans should modify recreation desired condition statements (D-REC-1, D-REC-2, and D-REC-10) for RMV uses so that they are compatible with D-SE-3.

Agency Response:
The intent of the desired conditions you reference was not changed in the Final Plans. Developed and dispersed motorized recreation use can occur in remote natural settings in management areas where motors are allowed. Most facilities and places where RMVs uses are allowed would not be highly developed. The range of appropriate recreation opportunities must meet or be less than the ROS objective.
Refer to response for PC# 3.4.3-3.

PC# 3.4.3-5
Public Concern: The Chippewa and Superior NFs should prohibit ATV use in riparian areas, Riparian Area MAs and Eligible Wild and Scenic River MAs.

Agency Response: Forest Plan forest-wide and management area direction provides for protection of riparian ecosystems. Cross-country OHV use will be prohibited forest-wide on both Forests. Cross-country snowmobile use is allowed on the Superior NF unless prohibitions or restrictions are needed for resource protections to meet management objectives. ATV use will generally be restricted to existing roads and motorized trails in Riparian Areas and Eligible Recreation and Scenic River MAs. Following project level analysis, some new motorized trail construction could also occur in these areas, particularly for winter motorized trails. ATV use is prohibited in the wild segment of the Eligible Wild, Scenic, and Recreation River MA on the Superior NF. Refer to Plan direction for these MAs.

PC# 3.4.3-6
Public Concern: The Chippewa and Superior NFs should develop distinct management plans for ATV use based on frozen and non-frozen ground time periods.

Agency Response:
Differing management practices for ATV use, based on ground conditions, would be determined during project-level planning. Seasonal use considerations would be analyzed during implementation, particularly when the Forests evaluate existing roads for various RMV uses.

PC# 3.4.3-7
Public Concern: The Chippewa and Superior NFs should leave roads open and construct trails for ATV and snowmobile use.

-As designated and maintained by local clubs
-To minimize environmental impacts
-To meet user demand
-To provide ATV use for dog sled training
-To provide multi-use and seasonal use opportunities
-For residents in Cook County
-For the local economy

Agency Response:
Forest Plan direction provides for allowing RMV use on many existing low maintenance level roads and includes an objective to designate additional motorized trails. (Chippewa FP O-RMV-1, O-RMV-2, and G-RMV-4; Superior FP O-RMV-1 and G-RMV-4) Achieving the Plan's RMV direction would require public involvement and environmental analysis at the project-level. Refer to response for PC# 3.4.3-8.

PC# 3.4.3-8
Public Concern: The Chippewa and Superior NFs should not construct additional ATV or snowmobile trail.

-Because there are enough road miles available
-Because it will increase illegal use
-To maintain the local economy
-To protect butterflies

-Because ATV trail use displaces non-motorized users
-Because the Forests cannot manage their current trail system and afford to construct new trails
-To protect Tribal access to remote areas
-Because the private sector is better positioned to provide for RMV use

Agency Response:
Forest Plan direction provides for management of RMV uses primarily on roads and trails while providing clear information for where the public can ride. Such direction should reduce impacts if people know specifically where then can and cannot ride.

Motorized recreation use is split among three basic types of experiences: road, trail, and cross-country. Cross-country OHV use will be prohibited on both Forests and cross-country snowmobile use will be prohibited on the Chippewa NF and allowed in some management areas on the Superior NF. Road related RMV opportunities will be reduced from the existing miles on each Forest. RMV access on roads is for more utilitarian purposes such as hunting, fishing, or berry picking access. RMV use on trails is a different experience than use on roads. Trail users want to travel loops or to destinations for pleasure (such as enjoying scenery, having a group or family

outing, traveling a long distance, etc.) At this time the Chippewa NF provides only 20 miles of trail open to ATVs and the Superior NF only 40 miles. Each Forest provides many miles of snowmobile trail. The demand for new snowmobile trail designation is anticipated for such purposes as reroutes around private land or connections between existing trails. (EIS section 3.8.3)

New motorized trail designation would undergo the appropriate level of environmental analysis considering and eliminating or mitigating resource impacts such as for butterflies and social concerns such as proximity to other non-motorized recreation activities and important Tribal areas. Potential motorized trail designation would be of a lesser development scale that what the private sector offers. The Forests would not develop scramble, mud hole, or challenge areas like those offered outside the Forests. (Chippewa FP S-RMV-3 and Superior FP S-RMV-2) Finally, at this point, the Forests would seek partnerships (volunteers, cooperative funds, etc.) for assistance in planning, development, and maintenance because of the limited trail funds currently available on the Forests. (Chippewa and Superior FPs D-CM-1)

PC# 3.4.3-9
Public Concern: The Chippewa and Superior NFs should designate ATV trails on existing snowmobile trails or other existing roads or trails, include "Items of Interest", and map connecting routes.

Agency Response:
These factors along with many other concerns would be considered during public involvement and project level planning.

PC# 3.4.3-10
Public Concern: The Plans should keep S-RMV-2 that prohibits RMV challenge, mud hole, or scramble areas.

Agency Response:
The Final Plans include the same direction as the Draft Plans that prohibits development of RMV challenge, mud hole, or scramble areas. (Chippewa FP S-RMV-3 and Superior FP S-RMV-2)

PC# 3.4.3-11
Public Concern: The Chippewa and Superior NFs should handle snowmobile reroutes only at a local level.

AND

PC# 3.4.3-12
Public Concern: The Chippewa and Superior NFs should not delegate RMV trail siting decisions to local communities. (DEIS 3.8-40)

Agency Response:
Current agency regulations and laws such as NEPA require project-level public involvement and environmental analysis and those decisions be documented appropriately. The Forests cannot restrict public involvement to only local participants if publics outside the area have expressed interest in certain kinds of projects. The portion of the EIS referenced has been clarified to explain that public involvement would be encouraged with all interested parties and adjacent landowners.

PC# 3.4.3-13
Public Concern: The Chippewa and Superior NFs should provide separate trails for ATVs and OHVs.

Agency Response:
The Forest Plans do not provide direction for potential development of ORV (four-by four trucks) trails but would, through site-level analysis, allow ORV use on some existing OML 2 roads. Forest Plans also do not provide direction for potential development of OHM (dirt bike) trails, but would, through site level analysis allow use on some existing OML 1 and OML 2 roads. In addition, during site-level planning allowing OHM use on the potential additional designated ATV trails would be considered. (EIS section 3.8.3 Indicators 1, 2, and 3)

PC# 3.4.3-14
Public Concern: The Chippewa and Superior NFs should modify G-RMV-3 and not use existing roads and trails for newly designated ATV and snowmobile trails.

Agency Response:
The intent of G-RMV-3 in the Draft Plan was not to use existing non-motorized trails for motorized trail designation, but to use existing motorized roads or trails where possible. Because this guideline was not strategic in nature and dealt more with implementation, it was not included in the Final Plans. We understand the need for designed and managed motorized trails. Trail designation would be based on the best trail location from a resource and trail riding experience.

PC# 3.4.3-15
Public Concern: The Chippewa and Superior NFs should add standards that prohibit RMV trails in quiet zones (2/3 of each landscape ecosystem) and that limit RMV road and trail miles to 75 miles per Ranger District.

Agency Response:
The Final Plans include provisions for non-motorized areas in two primary ways: (1) RMV uses are prohibited in some management areas such as Potential Research Natural Areas and Semi-primitive Non-motorized Recreation MAs and (2) based on public comment, a new objective was developed (O-REC-3) for project-level planning to consider management of some inventoried semi-primitive ROS areas for separate non-motorized and motorized recreation uses. Your proposal to manage 2/3 or each LE for non-motorized use was too extensive to meet the theme of Modified Alternative E.

The EIS (sections 3.8.3.b, 3.3.8.b indicator 25 and 3.6.1.b indicator 7) disclosed effects of potential use on existing road and trail miles as well as the potential new trail miles. Limiting the total road and trail miles to 75 miles per District does not take into consideration all Forest Plan direction. During site-level planning, the Districts will evaluate use of roads for motorized uses based on all Forest Plan direction such as wildlife, transportation systems, watershed health, and recreation. The Forests plan to allow existing uses on roads to continue only if it meets Forest Plan direction (Chippewa FP O-RMV-1 and G-RMV-4, and Superior FP G-RMV-4): "…Roads that are determined through site-specific analysis to have immitigable resource and social concerns and/or do not meet management objectives would be effectively closed."

PC# 3.4.3-16
Public Concern: The Chippewa and Superior NFs should increase by 50 percent or more the miles of additional designated ATV and snowmobile trail.

AND

PC# 3.4.3-56

Public Concern: The Chippewa and Superior NFs should reduce trail construction by at least 50 percent from the Draft Plan and limit trail construction to certain ELTs and coordinate with other landowners to minimize impacts.

Agency Response:

Refer to the EIS Recreational Motor Vehicle Section 3.8.3.a. The objective for potential additional designated ATV trails was based on the estimated Forest share of demand for core designated ATV miles as described in the Genereux report (2001). The objective for potential additional designated snowmobile trails was based on local demand estimates. The Forests have not found better information to change the objectives (Chippewa FP O-RMV-2 and Superior FP O-RMV-1) in the Final Plans.

Project-level environmental analysis for proposed new motorized trails would occur in coordination with other landowners (Chippewa and Superior FPs D-CM-1). Many Forest Plan standards and guidelines address how and where activities could occur. For examples: O-WS-10 (particularly the last bullet), Table G-WS-8, G-WS-9, and the Transportation System standards and guidelines. All other applicable Forest Plan direction such as in watershed health, transportation, and wildlife would also be incorporated to mitigate potential environmental effects.

PC# 3.4.3-17

Public Concern: The Chippewa and Superior NFs should close all other areas to motorized use once the "to-be-determined" amount of OHV trail is created.

Agency Response:

Forest Plan direction will manage OHV use on existing roads and trails with cross-country OHV use prohibited. Existing roads will be reviewed during Plan implementation for appropriate OHV use (Chippewa FP O-RMV-1 and G-RMV-4, and Superior FP G-RMV-4) and potential additional designated ATV trail has an upper limit (Chippewa FP O-RMV-2 and Superior FP O-RMV-1). In general, newly constructed roads will be closed to OHV use. Therefore, the Plans cap use by considering OHV use only on existing roads and placing an upper limit on the miles of potential new ATV trail.

PC# 3.4.3-18

Public Concern: The Chippewa and Superior NFs should clarify how the total 90 miles of new ATV trail will be determined.

Agency Response:

Clarifications have been added to EIS Recreational Motor Vehicle section 3.8.3.b. regarding what constitutes new trail designation. Chippewa FP O-RMV-2 and Superior FP O-RMV-1 have also been clarified. The ATV and snowmobile trail miles are in addition to the existing trail miles open on the Forests at this time. The Forests would work cooperatively with interested publics and organizations as well as forest-wide to find trail opportunities during project level analysis. It is importation to distinguish between trail and road riding experiences. Trails would be designed specifically for ATV (and OHMs in some cases) riding and the systems would include associated trail facilities such as trailheads, off-loading areas, latrines, designed overlooks, directional signing, interpretive signing, etc. The 90 miles of trail would be placed on the National Forest Trail System and managed for motorized trail riding opportunities. Where existing roads can be used for the trail system, they would be redesigned and managed as part of the designated trail system. However, if existing roads have resource problems or social considerations and do not provide a good trail riding experience, they would not be used for a designated trail. Low maintenance level roads, which are maintained on the National Forest Road

System, more often provide a utilitarian opportunity such as access to hunting camps or fishing areas or other dispersed activities. Also refer to response for PC# 3.4.3-8.

PC# 3.4.3-20
Public Concern: The Chippewa and Superior NFs should use the ATV licensure funds to construct new ATV trail.

Agency Response:
Use of licensure fees is not within the authority of the National Forests and must be determined by the State of Minnesota. Nevertheless, the Forests plan to work with the State and others for partnership and funding opportunities to help with ATV trail planning and designation.

PC# 3.4.3-21
Public Concern: The Plans should delete the objective that adds more designated snowmobile trail to protect the lynx.

Agency Response:
The objective was not deleted in the Forest Plans. The objective is a maximum that allows consideration of additional designated snowmobile trail for reroutes, connections, and possible new routes. Any possible additional designated snowmobile or other trail must also meet all other Forest Plan direction, including direction for lynx. That is, resource direction would essentially take precedence over the objective to designate new trail. New trail could not be designated that does not meet Forest Plan direction. (Refer to Forest Plan wildlife direction.)

(An error in the Superior NF Proposed Forest Plan was corrected in the Final Plan. The objective for the Superior NF is a maximum of 130 additional designated snowmobile trail miles. The mileage for the Superior NF Alternative E in the EIS was correct.)

PC# 3.4.3-22
Public Concern: The Chippewa and Superior NFs should allow OHMs on ATV trails, develop ATV trails away from non-motorized areas, reevaluate ATV trail mileage in 3-4 years, and develop an ATV route map for public use.

Agency Response:
OHMs could be allowed on the same trails as ATVs. (EIS section 3.8.3.b indicator 1) This would be determined through site-level analysis. ATV trails would not be developed in non-motorized areas and project-level analysis would consider social concerns in locating trails by avoiding non-motorized facilities as much as possible. The Forest Plan Chapter 4, Monitoring Table MON-4 indicates evaluation of RMV opportunities within five years. The Forests will improve public information during Plan implementation to help the public know where they can and cannot ride.

PC# 3.4.3-23
Public Concern: The Chippewa and Superior NFs should not continue to sacrifice natural resources for motor enthusiasts by building trails and increasing forest access to accommodate new popular motor vehicles such as the “Hummer”.

Agency Response:

The use of OHVs is recognized as one of the many recreation opportunities on the National Forests. The definition of OHV does not include the hummer. If new larger motorized recreation vehicles are developed, they may or may not be allowed on Forest roads and trails. Allowing use of new types of vehicles may need to be analyzed if resource or social issues arise concerning the legality or appropriateness of such use.

Your attachments of the sketch map of road access in 1985 compared with the Forest roads map from 2003 is difficult to validate specifically. It is safe to say that road access did increase with implementation of the 1986 Plans. However, the revised Plans (G-RMV-1) include direction to maintain (not increase) the existing higher maintenance level roads (OML 3, 4, and 5) and prohibit RMV use on such roads. The Plans also include direction to make decisions on the existing lower maintenance level roads (unclassified, OML 1, and OML 2) as to their status for public RMV use. (O-TS-2, Chippewa FP O-RMV-1, and Superior FP G-RMV-4) In addition, four-wheel drive trucks (ORVs) will generally be prohibited on OML 1 roads (G-TS-12) and newly constructed roads built for resource management will generally be closed to public motorized travel. (O-TS-3) Finally, the Forests plan to decommission unneeded roads. (O-TS-8) Therefore, the Forests anticipate that over the Plan implementation period there were will be fewer opportunities for RMV access on roads as compared to the existing opportunities. (EIS section 3.8.3.b indicator 3) It is also important to note that cross-country OHV travel will be prohibited. (Chippewa FP S-RMV-4 and Superior FP S-RMV-3)

PC# 3.4.3-24
Public Concern: The Chippewa and Superior NFs should modify O-RMV-1 to include a timeframe of 3 to 5 years.

Agency Response:
The Forest Plans do not specify a timeframe for completing a review of roads for RMV use. The Forests intend to work cooperatively to complete roads analysis in as timely a manner as possible within funding limitations and workforce availability.

PC# 3.4.3-25
Public Concern: The Chippewa and Superior NFs should reduce the new designated motorized trail mileage objective (CNF O-RMV-2 and SNF O-RMV-1) by the net increase in classified and temporary roads and take into consideration the Genereux study data for percent of machines used off of their owner's private land.

Agency Response:
Newly constructed temporary and OML 1 roads will generally be closed to public motorized use. (Chippewa and Superior FPs O-TS-3) Existing roads will be reviewed for appropriate RMV uses and fewer roads will likely be available under the new Forest Plans than under the 1986 Plans. (EIS section 3.8.3.b indicator 3) Therefore, there will not be an increase in the miles of road open to RMVs and consequently we would have the same objective for the maximum miles of additional designated motorized trail.

Although the Genereux Study found that currently many ATV owners only use their machines on their private land, the study also found that 50 to 60 percent of OHV owners want planned and marked trails. The Forests used the core trail demand predictions found on page 101 of the Genereux Study in developing additional designated trail mile objectives for the alternatives.

PC# 3.4.3-26
Public Concern: The Chippewa and Superior NFs should allow access on roads and logging areas year round for hunting, trapping, and fishing access.

Agency Response:
Forest Plan direction provides for a review of existing roads for appropriate RMV uses. We anticipate that many existing low maintenance level roads will continue to be open for ATV travel. However, all cross-country travel with ATVs (such as through logging areas) will be prohibited, with the exception of very few administrative uses. Cross-country ATV travel was prohibited because it creates unacceptable resource damage and social impacts and because the existing road system provides extensive access to the Forests.

PC# 3.4.3-27
Public Concern: The Chippewa and Superior NFs should prohibit RMV use on all OML 1 and OML 2 roads.

Agency Response:
Forest Plan direction is to allow RMV use on existing OML 1 and OML 2 roads until site-specific decisions are made. Roads with immitigable resource and social concerns will be effectively closed. (Chippewa FP O-RMV-1 and G-RMV-4, and Superior FP G-RMV-4)

PC# 3.4.3-57
Public Concern: The Chippewa and Superior NFs should provide ATV use on county or township roads as a means to assure that ATV users have access to services and to reduce the need for creating new trails.

Agency Response:
The Forests generally do not have authority to regulate uses on county and township roads. During site-level roads analysis and trail planning, the Forests will coordinate as much as possible with adjacent land management agencies and entities to provide high quality motorized recreation opportunities that cross multiple ownerships. Your point about access to services will be considered along with the many other factors in motorized recreation use planning.

PC# 3.4.3-28
Public Concern: The Chippewa and Superior NFs should prohibit OHV use on all roads until damaged areas are repaired and an enforcement plan is developed.

Agency Response: OHV recreation is an appropriate use of national forests and requires responsible management. As soon as possible after damaged areas of roads are discovered, repairs are made. Enforcement procedures are already in place and are used. OHV uses on roads are reviewed during project-level analysis and decisions are made to maintain or decommission roads based on resource and social considerations. Forest personnel also periodically review roads for maintenance needs. Outside of project-level analyses, road uses may be restricted or prohibited if damaged areas are brought to the attention of decision makers and they determine that the impacts are unacceptable.

PC# 3.4.3-29
Public Concern: The Chippewa and Superior NFs should add an equal amount of ATV trail for all roads that are closed.

Agency Response:

The Forest Plan direction allows continued use of low maintenance level roads where resource and social impacts can be mitigated. The Plans also include objectives for additional designated motorized trail. Forest Plan direction currently meets national direction. President Clinton's Roadless Rule is not in effect at this point. If it becomes effective and is not modified, it would have little to no affect on road access in the Forests.

PC# 3.4.3-61
Public Concern: The Superior NF should modify Alternative G to prohibit ATV use on unclassified roads like the Chippewa NF.

AND

PC# 3.4.3-30
Public Concern: The Superior NF should prohibit ATV use of unclassified roads like the Chippewa NF.

Agency Response:
The EIS includes seven alternatives with different approaches to managing ATV use, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for RMV management. Therefore, it is not necessary to modify Alternative G to address this interest. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing the ATV policy.

Plan direction for unclassified roads differs between the Forests because of conditions unique to each Forest. Resource and social considerations are still met in both cases.
On both Forests where existing RMV use occurs on roads, it would be generally continue to be allowed if it meets Forest Plan direction and does not have immitigable resource or social concerns. The Chippewa NF is more densely roaded and anticipates adding very few unclassified roads to their system. The Superior NF is less densely roaded and anticipates that some existing unclassified roads that are currently being used will be added to the road system. Roads will be reviewed during site-level analyses and decisions will be made to either rehabilitate the road or add it to the National Forest Road or Trail System. The use of unclassified roads should be a short term issue because, during the Plan implementation period, most or all areas on the Forests will be reviewed and decisions made as to their classification status or removal. (EIS section 3.8.3.b indicator 3)

Use of unclassified roads on the Superior NF does not include the use of illegally user constructed or maintained routes. Unclassified road use is also prohibited in the non-motorized Management Areas (MAs) such as Semi-primitive Non-motorized Recreation and Candidate Research Natural Area MAs and the BWCAW.

PC# 3.4.3-31
Public Concern: The Chippewa and Superior NFs should have the same OHV regulations and should control the use before it becomes a problem.

Agency Response:
Forest Plan direction for both Forests restricts RMV use more than in the 1986 Plans. The two primary differences between the Forests relate to use of unclassified roads and cross-country snowmobile travel where the Chippewa NF prohibits RMV use and the Superior NF allows it in most management areas. Resource and social considerations are still met in both cases due to differing circumstances on the Forests.

The Chippewa NF is more densely roaded and anticipates adding very few unclassified roads to their system. The Superior NF is less densely roaded and anticipates that some existing unclassified roads will be added to the road

system. On both Forests where existing use occurs, it would continue to be allowed if it meets Forest Plan direction and does not have immitigable resource or social concerns.

Cross-country snowmobile use is prohibited on the Chippewa NF because the Forest has adequate snowmobile opportunities on its designated trails and unplowed roads. In addition, snowmobilers do not need to travel cross-country to access fishing areas because existing trails, roads, and public water access sites provide sufficient access to water. Conditions on the Superior NF differ. The existing cross-country use generally includes access to lakes for ice fishing. The routes are often snow-filled drainages with little vegetation. Because snowmobiles have gotten larger and most are built specifically for use on maintained trails, the machines are very difficult for users to take off of roads and trails.

Refer to response for PC# 3.4.3-30 and to the EIS section 3.8.3.b, Indicator 3 and Indicator 4.

PC# 3.4.3-32
Public Concern: The Plans should include additional objectives, standards, and guidelines for RMV use (designated routes only, environmental review, funding for enforcement and restoration).

Agency Response:
In response to public comment and based on additional environmental review, RMV desired conditions, objectives, standards, and guidelines have been revised and clarified in the Final Plans. The primary change from the Proposed Plans is elimination of all cross-country OHV uses, with exceptions only for administrative purposes. In brief, the Final Plans provide direction for managed RMV use primarily on roads and trails, no cross-country OHV use, and some cross-country snowmobile use on the Superior NF. We anticipate that the new RMV direction will be easier to enforce because it is more restrictive.

The Plans do not address funding issues for any program areas. Funding is discussed in Chapter 1 of the Forest Plans, Implementing the Forest Plans, Budgets. The Forests do realize the importance of seeking funding or partnerships for all areas of trail planning and maintenance and will consider those issues during analysis for any potential trail additions.

Enforcement and monitoring processes are already in place in a variety of ways. RMV uses are reviewed during project-level analysis and decisions are made on use of roads based on resource and social considerations. If illegally developed trails are found, they are addressed. Forest personnel also periodically review roads and other areas for maintenance needs. Outside of project-level analyses, RMV uses may be restricted or prohibited if areas with adverse effects are brought to the attention of decision makers and they determine that the impacts are unacceptable. Such information can be from employees or the public or through the media such as you reference. Areas with considerable adverse effects are rehabilitated as soon as possible after discovery. The news reports (Meersman 2002) mentioned dealt primarily with impacts on State land but do provide trend and other information of concern. The MCEA map has been forwarded to the Recreation staff on the Chippewa NF for consideration. Enforcement and follow-up actions including restoration are also related to funding and are not discussed in the Forest Plans.

The Monitoring Plan in Chapter 4 of the Plans describes the overall strategy for determining if Forest Plan direction is being met. The annual monitoring and implementation evaluation guide describes each year's work in more detail. The annual guide is developed within each year's funding allocations.

PC# 3.4.3-33
Public Concern: The Chippewa and Superior NFs should work with the ATV and snowmobile industry and other agencies to provide tracking devices or other systems such as fees and taxes that would assist in enforcement of regulations.

Agency Response:
The Forests do not have the authority to change registration fees, add taxes to motorized recreation equipment, or develop tracking devices on recreation equipment. However, the Forests will continue to work cooperatively whenever possible with the recreation industry, interested publics, and agencies in managing RMV uses.

PC# 3.4.3-34
Public Concern: The Plans should include a standard that requires one law enforcement specialist per District and a proactive enforcement plan.

Agency Response:
The standards suggested were not included in the Forest Plans because they deal with funding and implementation. Funding is discussed in Chapter 1 of the Forest Plans, Implementing the Forest Plans, Budgets. Staffing levels relate to funding and are also not specified in Forest Plans.

Refer to response for PC# 3.4.3-28 and PC# 3.4.3-32 regarding enforcement.

PC# 3.4.3-35
Public Concern: The Chippewa and Superior NFs should prohibit cross-country ATV travel for big game retrieval and trapping or for all uses and provide adequate staffing to enforce the prohibitions.

-To prevent the spread of exotic species
-To provide a non-motorized hunting experience
-To be consistent with the CNF current policy
-To protect the environment (soil, vegetation, water, wildlife) and not create new unauthorized "unclassified" roads
-Because it is discriminatory to allow for just big game retrieval and trapping
-To be consistent with many private and industry landowners
-To be consistent with the State

-Because of inadequate staffing to monitor and enforce a regulation allowing big game retrieval and trapping
-To protect riparian areas
-To protect threatened and endangered species
-With exceptions for emergency use or for persons with disabilities

AND

PC# 3.4.3-36
Public Concern: The Chippewa and Superior NFs should allow cross-country ATV travel for big game retrieval or other uses.

AND

PC# 3.4.3-37
Public Concern: The Chippewa and Superior NFs should allow ATV use for big game retrieval and trapping access to be consistent with the State on this and other ATV regulations.

Agency Response:
Forest Plan direction for both Forests will prohibit all cross-country OHV travel (Chippewa FP S-RMV-4 and Superior FP S-RMV-3), with some administrative exceptions (D-RMV-3). Based on further environmental review and public comment, the exceptions for big-game retrieval and trapping were not included in Modified Alternative E. We realize that this is not entirely consistent with the State regulations. However, the Proposed Plan also differed from State regulations by not allowing access to deer stands like the State currently allows. Nevertheless, the State and Forests are all emphasizing management of OHV use on designated roads and trails and will strive to be consistent in how that information is displayed to the public. (EIS section 3.8.3.b indicator 4)

PC# 3.4.3-64
Public Concern: The Chippewa and Superior NFs should modify Alternative G to allow for big-game retrieval and trapping and select Alternative G because it would allow for an appropriate amount of RMV use.

Agency Response:
The EIS includes seven alternatives with different approaches to managing RMV use, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for RMV management. Therefore, it is not necessary to modify Alternative G to address this interest. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing the RMV policy.

The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative. Also refer to response for PC# 3.4.3-35, 3.4.3-36, and 3.4.3-37.

PC# 3.4.3-38
Public Concern: The Chippewa and Superior NFs should add standards and guidelines if cross-country travel for big game retrieval and trapping access continues to be allowed.

AND

PC# 3.4.3-39
Public Concern: The Chippewa and Superior NFs should adopt a standard that no more that 15 percent of land surface in a Ranger District will be available for ATV use in order to retrieve big game.

Agency Response:
We did not need to consider your suggested additions to OHV standards and guidelines because we dropped the exceptions for big game retrieval and trapping access. All cross-country OHV travel will be prohibited in the Forest Plans. (Chippewa FP S-RMV-4 and Superior FP S-RMV-3) Exceptions are only allowed for administrative purposes. (Chippewa and Superior FPs D-RMV-3)

PC# 3.4.3-41
Public Concern: The Chippewa and Superior NFs should add a provision in the Plans that limits ATV use to designated roads and trails.

Agency Response:
Refer to response for PC# 3.4.3-35. Plan direction for both Forests allows motorized use only on trails designated open for uses such as ATVs, OHM, and snowmobile. (Chippewa FP S-RMV-2 and Superior FP S-RMV-1) The Plans also provide direction to review existing roads for appropriate RMV uses. Refer to Chippewa FP O-RMV-1 and G-RMV-4, and Superior FP G-RMV-4.

PC# 3.4.3-42
Public Concern: The Chippewa NF should continue to restrict motorized travel to trails signed open for motorized use (S RMV-2), prohibit challenge areas (S RMV-3), and prohibit cross-country snowmobile use (S RMV-4) because the Forest does not have designated wilderness.

Agency Response:
These standards were retained in the Final Chippewa Forest Plan.

PC# 3.4.3-43
Public Concern: The Chippewa and Superior NFs should restrict off road vehicle (ORV) use on logging roads and trails using a "closed unless posted open" signing strategy.

-To limit and enforce ATVs use on designated roads and trails
-To be consistent with the State and counties
-To protect sensitive plants

AND

PC# 3.4.3-44
Public Concern: The Chippewa and Superior NFs should use an "open unless posted closed" signing strategy for managing RMV use.

Agency Response:
Signing and public information are parts of implementing the Plan direction. Because the Forest Plans are strategic documents, signing techniques and styles are not specified. Direction to develop clear public information on RMV use and to be consistent with adjacent public land management agencies where practical is included in the Plans (D-RMV-2) but specific practices are considered part of implementation. The Forests currently have visitor maps and other literature that are updated as information and regulations change. Refer to response for PC# 2.9-8 and 3.0-20.

PC# 3.4.3-45
Public Concern: The Final EIS should clarify the indicator for the RMV issue.

Agency Response:
RMV indicators 1 and 2 include the potential number of newly designated miles of summer and winter motorized trails. User-created trails are not part of the designated trail system. However, there may be rare situations where a user-created trail is evaluated and incorporated into the Forest Trail system. It is more common that user-created trails would be investigated and removed. User developed recreation facilities are briefly discussed in the EIS section 3.8.1.b. Additional information on user-created trails has been added to the EIS section 3.8.3.b.

PC# 3.4.3-46
Public Concern: The Plans and Final EIS should clearly address how Executive Orders and 36 CFR 295 that relate to managing OHV use will be included in standards or guidelines.

Agency Response: We are aware of and used Executive Orders 11644 and 11989 and 36 CFR 295 in development of Forest Plan RMV direction. The Forest Plans and EIS do not list all applicable policies, laws, and orders because, as stated in Chapter 1 of the Forest Plans Relationship of the Forest Plan to Laws and Other Documents, they are part of Forest Plan direction. Figure 1.1 in the Forest Plan illustrates the hierarchy of management direction.

Development of RMV direction also included use of local Forest monitoring and other information resources on RMV use and impacts. Forest monitoring information on use and impacts included, for example, NVUM reports, enforcement reports, District maintenance concerns, and data collected for mid-level analyses. Literature sources on RMV impacts were also reviewed. All the techniques for monitoring or collecting information on use and impacts were not specified in the Plans due to the strategic nature of the documents.

Final Forest Plan direction for RMV use and management has been clarified with some changes based on public comment and further environmental review. For example, all cross-country OHV use is prohibited on both Forests. Cross-country snowmobile use is prohibited on the Chippewa NF and generally allowed in most MAs on the Superior NF unless prohibitions or restrictions are needed for resource protection. Another example is that Monitoring Items in Chapter 4 of the Plan shows that RMV use will be reviewed annually.

Management for Off-road vehicle use is incorporated throughout the Forest Plan and meets the intent of 36 CFR 295. The Forests do not plan to create separate RMV Management Plans because they would be redundant of direction contained in the Forest Plans. That is, the Forest Plans are the RMV management plans as referenced in 36 CFR 295.2. Forest-wide and management area direction addresses the appropriate RMV uses and the EIS discloses the current and potential impacts for that direction based on existing use information. RMV information is found primarily in recreation, wildlife, watershed health, and transportation system sections of the EIS and Plans.

Project-level analysis would follow Forest Plan direction and applicable analysis laws such as NEPA when evaluating roads for RMV uses and evaluating potential locations of additional designated motorized trail. In addition, 36 CFR 295.5 allows us to determine whether RMV use is causing considerable adverse effects before the use is stopped. The Forests have implemented closures and provided enforcement when necessary.

PC# 3.4.3-47
Public Concern: The Final EIS should explain the rationale for providing an increase in RMV trail opportunities, especially because other information sources do not indicate a need for additional trail.

Agency Response:
Although the Genereux Study found that currently many ATV owners only use their machines on their private land, the study also found that 50 to 60 percent of OHV owners want planned and marked trails. The Forests used the core trail demand predictions found on page 101 of the Genereux Study in developing additional designated trail mile objectives for the alternatives. Refer to the EIS section 3.8.3 indicator 1.

Additional designated motorized trail miles were also proposed because the Forest Plan direction prohibits cross-country OHV use and emphasizes review of roads for RMV use. The Forests anticipate there will be fewer total opportunities on roads as compared to the opportunities allowed in the 1986 plans. Therefore, some current users

who thought there were enough opportunities when interviewed in various surveys may not provide the same answer if they had known the direction in the revised Plan. At this time the Forests allow ATV use on nearly all roads unless posted closed and on only 20 miles of trail on the Chippewa NF and 40 miles on the Superior NF. All of that allowed trail use is on existing snowmobile or ski trails. In addition, during Plan implementation fewer road riding opportunities will be available when compared to road miles currently open for RMV use. Designating additional ATV trail miles will help meet demand as well as meet desired conditions to provide road and trail riding opportunities. Refer to the EIS section 3.8.3 indicators 1 and 3.

Finally, it is important to distinguish between trail and road riding experiences. Trails would be designed specifically for recreational ATV (and OHMs in some cases) or snowmobile riding and the systems would include associated trail facilities such as trailheads, off-loading areas, latrines, designed overlooks, directional signing, interpretive signing, etc. Low maintenance level roads more often provide a utilitarian opportunity such as access to hunting camps or fishing areas or other dispersed activities.

PC# 3.4.3-40
Public Concern: The Chippewa and Superior NFs should require mufflers on ATVS and limit the noise to specified decibel levels.

AND

PC# 3.4.3-58
Public Concern: The Final EIS should use interior forest natural noise levels as the baseline for assessing effects of land allocation and trail design.

AND

PC# 3.4.3-48
Public Concern: The Final EIS and Plans should address noise and emissions impacts from RMV use.

-On recreationists
-On wildlife
-On the contributions of non-motorized users to local economies

Agency Response:
The Forests are required to have RMVs follow applicable noise emission standards established by any federal or State agency. (36 CFR 261.13 (d)) The State Off-Highway Vehicle Regulations (2003-04, page 16) require that RMVs have mufflers with a federally approved spark arrestor, and that overall noise emission may not exceed 99 decibels at a distance of 20 inches.

As described in the EIS (section 3.8.3.b) it is anticipated that all alternatives would have an impact on noise and emissions but that the effects would be within standards. Noise and emissions effects would be analyzed in detail during project-level planning and would need to meet State and federal (EPA) standards. The Forests could compare estimated noise levels to natural noise levels but trail design would not be required to meet natural noise levels.

We are aware of various studies and their site-specific impacts to species from RMV use. Upon further environmental review and in response to public comment, cross-country OHV use was determined to have unacceptable resource and social impacts. Therefore, direction in the Final Plans prohibits cross-country OHV use. (CNF S-RMV-4 and SNF S-RMV-3) Additional information on noise and other impacts to wildlife from other RMV uses allowed per Plan direction have been included in the EIS section 3.3.8 indicator 25.

The concerns of non-motorized recreationists are addressed in the EIS (section 3.8.1.b) and in the Forest Plans recreation direction and through allocation of some management areas to non-motorized uses.

PC# 3.4.3-49
Public Concern: The Final EIS should address the cumulative effects and foreseeable impacts of RMV use on the environment.

AND

PC# 3.4.3-50
Public Concern: The Final EIS should quantify the environmental impacts of RMV use and address monitoring and restoration.

-On effects to soil and sensitive areas
-On effects to wildlife
-On effects to the Canada lynx
-On effects from introduction of exotic species

-On effects to scenic quality

AND

PC# 3.4.3-51
Public Concern: The Final EIS should include NEPA analysis to support ATV restrictions.

Agency Response:
Refer to response for PC# 3.4.3-46.

NEPA was followed in development of the Forest Plan direction for RMVs. RMV use was a specific issue in the Plan revision process. RMV use and demand on roads, trails, and cross-country travel were addressed in all phases of the analysis process from issue identification to alternative development and analysis.

In summary, the Plan direction primarily allows RMV use on low maintenance level roads and trails, provides for consideration of additional motorized trails, and prohibits cross-country travel (with the exception of cross-country snowmobile travel allowed in most MAs on the Superior NF). The Record of Decision summarizes rationale for the selecting Modified Alternative E based on the environmental and social impacts disclosed in the Final EIS.

Many sections of the EIS address the direct, indirect, and cumulative impacts of motorized recreation: Wildlife section 3.3.8.b indicator 25, Non-native Invasive Species section 3.3.7, Watershed Health section 3.6.1.b indicator 7, Recreational Motor Vehicles section 3.8.3.b. Based on public comment and further environmental review, additional information has been included in the Watershed Health, Wildlife, and Recreation sections of the EIS. The Scenic section did not include estimated project-level activity impacts such as timber harvest or recreation activities because that section described the large scale view of the results of forest management from the alternatives.

Monitoring strategies are outlined in the Forest Plan Chapter 4. Some Forest Plan direction identifies potential restoration such as for road decommissioning and evaluation of existing roads and user constructed improvements. (O-TS-6, 7, and 8 and G-REC-3 and G-RMV-4) Site-specific techniques for restoration are not included because those methods would be based on project-level analysis.

Project-level analysis of road use, proposed motorized trails, and areas of concern will more specifically quantify environmental effects and mitigation or restoration measures.

PC# 3.4.3-59
Public Concern: The Chippewa and Superior NFs should re-evaluate proposed Plan direction on motorized recreation to assure it's sufficiently based on monitoring data.

Agency Response:
Refer to response for PC# 3.4.3-46 and 3.4.3-51.

The analysis to develop RMV Plan direction was based on local Forest and other information resources. EIS discussions for RMV use and impacts were based on the best information available and included quantitative data such as for roads as well as qualitative information such as observations from Forest monitoring and other crews. For example, the objective for the number of miles of road to be decommissioned was quantified based on road inventory and condition data and the decision to prohibit cross-country ATV use was based on such factors as observations, law enforcement incident reports, and public comment.

PC# 3.4.3-52
Public Concern: The Plan should define "environmental damage" as it relates to motorized use.

Agency Response:
Environmental damage or the phrase you refer to that was used in the Plan and EIS, "does not adversely affect the environment", is defined in FSM 2355.05, #3:

Considerable Adverse Off Road Vehicle Effect. Any adverse effect that: will not meet the designation criteria as identified in FSM 2355.14; and that is or may become irreparable because of the impossibility or impracticability of performing corrective or remedial measures. In making this determination the Forest Officer may consider the following factors:

1. Availability of funding and manpower to prevent or correct adverse effects.
2. Offsite (secondary) impacts.
3. Physical and biological conditions, such as slope, vegetation, soil erodibility and compaction, surface and subsurface hydrology, site's natural rehabilitative capability, and so forth.
4. Other social and political factors that may impair the ability to correct or prevent adverse effects.
5. Those natural, historical, and cultural resources and areas that are susceptible to irretrievable resource damage.

PC# 3.4.3-54
Public Concern: Per 36 CFR 216.13 (h) and FSM 2355, the Forest Plans should include or reference public maps that clearly delineate which roads and trails are open, restricted, and closed to RMV use.

Agency Response:
The Forest Plans do not include maps of the current RMV roads and trails because inventories change over time. However, data from road and trail inventories are used throughout the EIS. As you point out, the Plans include direction to provide clear public information for allowed, restricted, and prohibited RMV uses. (D-RMV-2) The Forests maintain visitor maps that show roads and trails and indicates their appropriate uses. Current maps do not indicate the few ATV trail mile opportunities because the maps show primary purposes of the trails and not secondary uses. (EIS section 3.8.3.a) The Forests have additional public information on RMV uses, such as the Superior National Forest Off-Road Vehicles Recreation Opportunity Guide.

The Final Plans describe what RMV uses are allowed, prohibited (closed), and restricted on roads and trails. The Forests will update public information with new Forest Plan RMV regulations as soon as possible after the Plans are approved.

We were aware and designed the Forest Plans to comply with FSM 2355 and other laws and policies. However, 36 C.F.R. § 261.13(h) does not seem to apply to your concern about maps and public information.
Also refer to response for PC# 3.1-19 and 3.4.3-22.

PC# 3.4.3-62
Public Concern: The Regional Forester should select Alternative D to severely restrict use of motorized vehicles and to emphasize semi-primitive non-motorized recreation.

AND

PC# 3.4.3-60
Public Concern: The Regional Forester should select Alternative D because it best restricts RMV use and because the majority of Minnesotans and Americans participate in non-motorized forms of recreation.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

There are many surveys on recreation use and preferences. The National Forests have a systematic standard procedure for reporting visitor use, The National Visitor Use Monitoring (NVUM) system. Summaries of data derived from NVUM reports for both Forests can be found in the EIS section 3.8.1.a. The data shows that the public participates in a broad range of recreation activities. It is difficult to isolate all RMV use because the data shown represents the public's primary activity. RMV use may be associated with other activities such as fishing, hunting, and winter sports.

Management of RMV use was a key issue in Plan revision and as a consequence motorized use appears to be highlighted in the Plan. However, non-motorized uses will continue to be a major component of the Forests' recreation programs in Modified Alternative E. (Refer to response for PC# 3.3-4, 5, 6, and 7). Modified Alternative E includes some changes from Alternative E based on public comment and further environmental review. Most notably of interest to your concern, all cross-country OHV travel will be prohibited. This should reduce environmental impacts and minimize impacts to non-motored recreationists.

PC# 3.4.3-63
Public Concern: The Chippewa and Superior NFs should modify Alternative D to meet the Sierra Club's original intent for

-Separating RMV and non-motorized users
-A proposed RMV policy

Agency Response:

The RMV policy in Alternative D was developed to meet the Forest Service theme of the alternative, to emphasize semi-primitive non-motorized recreation. We wanted to compare the effects of a very limited RMV use policy with other levels of RMV use.

Alternatives F and G have an RMV policy similar to what Sierra Club describes, so the effects of this policy have been analyzed and it is not necessary to modify Alternative D.

In the Final Plans, motorized uses may be separated from non-motorized uses based on management area direction. For example, motorized uses would not be developed in Semi-primitive Non-motorized Recreation MAs. In addition, during project level planning, decisions may be made to separate motorized and non-motorized uses. (Chippewa and Superior FPs O-REC-3) Also refer to response for PC# 3.4.3-14 and 3.4.3-22.

The EIS includes seven alternatives with different approaches to managing RMV use, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for RMV management. Therefore, it is not necessary to modify Alternative D to address this interest. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing the RMV policy.

PC# 3.4.3-66
Public Concern: The Regional Forester should select Alternative B to prohibit cross-country RMV travel; limit RMV use to designated trails and roads; and ban jet skis on smaller lakes.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

Also refer to response for PC# 3.4.3-3, 3.4.3-7, 3.4.3-9, 3.4.3-35, 3.4.3-41, and 3.4.4-10.

Water Access (3.4.4)

PC# 3.4.4-1
Public Concern: The Chippewa and Superior NFs should minimize or at least not increase motorboat access to lakes.

> **Because it will negatively impact current use and the BWCAW**
> **Because of the environmental effects and noise impacts**
> **Because of impacts to fish populations**
> **Because of impacts to the aquatic ecosystem**

AND

PC# 3.4.4-2
Public Concern: The Chippewa and Superior NFs should limit motorboat use and address impacts of motorboat traffic on the environment.

Agency Response:
As discussed in the EIS Water Access section 3.8.4.b, the maximum number of new water access sites is the same for all alternatives. The number of new water access sites was based on current and projected demand. The alternatives differ by the level of development emphasized for existing and new water access sites. Modified Alternative E would allow a variety of access sites with some emphasis on higher development levels. Resource related impacts for potential water access development are addressed in the EIS sections 3.6.1 indicator 7 and 3.3.8 indicator 25.

When new or reconstructed water access sites are proposed, social and resource concerns would be analyzed in more detail at the project-level. Proposed new water access sites are not planned in the BWCAW. The Plan's Water Access direction pertains to bodies of water outside the BWCAW. The Plan direction was developed to provide strategic methods for mitigating environmental effects. For example, G-RWA-2, 5, 6, and 9 were particularly designed to address potential environmental effects from water access development or reconstruction.

Also refer to response for PC# 3.3-4, 3.3-5, 3.3-6, and 3.3-7.

PC# 3.4.4-3
Public Concern: The Chippewa and Superior NFs should develop more and enhance public access to waters.

-For public access
-For the local economy

AND

PC# 3.4.4-4
Public Concern: The Chippewa and Superior NFs should reduce, not increase, motorboat use and water access.

AND

PC# 3.4.4-11
Public Concern: The Chippewa and Superior NFs should clarify what Alternative E means to users in regard to potential new water access sites. (Draft EIS 3.8-56)

Agency Response:
Implementation of Modified Alternative E should result in no more than five new water accesses on the Chippewa NF and no more than ten on the Superior NF (Chippewa and Superior FPs S-RWA-1). This is a standard and not an objective which means that it is a limitation and not a step needed to meet a Desired Condition. Both Forests have a high percentage of lakes and streams with access. (EIS section 3.8.4.a) The number of new or reconstructed water access sites was based on current and projected demand and adding new sites will be dependent on the results of project-level analysis and funding and maintenance costs.

The theme of Modified Alternative E is to emphasize a diverse economic base in local communities. During Plan implementation, the Forests would seek opportunities to cooperate in meeting demand for water access. Cooperation is very important due to limited funding and the added recreation Objective (O-REC-4) in the Plans that states that maintenance of recreation facilities generally takes precedence over development of new facilities. Therefore, the number of new water access sites may or may not increase during Plan implementation because it

will depend on Forest Service and cooperative funding and maintenance opportunities. We do not, however, anticipate or plan for a decrease in the number of water access sites.

PC# 3.4.4-5
Public Concern: The Chippewa and Superior NFs should designate some large lakes outside the BWCAW as carry-in access only.

AND

PC# 3.4.4-6
Public Concern: The Chippewa and Superior NFs should designate as many lakes as possible as non-motorized with carry-in access to protect the environment and wildlife and provide non-motorized recreation opportunities.

Agency Response:
Forest Plan direction, particularly G-RWA-9, includes direction that would restrict higher developed facilities to General Development and Recreation Lakes with lesser developed facilities at Natural Environment lakes. Other Plan direction (G-RWA-2, 4, 5, and 6) specifies situations where new ramps would not be allowed on certain kinds or sizes of lakes.

Decisions on site-specific changes or designations for water access were not made in the Forest Plan. The Plan provides direction for project-level planning. Designating lakes outside the BWCAW as carry-in access only could be done through project-level analysis, in coordination with the State and affected county.

Tiering to the Plans' D-RWA-1, D-REC-1 and O-REC-3, it would also be possible during project-level planning to consider designating lakes for non-motorized recreation. This requires close work with the State and affected county, especially is there is other ownership on the lake. It is also important to point out that the State manages the water surface.
Also refer to response for PC# 3.4.4-3 and 3.4.4-4.

PC# 3.4.4-7
Public Concern: The Chippewa and Superior NFs should coordinate with local governments, county, reservations, and the MNDNR Wildlife Division and/or the Division's Shallow Lake Program before proposing new water access sites to minimize wildlife impacts

Agency Response:
Coordination with appropriate local governments, tribal representatives, State, and county personnel occurs during project-level planning prior to making decisions on water access changes or additions. State, county, and other agency personnel were also involved in the initial development of Forest Plan direction for water access.

PC# 3.4.4-8
Public Concern: The Plans should amend G-WTA-2 to exclude ATVs from drive-down access sites.

Agency Response:
The intent of G-RWA-2 was to also preclude the use of ATV access at lakes smaller than 150 acres. We have clarified the wording for G-RWA-2 and G-RWA-5 because of the confusion in the interpretation of the guidelines.

PC# 3.4.4-9
Public Concern: The Chippewa and Superior NFs should provide fish cleaning stations at boat ramps.

Agency Response:
Thank you for your suggestion. Fish cleaning stations are available at some Forest Service water access sites and could be added at other higher developed sites depending on the results of project-level analysis.

PC# 3.4.4-10
Public Concern: To protect aquatic environments, the Chippewa and Superior NFs should ban jet skis (personal watercraft) from some lakes and all wilderness lakes, especially border lakes that allow motor use.
Agency Response:
Jet skis are prohibited on motor and non-motor lakes in the BWCAW. The Forest Service does not have the authority to ban jet skis on lakes outside the BWCAW. Use of motors on most lakes outside the BWCAW is regulated and enforced through State and county surface water zoning designations. Potential impacts resulting from current use of jet skis are not specifically addressed in the EIS because the Forest Service does not have the authority to regulate on the water's surface. However, impacts resulting from different facility development levels of water access are addressed in the EIS. Water access sections of the Forest Plan were designed to provide direction for project-level analysis that minimizes impacts to the aquatic environment.

PC# 3.4.4-12
Public Concern: The Chippewa and Superior NFs should specify where user developed sites are and how and when they will be evaluated.

Agency Response:
The water access inventory developed for the Plan revision process included the location and number of known user developed sites. The numbers of those sites are included in the EIS section 3.8.4.a Tables WTA-3, WTA-4, WTA-5, and WTA-6. User developed sites were also mapped and the information is available for project-level planning. The inventory would also be updated during project-level planning.

Forest Plan direction includes a guideline (G-REC-3) that states that user developed sites will generally be reviewed and be managed at an appropriate level or be removed and the area rehabilitated. Because the Forest Plan direction is strategic it does not specify exactly when and where user developed sites would be evaluated. That would depend on the projects analyzed during Plan implementation.

PC# 3.4.4-13
Public Concern: The Final EIS, not site specific analyses, should include the environmental analysis of potential water access sites.

Agency Response:
The Forest Plan provides direction for project-level planning. The environmental analysis of the programmatic direction for water access is included in various sections of the EIS. (3.3.8 indicator 25, 3.6.1 indicator 7, and 3.8.4) Environmental analysis for site-specific projects such as potential water access sites, timber sales, and watershed improvement projects is not included and is appropriately done at the time of a proposed action. (Chapter 1, Implementing the Forest Plan, Site-level Projects) Interested publics may choose to be involved by getting on some or all mailing lists for project-level analyses.

PC# 3.4.4-14
Public Concern: The Final EIS should explain why all the alternatives have the same number of potential new water access sites.

Agency Response:
This was discussed in the Draft EIS Water Access section 3.8.4.b. Some clarification has been added to the Water Access Section in the Final EIS. The indicator for water access is the development level emphasis for existing and proposed sites. Level of development means the types of facilities and amenities at sites; it is not the potential number of new sites. The potential number of new sites on each Forest was based on current and projected demand for water access. Therefore, access demand could be met in all alternatives (except Alternative D on the Chippewa NF where no new access would be built) but the types (level of development) of facilities and amenities at potential access sites would differ by alternative. The estimate of maximum new sites is a standard and not an objective. Refer to response for PC# 3.4.4-3, 3.4.4-4, and 3.4.4-11.

Another reason for not varying the number of new water access sites by alternative was because the potential maximum was so small there would be little to compare among the alternatives. The potential maximum was needed for programmatic analysis and to place a limitation on new development that would be within the estimated impacts disclosed in the EIS.

PC# 3.4.4-15
Public Concern: The Regional Forester should select Alternative G so that new water access sites would be carry-in only.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

Refer to response for PC# 3.4.4-1, 3.4.4-2, 3.4.4-5 and 3.4.4-6.

Recreation Sites, Special Uses, Fees, and Activities (3.5)

PC# 3.5-1
Public Concern: The Chippewa and Superior NFs should make a concerted effort to maintain existing recreation facilities and to enforce rules governing those areas.

Agency Response:
The Forests do work hard, within their limited funds, to maintain existing recreation facilities and to enforce regulations governing those areas. A recreation desired objective (O-REC-4) has been added to the Plans to emphasize maintenance of existing recreation facilities over development of new recreation facilities.

PC# 3.5-2
Public Concern: The Chippewa and Superior NFs should minimize recreation regulations.

Agency Response:
We have modified the desired condition (D-REC-8) that you are referring to because we realize that there are complexities in our system in combination with adjacent landowners and Canadian regulations that would make it impossible for a visitor to feel free from regulation and control. However, the Forests will still try to limit regulations, constraints, and supervision of recreation areas to those necessary for resource protection, visitor satisfaction, and safety. When possible, the Forests would make changes to simplify or minimize current and potential future regulations.

PC# 3.5-3
Public Concern: The Chippewa and Superior NFs should not use new urban or suburban-style road signs and other improvements.

Agency Response:
Forest Service Handbook EM 7100-15, Sign and Poster Guidelines for the Forest Service, includes direction for recreation and traffic signing. Signing is designed to match the forest setting and meet regulatory and safety needs. One of the current signs in the area you refer to is planned for replacement this year. The other signs will be reviewed periodically to insure they meet handbook standards. In the Pike Bay area, there may be other signs, such as fire numbers, that are placed and managed by other agencies. The paved bike trail you refer to was developed after thorough public involvement and environmental analysis. There are many people who supported the trail and are now enjoying it.

PC# 3.5-4
Public Concern: The Chippewa and Superior NFs should specify what kinds of recreation activities are appropriate on the Forests.

Agency Response: In addition to the Forest-wide recreation related desired conditions, objectives, standards, and guidelines, examples of the kinds of appropriate recreation activities are identified in the desired condition statements for each management area (MA). For example, D-RU-6 describes the kinds of dispersed recreation activities appropriate in Recreation Use in a Scenic Landscape MA. Activities that are restricted or prohibited are identified in the Forest-wide MA standards and guidelines. For example, S-RNA-6 states that developed recreation sites are not provided in Research Natural Area MAs.

PC# 3.5-5
Public Concern: The Chippewa and Superior NFs should address the number of, maintenance, and continued use of dispersed campsites.

Agency Response:
Specific objectives were not developed for dispersed sites because no need for change was identified in the Plan revision process. However, the EIS and Plans do include the existing number of dispersed campsites (EIS section 3.8.1.a) and water access sites (EIS section 3.8.4.a) and address the need to review the sites during project-level analysis (G-REC-3).

PC# 3.5-6
Public Concern: The Plans and Final EIS should include the same special use permit information as in the Drafts.

Agency Response:
Thank you for your comment. Special use information and direction in the Final EIS and Plans is same as what was in the Draft EIS and Proposed Plans.

PC# 3.5-7
Public Concern: The administration section of the Plans should include objectives for management of outfitter and guide special use permits.

Agency Response:
The Chippewa and Superior NFs do not have an administration section in their Plans. The Plans do address direction for Special Uses. Nevertheless, each Forest manages outfitter and guide uses within Manual, Handbook, policy and Forest Plan direction. Because outfitter and guide use was not identified as a need for change in the Plan revision process, Forest policies for outfitter and guide use was not changed.

PC# 3.5-8
Public Concern: The Chippewa and Superior NFs should create more blueberry patches using prescribed burning.

Agency Response:
Creation of more blueberry patches was not addressed specifically in the Forest Plan because it was not identified as need for change in the Plan revision process. However, prescribed burning is a growing program on each Forest and could result in more blueberry patches. Specific suggestions for areas to increase burning to increase blueberries could be made to your local District office for consideration during project-level analyses.

PC# 3.5-9
Public Concern: The Final EIS should correctly address the impacts to hunting opportunities.

Agency Response:
Based on public comment and further environmental review, some additional information on impacts to hunting opportunities was included in the Final EIS. Total NVUM use figures for key recreation activities (including hunting) have been added to the EIS section 3.8.1.a. Broad trend information was also added to that section. Although some other sources of data may differ on trends for projected future hunting demand, the Forest's primary source (Cordell 1999) does indicate a slight decrease in participation levels for hunting (Forest Plan, Appendix A, Recreation). Information has also been added to the EIS Social (section 3.9.2.b) and RMV section (3.8.3.b) for impacts to hunters as it relates to how RMV policies affect access in the alternatives.

PC# 3.5-10
Public Concern: The Chippewa NF should coordinate with the State and other agencies to develop public use plans at the recently acquired former Cedar Springs Resort and Harbor site.

Agency Response:
Your comment has been forwarded to the Chippewa NF recreation staff for their consideration because it is outside the scope of the Forest Plan. For your information, at this time existing buildings are planned to be

removed and there are no plans for creating developed recreation sites or a boat access on National Forest lands at the Cedar Springs Resort.

PC# 3.5-11
Public Concern: The Chippewa and Superior NFs should charge user fees to collect funds for trail and backcountry site maintenance.

AND

PC# 3.5-13
Public Concern: The Chippewa and Superior NFs should evaluate the fees they charge, because fees cause over-control and because NF lands are already supported by tax dollars.

AND

PC# 3.5-14
Public Concern: The Regional Forester should select Alternative A because the Forest Service would not charge fees to use National Forests, with the exception of fees for campgrounds and the commercial harvesting of forest products.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

All alternatives, including Alternative A, have the ability to collect recreation user fees. Collection of user fees is determined by national programs and policies and is not part of the forest planning process which is aimed at land allocation. The Forests collect fees at nearly all developed recreation sites such as campgrounds and have done so for many years per Forest Service Manual (FSM) 2330. These fees are reviewed every few years to be consistent with other recreation providers. The Forests are also required to assess fees for collecting most miscellaneous forest products. Congress controls the allocation of funds from fees collected for uses on national forests. Traditionally, fees collected for uses on national forests go directly to the Federal treasury for disposition. There is seldom a direct correlation with the amount of funds collected at a site with the funds that are allocated to a Forest for administration of the site.

Congress has recently authorized a program, the Recreation Fee Demonstration Project, on various public lands across the country, including limited sites on national forests. It is a valuable tool that helps accomplish needed maintenance and upkeep at Forest recreation sites because eighty percent of the funds collected must be used at the site. At this time, the Chippewa NF has authority to collect fees for use at a few developed recreation sites and the Superior NF has authority to collect fees for use in the BWCAW.

The administration of outfitter and guide special use permits is done under regulations and policy in Forest Service Handbook (FSH) 2709.11. The Forests must follow agency direction in administering and issuing any new permits. Changing these procedures is a national issue and outside the scope of the Forest Plan revision process.

PC# 3.5-12
Public Concern: The Chippewa and Superior NFs should develop another means of communicating with permit holders.

Agency Response:
Methods for communicating with permit holders are addressed through national policy and regulations and local expertise and not with the Forest Plan which is a land allocation strategic management document.

Lands (3.8)

PC# 3.8-1
Public Concern: The Superior Plan land adjustment direction should be to consolidate land ownership patterns.

-To foster compatibility with policies of other land management agencies
-To help resolve issues related to access

Agency Response:
Respondents recommend that direction in the Superior NF Plan promote consolidation of land ownership patterns, and they cite compatibility with the policies of other agencies and opportunities to resolve access issues as reasons for including this direction. We agree. Land adjustment direction to promote land ownership consolidation where appropriate, is included in the final Plans of the Superior (and Chippewa) NF. Forestwide management direction most clearly focused on the topic of land ownership consolidation includes desired condition D-LA-1, objective O-LA-1, and guidelines G-LA-2 (item 2(f)) and G-LA-3. Similar Management Area-specific direction, where compatible with the theme of individual Management Areas, is also provided. Noteworthy examples of land consolidation direction for individual Management Areas includes D-GF-11, O-GF-2 and O-GF-3 in the General Forest MA; and D-LR-11, O-LR-2 and O-LR-3 in the Longer Rotation MA.

PC# 3.8-2
Public Concern: The Superior Plan Management Area direction for land adjustment needs to be refined.

-To address water frontage in the General Forest Management Area
-To address exchanges for residential or resort development in the Recreation Use in a

Agency Response:
The respondent asks that limitations on land conveyances of shorelands in the General Forest MA on the Superior NF be increased such that land along perennial streams or lakes greater than 2 acres in size be either retained or conveyed only with deed restrictions to another public land management agency. We have decided to not amend the management direction as requested because we feel doing so would hamper our ability to use land adjustment as a tool to advance, and perhaps even be counterproductive to, the theme of this MA. The requested restrictions could potentially reduce the value of land to be conveyed, and seriously limit our opportunity to acquire, through exchange, tracts that may be even more critical in terms of values commonly associated with water frontage. The

requested direction would also set the Forest Service up with the long term management challenge and costs of enforcing the deed restrictions on subsequent sale or use of the conveyed lands. We feel that guideline G-LR-4 provides a level of control on land conveyance that is better fitted to the theme of this MA and have retained this guideline in the final Plans of both Forests.

The respondent also asks that limitations on land adjustment in the Recreation Use in a Scenic Landscape MA on the Superior NF be increased to prohibit exchanges of lands that could eventually be used for residential or resort development. We have decided to not amend the management direction as requested because doing so would preclude the very types of developed recreation opportunities that are described in the theme and desired conditions (e.g. D-RU-5, D-RU-8 and D-RU-9) of this MA. We feel that standard S-RU-1 provides a level of control on land adjustments that is better fitted to the theme and desired conditions of this MA, and have retained this guideline in the final Plans of both Forests.

PC# 3.8-3
Public Concern: The Forest Service should not use the past or current presence of trails or roads as a basis for giving control of federal land to the states.

Agency Response:
The respondent is concerned that the Forests will use the past or current presence of trails or roads as the sole justification for giving control of (e.g. conveying) specific parcels of NFS land to the State (in our case the State of Minnesota). We believe adequate safeguards are in place to address this concern. The Federal Land Policy and Management Act of 1976 (Public Law 94-579) and the Federal Land Exchange Facilitation Act of 1988 (Public Law 100-409) preclude the Forest Service from conveying control of NFS lands unless such conveyance meets the test of being in the overall public interest. Forestwide or Management Area-specific direction (desired conditions, objectives, standards or guidelines) for land conveyance in the revised Plans of both Forests forms the basis for determining what is, and what is not, in the public interest. Direction in the Plans of both Forests most relevant to land conveyance includes forestwide desired condition D-LA-1, forestwide objective O-LA-1, and forestwide guideline G-LA-3, as well as several other desired conditions, objectives, standards or guidelines which are tailored toward meeting the themes of the individual Management Areas. None of this forestwide or Management Area-specific direction in the Plans of either Forest specifically identifies the past or current presence of trails roads as a basis for, or even as a factor to consider, in deciding the merits of a proposed land conveyance.

PC# 3.8-4
Public Concern: The Forest Service should not acquire more land to add to the federal land base of the Chippewa and Superior NFs.

Agency Response:
The respondent is concerned that the Forests continue to add more land to the National Forest System and fail to consider the social and economic effects this has on nearby local communities. The motives for additional land acquisition are also questioned.

Our intent is that any future land acquisitions on both Forests will be done by working with willing sellers or exchange proponents, and will be guided by the forestwide or Management Area-specific direction for land acquisition in each revised Plan. Examples of relevant forestwide direction in the Plans of both Forests include desired condition D-LA-1, objectives O-LA-1, O-LA-2, and O-LA-3, and guidelines G-LA-1, G-LA-2 and G-LA-3. We believe that this direction clearly states the conditions under which, and the reasons why, any given parcel

of land might be considered for future acquisition. Additionally, land acquisitions on both Forests will only be undertaken if they benefit the overall "public interest". Consideration of potential effects on the social and economic fabric of nearby local communities is a necessary and required facet of determining if any given future land adjustment action is clearly in the "public interest".

PC# 3.8-5
Public Concern: The Superior NF should continue to exchange federal land outside the BWCAW for state school trust fund lands inside the BWCAW.

-To comply with the wishes of the State Legislature
-To minimize adverse economic and social impacts to local communities and the State

Agency Response:
The Superior NF is maintaining an active and open dialogue with the State of Minnesota on the issue of School Trust Fund lands. Because resolution has not been achieved within the timeframe of this Forest Plan finalization, these discussions are likely to continue into the future. Our stance in these future discussions will be guided by the management direction for land adjustment provided in the new Plan, particularly forestwide guideline G LA-5 which directly addresses State School Trust Lands, and the management area standards and guidelines pertinent to acquisition of non-federal lands within the BWCA Wilderness.

PC# 3.8-6
Public Concern: The Chippewa and Superior NFs should continue to acquire priority lands to provide for long term conservation.

Agency Response: Management direction in the revised Plans of both Forests provides for acquisition of lands in the priority categories supported by the respondent. In particular, the land acquisition direction provided by forestwide guideline G-LA-2 places acquisition priority on lands that have unique conservation value, promote efficient land ownership patterns, or provide opportunities for expanded shoreland and wetland protection. Management direction for each management area provides additional guidance on advancing land acquisition for long term conservation purposes and ownership consolidation. The specific land acquisition direction provided for any given Management Area reflects the theme that is unique to that MA. Examples of such theme-compatible management area direction for land acquisition include desired condition D-GF-11 and objectives O-GF-2 and O-GF-3 in the General Forest Management Area in the Plans of both Forests. Similar theme-compatible direction for land acquisition is provided for each of the other Management Areas in the Plans of both Forests.

Special Designations

Special Designations – General (4.0)

PC# 4.0-1
Public Concern: The Final EIS and Forest Plan should not disaggregate the forests into smaller areas such as management areas which make it more difficult to provide for wildlife habitat,

improve forest health, reduce risk of catastrophic wildfire, balance forest age-class and provide timber outputs.

Agency Response:
The purpose of the Forest Plans is to identify desired Forest-wide conditions and provide strategic direction on how, when, where, and what to achieve those conditions. The National Forest Management Act, section 219.14 directs that "for the purpose of analysis, the planning area shall be stratified into categories of land with similar management costs and returns. The stratification should consider appropriate factors that influence the costs and returns such as physical and biological conditions of the site and transportation requirements." This is a widely accepted approach in land use planning which facilitates effective and efficient allocation of Forest resources to meet multiple-use objectives by identifying sites with similar capabilities and prescribing appropriate management by category. Site-specific management direction is then determined at the project level, consistent with the Forest-wide objectives.

PC# 4.0-2
Public Concern: : In the revised Forest Plans, the Chippewa and Superior National Forests should not promote "special emphasis areas" over General Forest emphasis areas in a way that implies that silviculture treatments are restricted or forest products are less available.

Agency Response:
Special emphasis areas are not promoted over General Forest emphasis areas in the Forest Plans. Per the theme for Alternative E: "Timber and other commodity products would also be emphasized." Forest-wide goals would "provide for sustained forest product uses in an environmentally acceptable manner." Desired conditions, objectives, standards and guidelines support sustained management of forest products (see D-TM-1, O-TM-1, D-SE-1, Forest-wide standards and guidelines for timber management)

PC# 4.0-5
Public Concern: The Chippewa National Forest should choose a management direction, similar to Alternative G, that better protects unique features and provides for a proposed wilderness area and for natural research areas.

Agency Response:
Although additional wilderness is not proposed, modified Alternative E allocates 19 areas identified in other alternatives, and also adds four areas (Sucker Bay, Mississippi, Trout Lake and North Fork) as unique areas. While this is not the same acreage of special designated areas proposed in Alternative G, it provides a balance between protection of unique features and other multiple-use management objectives which will provide for diverse economic opportunities.

PC# 4.0-6
Public Concern: The Superior and Chippewa National Forests should closely coordinate with the DNR prior to designation of special management areas to avoid conflicts with DNR management and administration.

Agency Response:
The Forest Service has worked closely in the past with the Mn DNR regarding land management decisions, such as special designations, that could have implications on State resources. For example, the evaluation of candidate Research Natural Areas was conducted in cooperation with the Mn DNR and other interested parties. Both

Forests plan to maintain this relationship during consultation leading to a Forest Plan decision and into future implementation of the new Plans.

PC# 4.0-7
Public Concern: The Superior National Forest should not expand the BWCAW by surrounding the wilderness with special designations or special management areas with low management intensity.

Agency Response:
The revised Forest Plan does not expand BWCAW boundaries or create a buffer around the existing wilderness through special designations or special management areas. To do so would be inconsistent with Forest Service policy (Forest Service Manual 2320.3, #5). Several areas on the Forest met criteria, un-related to the BWCAW, for designation for special management to protect unique or sensitive resources within their boundaries.

PC# 4.0-8
The Superior National Forest should protect additional area around the BWCAW in low management intensity designations

-to provide wildlife corridors
-to reduce conflicts between recreationists and loggers

Agency Response:
The revised Forest Plan does not designate special management areas for the purpose of creating a buffer around the BWCAW. To do so would be inconsistent with Forest Service policy (see response to PC# 4.0-7). The need to maintain wildlife corridors across the landscape is addressed through spatial and vegetation management objectives. Allocation of Management Areas is based on capabilities and characteristics of each geographic area regardless of proximity to the BWCAW. This general approach was used in the current Forest Plan and has not created continual disputes between recreationists and loggers or compromised the values of these areas for their intended use

PC# 4.0-9 (formerly 2.7.5-9)
Public Concern: The Chippewa and Superior National Forests should increase the protection and emphasis of old-growth forests through special designations.

Agency Response
The Chippewa and Superior National Forests recognize the important ecological functions and social value of old growth forests and considered a range of planning alternatives that examined various levels of mature or older forest and a range of conditions that benefited wildlife species in different ways. The revised Forest Plans provide forest-wide spatial and vegetation management desired conditions and objectives regarding distribution and stand characteristics for all ages of forest stands including old growth. (D-VG-6, D-VG-7, O-VG-1 through O-VG-24). Rather than embedding management for older forests within several MAs, Forest-wide vegetation management objectives reach across MAs and include the entire landscape. Standards and guidelines are designed to require consideration of old growth during project planning. On the Superior National Forest, these objectives consider vegetation conditions across the landscape, inside and outside of the BWCAW. Similarly, opportunities for non-motorized recreation are addressed through Forest-wide objectives, standards and guidelines as well as allocation to semi-primitive and primitive non-motorized management areas. Habitat needs of threatened, endangered or under-represented species are included in the spatial and vegetation management direction. (See also, response to PC# 2.7.5-2)

Roadless (4.0.1)

PC# 4.0.1-1
Public Concern: The Superior National Forest should provide additional protection for roadless areas in order to maintain a diversity of recreational experiences and meet demand for non-motorized recreation.

Agency Response:
The Forest Service is committed to protecting and managing roadless areas as an important component of the national Forest System. Toward this goal, the Forest conducted roadless inventories using Forest Service Handbook 1909.12, Chapter 7 and Regional direction. These inventoried areas were then evaluated based on several criteria to determine if they should be recommended for Wilderness designation. Based on our evaluation, none of the areas were recommended for designation.

However, the revised Forest Plan allocates these roadless areas to a variety of management areas to provide for a diversity of recreational opportunities including non-motorized, non-consumptive uses that are consistent with management objectives. In addition, we have added direction to further address non-motorized recreation (Chapter 3), and added areas to the Semi-primitive Non-motorized Management Areas on the Forest. Also, D-REC-1 was modified to include non-motorized recreation and O-REC-3 was added to encourage analysis of separate motorized and non-motorized recreation uses during project-level planning.

PC# 4.0.1-1a
Public Concern: The Superior National Forest should provide additional protection for roadless areas in order to reduce negative impacts to wildlife.

Agency Response:
The FEIS analysis of potential effects to sensitive wildlife species indicates the distribution of motorized access provided in the revised Forest Plan is not likely to adversely affect wildlife populations. Specific analysis of effects on lynx is included in section.3.2 of the FEIS and standards and guidelines will also minimize effects. This management approach was developed in consultation with the US FWS. (See response to 4.0.1-1 regarding recreation.)

PC# 4.0.1-2
Public Concern: The Chippewa and Superior should provide clear and specific management direction for roadless areas

-To protect from ATV and other RMVs
-To preserve option for Congressional designation
-To comply with the Roadless Area Conservation Rule
-To ensure no road construction occurs in the roadless areas

Agency Response:
Once the new roadless area inventory is finalized, any proposed site-specific projects within inventoried areas will require an environmental analysis which considers effects of the project proposal on the roadless characteristics in the area. The effects analysis must consider the entire inventoried area, not just the project area. (FS Regional Forester, August 13, 1997 direction to Forest Supervisors) If the RACR becomes effective, its direction would apply only to the original 16 “old” RARE II areas and not to new areas on both Forests that met the Forest Plan

Revision Roadless Area Inventory criteria. Management of the areas in the Forest Roadless Area Inventory would be managed by direction developed through this plan revision process.

PC# 4.0.1-3
Public Concern: The Superior National Forest should protect the Wolf Lake area as roadless

Agency Response:
Wolf Lake area was evaluated as part of the plan revision roadless inventory process. The area was not identified as part of RACR FEIS. While the area currently provides opportunities for remote recreational experience, several factors affect wilderness potential: the area still shows evidence of heavy logging in the past, snowmobile use is common, adjacent landowners use the area to access their land and high potential exists for future development on other ownerships. Under allocation to the Longer Rotation MA, project level planning will retain the remote character of ROS inventoried semi-primitive motorized and non-motorized areas (G-LR-1).

PC# 4.0.1-4
Public Concern: The Superior National Forest should protect all original RARE II and all 30 newly inventoried potential areas (under Roadless Conservation Rule)

Agency Response:
It is important to distinguish the different legal basis behind RARE II, RACR and Forest Plan Revision Roadless inventory areas. The areas identified during the RARE II inventory were the basis for analysis of roadless areas on the Superior National Forest for the RACR FEIS. These areas were the starting point for Forest Plan revision inventory process which also identified 30 areas for consideration according to criteria developed and approved through the RO. The Superior National Forest followed direction in Forest Service Handbook 1909.12 and Forest Service Manual 1923 to evaluate inventoried roadless areas' eligibility to be recommended for wilderness designation. None of the areas were recommended for Wilderness designation in the Record of Decision. For a complete description of this process, see Appendix C of the FEIS.

The only acres covered by RACR are those identified by the 2000 FEIS. Otherwise, inventoried roadless areas will be managed under direction of the revised Forest Plan. The final legal disposition (final arrangement) of the Roadless Area Conservation Rule of 2001 continues to be in question and remains within the court system under appeal. Depending upon the ultimate resolution, there is ongoing legal uncertainty of implementing the Roadless Area Conservation Rule in the future.

PC# 4.0.1-5
Public Concern: The Chippewa and Superior National Forests should allocate roadless areas to wilderness, unique biological, geological or historical, or RNAs and not link vegetation management decisions to qualification of a site for wilderness designation.

Agency Response:
The Chippewa and Superior National Forests followed specific criteria to allocate areas for designation as wilderness, unique biological, geological, historic, or RNA. Some of the inventoried roadless areas were allocated to these management areas if they qualified. (See Appendix C of the FEIS) Vegetation management objectives were determined on a Forest-wide basis and will be implemented at the project level across all of the MAs. (See Chapter 2 of the Forest Plans)

PC# 4.0.1- 6
Public Concern: The Superior National Forest needs to highlight the unique situation of roadless areas on the Forest.

Agency Response:
Additional information has been added to the discussion of roadless areas in Appendix C of the FEIS. This includes consideration of regional and landscape context.

Potential Wilderness (4.0.2)

PC# 4.0.2-1
Public Concern: The Chippewa and Superior National Forests should provide an explanation for not recommending wilderness designation for any inventoried areas.

Agency Response:
Appendix C documents the evaluation of 30 inventory areas. The discussion about the wilderness evaluation and conclusions are expanded in the FEIS to explain why modified Alternative E does not include the Potential Wilderness MA and the Record of Decision provides further rationale for the decision. All national forests must inventory, evaluate, and consider for wilderness recommendation existing RARE II areas, any additional areas published in the Roadless Area Conservation Rule, and other unroaded areas that may not have been previously inventoried in RARE II when revising Forest Plans, according to protocol in 36 CFR 219.17 and FSM 1923.

PC# 4.0.2-2
Public Concern: The Forest Service should provide a revised analysis of potential wilderness areas

-Because the analysis process in the Draft EIS is fatally flawed
-Because the analysis should separate evaluation of lands inside and outside of the Boundary Water Canoe Area Wilderness

Agency Response:
The discussion about the roadless inventory, wilderness evaluation and conclusions are expanded in Appendix C of the FEIS. The National Forest Management Act, 36 CFR 219.17(b), and FSM (Forest Service Manual) 1923 require that the identification and evaluation of roadless areas be considered for recommendation as potential wilderness areas during the forest planning process according to national protocol. As a part of the Forest Plan revision process, the Chippewa and Superior National Forests began their latest roadless area inventory evaluation with the areas identified in the 11/2000 RACR Final Environmental Impact Statement. The actual recommendation for wilderness designation under each alternative was determined consistent with the management theme of each alternative. The focus of Alternative E is to provide for diverse economic opportunities including diverse recreation-based opportunities. Modified Alternative E includes other management areas with more flexibility than Potential Wilderness to meet the theme for diverse economic and recreation opportunities.

The analysis of alternatives considered the Superior National Forest as a whole landscape, including the BWCAW. However, current management direction for the BWCAW will continue as part of Chapter 3 of the revised Forest Plan for the Superior National Forest.

Also, the fact that the revised plan is based on an ecosystem landscape approach requires consideration of all resources inside the Forest boundary including non-federal ownership.

PC# 4.0.2-3
Public Concern: The Chippewa and Superior National Forests should protect potential wilderness through other designations

Agency Response:
Some Forest Inventory Roadless Areas were allocated to management areas according to capabilities and characteristics. The EIS, section 3.7.1, Table PWA-1 displays the allocation of Forest Roadless Inventory Areas in Modified Alternative E. In addition, during project-level analysis, those areas with inventoried semi-primitive motorized and non-motorized ROS classes will be managed to retain remote characteristics.

PC# 4.0.2-4
Public Concern: The Chippewa and Superior National Forests should protect wilderness through specific designation not as part of a short rotation logging program

Agency Response:
Both National Forests were inventoried for roadless areas and these areas were evaluated to determine if they should be recommended for wilderness designation. This process and the rationale for our decisions are explained in detail in Appendix C and the Record of Decision respectively.

Areas already designated as wilderness are managed to protect and maintain wilderness characteristics and are not included in the timber harvest program. The Forest Plan for the Superior National Forest includes an entire chapter that provides management direction for Forest Service lands inside the BWCAW to protect wilderness values.

PC# 4.0.2-6
Public Concern: The Chippewa and Superior National Forests should recommend additional wilderness to provide a better balance between motorized and non-motorized recreation

Agency Response:
One of the objectives of the revised Forest plans is to provide balanced recreational opportunities. While wilderness provides non-motorized recreation, there are many other allocations such as Semi-primitive Non-motorized, Research Natural Areas, Unique Areas that provide some non-motorized recreation as well as opportunities for other compatible management activities. (See also response to PC# 3.3-4 and 3.3-6) In addition, recreation motor vehicles will be restricted to designated routes and cross-country travel will not be allowed on either Forest. Also, some areas which are designated as roaded natural will be managed to retain their "remote" character for additional semi-primitive recreation including non-motorized opportunities (G-GF-1 and G-LR-1). We believe our decision will provide a balanced mix of motorized and non-motorized opportunities.

PC# 4.0.2-7
Public Concern: The Superior should recommend designation of 89,000 acres to wilderness as proposed by the Friends of the BWCAW.

-To enhance watershed health
-To reduce impacts in BWCAW

-To meet demand for BWCAW
-To protect non-commodity values
-To preserve diverse recreational opportunities
-To provide areas for quiet solitude
-To protect the Superior Hiking Trail
-To protect wildlife
-To protect ecological diversity
-To protect under-represented forest types
-To protect environmental quality
-To protect areas from exotic and introduced species
-To provide an opportunity to study in-tact ecosystems
-To provide option to Congress to consider designation
-To control costs of managing the Forest.
-To move the forests toward desired age class conditions
-For future generations
-To provide economic benefits
-Because it would make wilderness more accessible in other areas of the Forest
-Because roadless areas disappear without protection
-Because that is the wish of the majority of citizens
-Because wilderness designation is desired by Native Americans
-To maximize present net value

Agency Response:
While the Potential wilderness MA designation could address many of these concerns, it is not necessarily the most appropriate, effective, or only way to address these concerns. It is important to keep in mind the purpose for wilderness designation is to protect and maintain wilderness values in areas that meet specific criteria. There are many other allocations that provide for public desires for non-motorized recreation, non-commodity values, as well as opportunities for other compatible management activities. Opportunities for solitude and remote, primitive recreational experiences are also provided in SPNM MAs, some Candidate RNAs, RNAs, etc. Roadless values will continue to be protected. Once the new roadless areas inventory is finalized, any proposed site-specific projects within an inventoried area will require an environmental analysis which considers effects of the project proposal on the roadless characteristics in the area. The effects analysis must consider the entire inventoried area, not just the project area. (FS Regional Forester, August 13, 1997 direction to Forest Supervisors). Vegetation Management Objectives define the desired conditions and geographic distribution for age and type across the landscape to maintain diversity and provide habitat for a wide range of wildlife including threatened, endangered and sensitive species. In some cases, these objectives are more achieveable outside wilderness because we have a broader range of tools we can use to alter the mix of species and age classes. Forest-wide standards and guidelines address introduction and spread of non-native invasive species. Riparian, soil and watershed management objectives address watershed health. In addition to forest-wide management direction that maintains ecosystem integrity, Potential Research Natural MAs have been allocated to provide opportunity to study ecosystems.

PC# 4.0.2-8
Public Concern: The Superior National Forest should recommend wilderness designation for the vegetable chain of lakes to protect this area from private development and create a buffer for the BWCAW.

Agency Response:
The chain of lakes referred to as the “vegetable chain” currently provides high quality remote recreational experience in a natural-appearing environment and will continue to offer this type of recreation and options for other uses under the allocations in the revised Forest Plan. We have expanded our original boundary of the

Cucumber Lake area and allocated it to the Semi-primitive Non-motorized MA. While FSM 2320.3 #5 prohibits the Forest Service from designating additional wilderness with the purpose of establishing buffers around existing wilderness, projects outside of the Wilderness are planned to minimize negative effects on wilderness values and acquisition of land with water frontage and high quality recreational opportunities is a priority in the Forest Plan.

PC# 4.0.2-9
Public Concern: The Superior should recommend designation for Homer Lake, Baldpate, Big Lake/Portage River, Brule Mountain, Cucumber Lake, Eagle Mountain, Gunflint Lake, SE, because of their proximity to the BWCAW and the current heavy use of the BWCAW.

Agency Response:
We have given very serious consideration to all of these areas and have decided not to recommend them for wilderness designation. Our analysis found that most of these areas would provide very little additional recreation capacity to the BWCAW and, as allocated, will continue to provide more options for remote kinds of recreation consistent with the emphasis of the revised Forest Plan. See response to PC# 4.0.2-8, 14, 15, 16, 18.

PC# 4.0.2-10
Public Concern: The Superior should recommend wilderness designation for Garden Lake

Agency Response:
Garden Lake area did not meet the plan revision inventory criteria or any prior roadless inventory including RARE II or RACR.

PC# 4.0.2- 11
Public Concern: The Superior should recommend wilderness designation for Wolf Lake

Agency Response:
The Wolf Lake area was evaluated as part of the plan revision roadless inventory process. While the area currently provides opportunities for remote recreational experience, several factors affect wilderness potential: the area still shows evidence of heavy logging in the past, snowmobile use is common, adjacent landowners use the area to access their land and high potential exists for future development on other ownerships. Based on our analysis, this area was not recommended for wilderness designation. However, as part of a General Forest - Longer Rotation MA, project level planning will seek to retain the remote character of ROS inventoried semi-primitive motorized and non-motorized areas (G-LR-1).

PC# 4.0.2- 12
Public Concern: The Superior should recommend wilderness designation for Echo River

Agency Response:
Echo Lake area was evaluated as part of the plan revision roadless inventory process. While the area's hiking and scenic values are consistent with wilderness management it would not add any substantial capacity to potential wilderness use because there are not connecting water routes to the BWCAW. Under allocation to the Recreation Use in a Scenic Landscape MA, this area will provide a variety of recreation opportunities consistent with the emphasis of the revised Forest Plan.

PC# 4.0.2- 13
Public Concern: The Superior should not recommend wilderness designation for Echo River

Agency Response:
Based on our analysis, this area was not recommended for wilderness designation. See response to PC# 4.0.2-12.

PC# 4.0.2- 14
Public Concern: The Superior should recommend wilderness designation for the Eagle Mountain Unit

Agency Response:
This unit was originally inventoried under RARE II, then also evaluated as part of the plan revision inventory. There are no known key values that would contribute to wilderness designation. Although this area is adjacent to the BWCAW, it does not add recreation capacity because it does not contain water routes or other opportunities to connect with the BWCAW. The area is close to major roads with logging operations and extensive recreation occurring on adjacent lands. Current diverse recreational use, including fishing, hiking, hunting, sightseeing, and camping will continue under the direction in the revised Forest Plan.

PC# 4.0.2- 15
Public Concern: The Superior National Forest Plan should recommend wilderness designation for the Big-Lake Seven Beavers and Cabin Lake areas

Agency Response:
Cabin ***Creek*** unit was a RARE II area included in the RACR inventory but not found to meet criteria for the plan revision inventory. While these areas were not identified as potential wilderness, the fact that natural processes remain largely intact and contain some underrepresented ecolological types, lead to allocation of some or all parts to potential Research Natural Areas. These areas receive very little recreation use currently but will probably continue to provide primitive to semi primitive experience under MA direction in the revised Forest Plan. Seven Beavers contains a large amount of older vegetation, highly valued peat land adjacent to MnDNR Sand Lake Peat land Scientific and Natural Area and includes the only representative of lake type 2. Parts are allocated to Riparian Emphasis MA. The Forest is working on an M.O.U for management with other organizations regarding management of the Seven Beavers unit. The Cabin ***Creek*** area is allocated to potential Research Natural Area, Semi-Primitive Motorized Recreation and General Forest MA's.

Goal 6 is carried forward in the SPNM MA to provide a variety of vegetative conditions to provide primarily a non-motorized recreational environment and a mix of forest products. The system of roads and trails provide access with roads generally closed to motor vehicles used by the public. Goal 7 is carried forward in the Recreation Use in a Scenic Landscape which features higher density recreational development. Vegetation and wildlife are managed to enhance the featured recreational objectives.

PC# 4.0.2- 16
Public Concern: The Superior National Forest Plan should recommend wilderness designation for the Agassa Lake, Baldpate Lake, Portage Lake, Homer Lake, Meander Lake, Mine Lake, North Arm Burntside, and Seven Beaver Units

Agency Response:
All of these sites were evaluated in the revision potential wilderness inventory described in Appendix C of the FEIS (with the exception of Portage Lake which did not meet criteria for consideration under any of the inventories.) Most of these sites currently provide a range of remote, semi-primitive (motorized and non-

motorized) recreational experience and will continue provide a variety of economic and recreation opportunities under the MA allocations consistent with their capacity and emphasis of the revised Forest Plan. Mine Lake area is allocated to Recreation Use in a Scenic Landscape. North Arm Burntside is allocated to Semi-primitive Motorized MA. Meander Lake is allocated the Longer Rotation emphasis. Agassa Lake is allocated to the Longer Rotation and Semi-primitive Motorized MAs. The Baldpate was included in the RARE II and RACR FEIS and is allocated to the Longer Rotation emphasis. Baker-Homer-Brule was included in the RACR FEIS and is allocated to Semi-primitive Motorized Recreation and Longer Rotation emphasis MAs. These two areas will be subject to RACR when it is resolved. See response to PC# 4.0.2-15 regarding Seven Beavers area.

PC# 4.0.2- 17
Public Concern: The Superior National Forest Plan should not recommend an increase of area in designated wilderness

-Because this would reduce multiple use
-Because it would limit public access
-Because of negative economic impacts to communities/business
-Because there is there is currently enough designated wilderness provided in the BWCAW
-Because it would negatively affect landowner rights
-Because it would add to the risk of wildfire
-Because it would limit access for disabled or aged users
-Because resources to manage the BWCAW are already strained
-Because use patterns need to be addressed first
-Because the areas proposed by the Friends of the BWCAW do not meet required criteria

Agency Response:
Additional areas are not allocated to Potential Wilderness. Many of these issues were considered in that decision. See Appendix C of the FEIS and the Record of Decision for more discussion.

PC# 4.0.2- 18
Public Concern: The Superior National Forest Plan should not include Gunflint Lake in recommended wilderness because motorized use is appropriate

Agency Response:
This area is not allocated to Potential Wilderness but is allocated to Recreation Use in a Scenic Landscape and will continue to provide a variety of recreational use and economic opportunities.

PC# 4.0.2- 19
Public Concern: The Chippewa National Forest Plan should recommend wilderness designation for the following areas: Winter 3682, North Fork 4705, Cutfoot Sioux 913, Flora Lake 495, Goche Lake 2367, Mississippi 364, Otter Tail 539, Pimushe Lake 961, Sucker Bay 673, Sunken Lake 964, Trout Lake 671, Big Island 31, Elmwood Island 44, Potato Island 11.s.

Agency Response:
Most of these areas were allocated to MAs that will continue to protect ecological, social, and economic values. The North Fork and Winter areas met criteria for the revision roadless area inventory but were not allocated as Potential Wilderness in the revised Plan. The Winter area is allocated to Riparian Emphasis. North Fork , Mississippi, Sucker Bay, and Trout Lake are allocated to Unique areas. Ottertail, Pimusche Lake, and Sunken

Lake units are allocated to Candidate RNAs. See Record of Decision, Section 3.7.2 and Appendix C of the FEIS.

Boundary Waters Canoe Area Wilderness (4.0.3)

PC# 4.0.3-1
Public Concern: The Superior National Forest should not allow any motorized vehicles in the BWCAW.

Agency Response:
The BWCAW is managed to protect wilderness values. This Forest Plan revision does not change management direction in the BWCAW. Current motorized uses are allowed in specific areas inside the Wilderness and are closely regulated in accordance with the BWCAW Act. See Chapter 3 of the Plan.

PC# 4.0.3-2
Public Concern: The Superior National Forest should manage lands, including Magnetic Lake, Magnetic Rock Trail and the east end of the Gunflint as if they were inside the Wilderness and continue motorized used but limit motor size on Gunflint through North Lake.. The area around Mine Lake and Ham Lake should be included in wilderness management.

Agency Response:
Your comment is noted. However, revising management direction for boat motors in the Wilderness was not part of this Forest Plan revision. Only lands that meet wilderness criteria are identified as Wilderness Study Areas in the Forest Plan and will be managed with direction similar to the BWCAW to protect potential wilderness values until Congress makes a decision regarding designation. See response to PC# 4.0.3-1

PC# 4.0.3- 3
Public Concern: The Plan for the Superior National Forest should establish a minimum buffer of 100 meters around the BWCAW

Agency Response:
FSM 2320.3 #5 prohibits the Forest Service from designating areas with the purpose of establishing buffers around designated wilderness. Projects outside of the Wilderness are planned to minimize negative effects on wilderness values.

PC# 4.0.3-4
Public Concern: The Forest Service should not use different Management Areas such as Pristine, Primitive, and Semi-primitive in inventoried wilderness.

Agency Response:
The BWCAW is part of the Superior National Forest and therefore, the Forest Service has authority to allocate areas of the wilderness to different management areas to facilitate meeting wilderness objectives. “This establishes a framework for managers that allows them to provide a range of wilderness opportunities for the public while maintaining the overall goals of preserving the natural ecosystem and protecting the integrity of the

wilderness for future generations" (Chapter 3, Forest Plan, Superior National Forest). It is a sign of success if the result of this management is a "seamless" wilderness experience for visitors, including moose, bear, and hikers.

PC #4.0.3-5
Public Concern: The Forest Service should consider the cumulative impacts of the Superior National Forest Plan on the BWCAW.

Agency Response:
The analysis for Forest Plan revision considered general cumulative effects in terms of even and uneven-age harvest treatments on national forest lands and other ownerships outside the BWCAW. Since timber harvest is not allowed on lands in the BWCAW administered by the Forest Service, this was not considered an effect, although the contribution to species diversity was. Analysis of effects by individual harvest treatments is a site-specific analysis which will be addressed at the project level. (See also, the response to PC# 2.7.1-11 and 2.7.6-18)

Potential Research Natural Areas (4.0.4)

PC #4.0.4-1
Public Concern: The Chippewa and Superior National Forests should designate more RNA's than included in the Proposed Plan

Agency Response:
The Code of Federal Regulations 36 251.23 states that when appropriate the Forest Service shall establish a series of research natural areas, sufficient in number and size to illustrate adequately or typify for research or educational purposes, the important forest and range types in each forest region, as well as other plant communities that have special or unique characteristics of scientific interest and importance. To meet this direction, the Chippewa and Superior National Forests used ecosystem as a measure of how many different types of natural communities would be captured in Candidate RNAs. The alternatives encompass a range of possible levels of ecosystem representation. Modified Alternative E represents an intermediate level of ecosystem representation on both Forests. While some may feel that this alternative does not go far enough to address ecosystem representation in the RNA network, the Regional Forester feels that it provides adequate representation while also providing for other resource uses.

In response to public comments, the Chippewa National Forest re-examined Candidate RNAs. Subsequently, two areas were added. Ottertail and Pimushe Lake, because they are excellent representations of Northern Hardwoods-Conifer forests and Northern Hardwoods, respectively. North Fork area was dropped from consideration as a Candidate RNA as it was determined to better meet criteria for a Unique Biological Area. Due to the large acreage of the North Fork area, this shift reduced the acres allocated to Candidate RNAs. The Forest Service believes the areas left in the allocation to Candidate RNA are higher quality.

PC# 4.0.4-2
Public Concern: The plans for the Chippewa National Forest and Superior National Forest should add RNAs to include LE's not represented

Agency Response:

The Chippewa National Forest allocated Candidate RNAs by the different land types on the Forest, not LE's. The Superior National Forest allocated Candidate RNAs by the different subsections on the Forest. Landtypes and subsections are two different levels of the National Hierarchy of Ecological Units. The Forests examined ecosystem representation at the land type or subsection level during the RNA allocation process. As a result of this process, some alternatives had more Potential RNAs allocated to them than others. This rationale for allocating Potential RNAs to alternatives is described in the EIS in section 3.7.1.b.

PC# 4.0.4-3
Public Concern: The Chippewa and Superior National Forests should designate all of the pRNA's recommended in Alt F.

Agency Response:
The process used for allocating potential RNAs to alternatives is described in the EIS in section 3.7.1.b. Modified Alternative E does not have all the pRNAs that were allocated in Alternative F because allocating all the pRNAs to Alternative E was not consistent with the theme of this alternative. See the response to PC# 4.0.4-1 for further discussion of how the Forests meet the direction to analyze RNA needs in the Forest Plan Revision process.

Vora et al. 2002, Stephenson 1991, Grumbin 1994, Engstrom et al. 1999, McLachlan and Bazley 2001, and deGruchy et al. 2002 are all cited to document the importance of reference areas to ecosystem management and the importance of RNAs as reference areas. Although these references were not considered explicitly in the analysis, the importance of reference areas and the importance of RNAs as reference areas was considered in the analysis and is discussed in 3.7.1.a. The information in Vora 1997 was considered in the development of the pool of pRNAs as described in USDA Forest Service 2000, which is cited in the EIS in section 3.7.1.a. Snow et al. 1998 was considered in the analysis and is cited in section 3.7.1.a. The Nature Conservancy's Great Lakes (2000) and Superior Mixed Forest (2002 & 2003) Ecoregional Plans were not considered explicitly in the analysis, however their content is similar to Snow et al. 1998 which was considered. Williamson 2002 is properly cited as USDA Forest Service 2002, which was considered in the analysis and is cited in section 3.7.1.a.

PC# 4.0.4-4
Public Concern: The Chippewa and Superior National Forests should designate roadless areas, particularly the Vegetable Lakes Complex and the Star and Homer Lakes Region, that do not meet wilderness criteria as pRNAs

Agency Response:
To be allocated to Candidate RNAs in the Forest Plans an area must meet certain criteria which the referenced areas do not meet. See response to PC# 4.0.2-3. The Cucumber area of the Vegetable Lakes Complex is allocated to Semi-primitive Non-motorized while the rest of the area is allocated to the Longer Rotation MA. Homer Lake area is allocated to Semi Primitive Motorized and Longer Rotation MA. Management is less intensive in all of these MAs than in the General Forest MA.

PC# 4.0.4-5
Public Concern: The Superior National Forest should not add more acreage in RNA or SNA designation.

-Because funding for existing research areas is in doubt
-Because it would reduce area available for timber harvest

Agency Response:

The Code of Federal Regulations provides for identification of candidate RNAs during the Forest Plan Revision process. The alternatives encompass a wide range of numbers of potential RNAs, from 1 to 41. While some may feel that Modified Alternative E proposes too many candidates, the Regional Forester feels that this alternative provides for adequate representation of areas for research and education while at the same time providing for other resource uses. See section 3.7.1.b of the EIS for discussion of the effects of RNA designation on other resources. No area is allocated to Experimental Forest MA in the selected alternative.

PC# 4.0.4-6
Public Concern: The Chippewa and Superior National Forests should consider smaller size parcels for pRNAs.

Agency Response:
Smaller sized parcels are generally not consistent with RNA management goals. FSM 4063.1 states that in the western U.S., 300 acres can be considered an approximate minimum size for RNAs, but that in the eastern U.S. RNAs may be smaller than 300 acres. While some smaller parcels were considered in the planning process (e.g. Lutsen SNA addition – 76 acres, Lookout Mountain White Pine – 39 acres), having many smaller RNAs scattered across the Forest was not considered to be reasonable, feasible or even desirable from a management or ecological context (USDA Forest Service 2000).

PC# 4.0.4-7
Public Concern: The Chippewa and Superior National Forests should select a network of Research Natural Areas consistent with regional policy

Agency Response:
The draft Region 9 RNA framework was considered during the potential RNA analysis process. Refer to sections 3.7.1.a and 3.7.1.b of the EIS.

PC# 4.0.4-8
Public Concern: The Forest Service should identify the approach used to prioritize allocation of pRNAs by alternative and list the criteria by which alternatives can be evaluated for determining how well they meet the goals of the RNA program.

Agency Response:
The process for developing a pool of pRNAs for consideration in the planning process is described in USDA Forest Service (2002) for the Chippewa and USDA Forest Service (2000) for the Superior NF and summarized in the EIS in section 3.7.1.a. The approach for allocating pRNAs by alternative is described in the EIS in section 3.7.1.b. The criterion used for evaluating how well the alternatives meet the goals of the RNA program was ecosystem representation; the goals of the RNA program can be found in 36 CFR 219.25 and 36 CRF 251.23 in section 3.7.1.b of the EIS. The alternatives provide a range of ecosystem representation in pRNAs.

USDA Forest Service 2000 was considered and cited extensively in the EIS analysis in section 3.7.1.a and 3.7.1.b. Although Snyder et al. 1999 is a relevant method for RNA allocation, it was not considered in the analysis. The Forests used a different method for RNA allocation as described in the EIS in section 3.7.1.b.

PC# 4.0.4-9
Public Concern: The Superior National Forest should increase the number of RNAs in order to achieve the goals of the Forest's RNA program and to further the mitigation strategy for protecting sensitive sites as defined by the Generic Environmental Impact Statement (GEIS)

Agency Response:
There are no goals for the RNA program that are specific to the Superior National Forest. The forest planning process is used to work toward achieving the goals of the RNA program as described in 36 CFR 219.25 and 36 CFR 251.23 in section 3.7.1.b of the EIS. See the response to PC 4.0.4-8 for further discussion. Because the alternatives include a range of pRNAs from low to high, each alternative furthers the mitigation for protecting sensitive sites recommended in the GEIS to a different degree. Forest-wide management direction also protects rare and sensitive plant communities. (Examples: See D-VG-8, O-WL-32, S-WL-9, G-WL-11, G-WL-20&21) Jaako Poyry Consulting 1994 is a relevant reference but it was not considered explicitly in the analysis. As acknowledged above, each alternative furthers the mitigation for protecting sensitive sites as recommended in the GEIS to a different degree. While this is an added benefit of RNA establishment, there was no need to include this in EIS.

PC# 4.0.4-10
Public Concern: The Forest Service should confirm the acreage of pRNAs proposed in the plan for the Chippewa and Superior

Agency Response:
The acreages of pRNAs were confirmed and errors were corrected in the FEIS.

Research Natural Areas (4.0.5)

PC# 4.0.5-1
Public Concern: The Forest Service should discontinue designating RNAs or pRNAs in order to maintain flexible management options

Agency Response:
Management options such as prescribed fire or noxious weed treatment exist for RNAs. Such management, while not commodity oriented, is in keeping with the intent of RNAs and is intended to be flexible enough to maintain the natural processes for which each one was established.

PC# 4.0.5-2
Public Concern: The Proposed Forest Plans miss opportunities to cooperate with the MNDNR in recommending RNAs adjacent to existing state Scientific and Natural Areas (SNAs)

Agency Response:
Not all opportunities for recommending RNAs adjacent to existing state SNAs were selected in alternative E. Kawishiwi Pines pRNA was not selected because alliances in this pRNA are represented in the RNA-equivalent, the BWCAW. Lutsen SNA Addition pRNA was not selected because an A-ranked occurrence of upland white-cedar was already represented in Cabin Creek pRNA in the North Shore Highlands subsection. However, in contrast to these situations, alternative E does recommend Big Lake-Seven Beavers pRNA. This pRNA is within a couple miles of the Sand Lake Peatland SNA and The Nature Conservancy's Sand Lake Seven Beavers Preserve.

PC# 4.0.5-3
Public Concern: The Forest Service should clarify that RNAs do not eliminate the need to protect old growth and roadless areas for achieving RNV.

Agency Response:
The objective of RNAs is to protect and maintain natural processes in representative pieces of landscape ecosystems. RNAs may contain old growth and management may contribute to develop old growth but vegetation objectives, including all age classes, are defined Forest-wide across all allocations. RNV is one measure used to evaluate vegetation conditions Forest-wide.

PC# 4.0.5-4
Public Concern: The Forest Service should prohibit RMVs from RNAs

Agency Response:
Superior NF and Chippewa NF management direction discourages RMV use in RNAs. S -RNA-7, 8, and 9 address this issue. The interim ROS for Candidate RNAs would be semi-primitive non-motorized. This ROS might change when establishment records are completed for Candidate RNAs.

PC# 4.0.5-5
Public Concern: The Forest Service should not protect dry Mesic Jack pine/black spruce and lowland conifer because they are neither unique or rare

Agency Response:
The emphasis in selecting the pool of pRNAs that was considered during Forest Plan Revision was representation of plant community types at the subsection level. Jack pine/black spruce and lowland conifer were two such community types considered. A small portion of these two community types would be included in candidate RNAs under Modified Alternative E, and natural processes or management that mimics natural processes would be used to maintain these communities. A much larger portion of these community types would be included in other Management Area designations, and management would be guided by the Vegetation Objectives, Forest-wide and Management Area standards and guidelines.

PC# 4.0.5-6
Public Concern: The Chippewa National Forest should designate more RNAs as a form of land protection

Agency Response:
The process for allocating pRNAs to alternatives is described in the EIS in section 3.7.1.b. See also the response to PC# 4.0.4-1.

PC# 4.0.5-7
Public Concern: The Superior National Forest should provide more explanation behind selection and consider impacts of RNA designation, particularly the Big Rice Lake RNA and the proposed size of the Seven Beavers RNA, on other management for wildlife, timber or other products.

Agency Response:
These issues were considered in the analysis of pRNAs. The discussion of these issues is expanded in the FEIS, section 3.7.1.b.

Other Management Area Designations (4.0.6)

PC# 4.0.6-1
Public Concern: The Forest Service should not, without public input, change from using management areas that are based on prevailing vegetation with specific composition, rotation ages, and age class goals (i.e. 1986 MAs) because to do so eliminates accountability for progress towards vegetation management goals.

Agency Response:
Public involvement has been part of the Forest Plan Revision process for the Chippewa and Superior National Forests from identifying needed changes through development of draft alternatives. (See Appendix A, FEIS) The choice to name and define management areas used to be included in a FS Regional Guide. That Guide was eliminated and the choice was delegated to the Forests who, in the case of the Chippewa and Superior NFs chose the clarity of names over numbers. As far as visualizing forest composition and FS accountability, the purpose of the revised Forest Plans is to define a desired condition for each Forest as a whole and provide strategic direction for achieving that condition. Composition, rotation ages, and age class goals are purposefully defined at the Forest-wide level by landscape ecosystem rather than for individual MAs to facilitate tracking change across the landscape. Chapter 2 of the Forest Plans defines measurable objectives for each Landscape Ecosystem and indicates the distribution among the MAs. Management areas provide more specific management direction to achieve forest-wide objectives according to the capabilities of the area allocated to each MA. Project-level analysis will indicate potential impacts at a site-specific level. Monitoring of Plan implementation will be conducted Forest-wide to determine cumulative effects but will also track by MA. (See "Management Direction" Chapter I of the Forest Plans. Also, reference section 3.1.3 of FEIS regarding Ecosystem Management approach)

PC# 4.0.6-1a
Public Concern: The Superior National Forest should carry forward the proposed alternative outcome on reducing General Forest Emphasis aspen type acreage to jack pine/spruce type acreage.

Agency Response:
Your comment is noted. This emphasis was carried forward in the revised Forest Plan.
(See "Forest-wide Vegetation Composition Objectives" Table NSU-2, Superior National Forest Plan.)

PC# 4.0.6-2
Public Concern: The Chippewa National Forest should re-allocate the area northwest of Marcell and south of Bowstring Lake from Longer Rotation to the General Forest MA to continue management similar to MAs 1.1, 1.2 and 1.3 of the existing Plan.

Agency Response:
Management Area (MA) allocation varied greatly by alternative and the mix of MAs was dependant on the theme of the alternative. The areas mentioned above were included in General Forest MAs in Alternatives A and C. Alternative E emphasizes a diverse economic base in local communities. This alternative would promote tourism and associated revenues by emphasizing resources such as recreational opportunities, scenic landscapes and diverse wildlife habitats. The General Forest - Longer Rotation Management Areas in Alternative E are located throughout the Forest where recreation use and/or lake density is high or the potential for use is high. The areas around Bowstring Lake meet those criteria.

PC# 4.0.6-2a
Public Concern: The Chippewa National Forest should re-allocate the entire North Country National Scenic corridor and the area southwest of Walker on the north side of the Shingobee River and as far north as Kabekoma Bay to the Recreation Use in a Scenic Landscape MA.

Agency Response:

A range of MA allocations for this area were considered in the alternatives for Forest Plan revision. However, the mix of allocations represented by modified Alternative E (similar to Alternative E in the DEIS) was selected by the Regional Forester to maximize a variety of recreation and economic opportunities. Management direction in most of these MAs provides for bicycling, hiking, ski, and hunting trail opportunities consistent with the emphasis of the selected alternative. The General Forest MA Desired Condition includes backpacking , bicycling, hunter walking recreation opportunities. During project-level planning the Recreation Opportunity Spectrum (ROS) inventory will be used to guide management that retains recreation character of the ROS class and is consistent with Scenic Integrity Objectives. Forest-wide objectives, standards and guidelines provide management direction for trails. For example: D-SC-1, D-REC-2, D-REC-7, G-REC-2, G-REC-3.

PC# 4.0.6-3
Public Concern: The Superior National Forest should reclassify lands in the Laurentian RD and in the west part of La Croix RD to Longer Rotation MA

Agency Response:

A range of different allocations of lands in the Laurentian RD and across the Superior National Forest are represented in the alternatives considered for Forest Plan revision. However, allocation to a mix of Longer Rotation, General Forest, Recreation Use in a Scenic Landscape, Riparian Emphasis, Eligible Wild and Scenic River, SPMN, Candidate RNA MAs is consistent with the focus of modified Alternative E which was selected by the Regional Forester for implementation. Management direction in most of these MAs includes longer rotations.

PC# 4.0.6- 3a
Public Concern: The Chippewa and Superior National Forests should consider applying portions of the SMC concept to the Longer Rotation MAs in the Final Plans.

Agency Response:

While some forest-wide objectives are common to these two MAs, the more specific management emphasis is quite different. The emphasis of the Longer Rotation MA is, through extended rotation ages, to “maintain ecosystem integrity while providing a variety of sustainable economic and social uses and values. …these areas are also managed for forest products, and occasionally there is a moderate to high level of human interaction on the landscape.” The emphasis of the Special Management Complex MA is conservation and maintenance of large areas of contiguous, older forests. Opportunities for recreational uses and other management activities is much more limited under the SMC allocation and not consistent with the Forest Plan emphasis on diverse recreation and economic opportunities. (See Chapter 3 of the Forest Plans for description of MA management emphasis.)

General Forest MAs (includes Longer Rotation MA)

PC# 4.0.6-6
Public Concern: The Chippewa and Superior National Forests should indicate how the General Forest MA will deviate from RNV, by decade, compared to the rest of the Forest as a whole.

Agency Response:
Range of Natural Variation (RNV) was not used as a measure but as a comparison point. This comparison was done at the Landscape Ecosystem level rather than by MA.

PC# 4.0.6-8
Public Concern: The Chippewa and Superior National Forests should allocate less land to the longer rotation emphasis or other allocations with little or no timber management in order to come closer to recommendations in the GEIS.

Agency Response:
It is not clear how the commentor arrived at acres where "longer rotation or where little or no timber management" would occur but it appears that everything other than General Forest MA was added to get these figure. This is not a fair or accurate representation of the other MA's. A substantial amount of timber management is not only allowed but encouraged in many management areas other than General Forest MA. The Forest Plan sets management goals by LE which include working toward a specified percentage of each LE which will eventually be in older age classes. Longer Rotation MA's do employ extended rotations as one of the means for reaching objectives but there are no requirements that rotation be extended to 1.5 X normal. We agree that the Forest Plan does not follow the GEIS exactly in how it addresses older Forests and old growth. There are no MA's which equate to the ERF units envisioned when the GEIS was prepared 10 years ago. The plan provides for these resources in a way which is more flexible and has a direct tie to individual Landscape Ecosystems. We do not believe this is inconsistent with the GEIS.

PC# 4.0.6-58
Public Concern: The Chippewa and Superior National Forests need to define "large tree character" as used in the Longer Rotation MA.

Agency Response:
We have clarified the terminology in the Forest Plan as "older and larger" trees.

PC# 4.0.6-9
Public Concern: The Chippewa National Forest should explain why the modeling results for clearcut treatments in the Longer Rotation MA are nearly the same as for General Forest MA in the first decade

Agency Response:
Percentages are similar due to existing age classes. If only suitable lands are considered, even-aged management accounts for 7.5% of treatments in the Longer Rotation and 9.6% in the General Forest MA during the first decade. Over time, intervals between clearcut treatments become noticeably longer in the Longer Rotation MA. Clearcutting drops overall by the 3rd decade. (See Forest Plan Appendix D, Table APP-D2)

PC# 4.0.6-10
Public Concern:
To be consistent with the desired condition, the Superior National Forest should consider more intensive management for longer-lived species that are under-represented in the Longer Rotation MA.

Agency Response:

The listed percentage of Landscape Ecosystems (LE) in the Longer Rotation MA indicates existing conditions and - not management objectives for tree types. The vegetation management objectives in Chapter 2 indicate desired composition for forest types within each LE. Under the selected alternative, vegetation management objectives generally emphasize an increase in older forest and less even-aged management. Compared to the General Forest MA, longer periods between final harvest are emphasized in the Longer Rotation MA. That does not mean there will be no short rotation harvest. A variety of age structures will occur including mixed age. Patches of young, even-aged forests will exist but less frequently than in the General Forest MA. A range of treatments, including clearcuts, shelterwood, uneven-aged treatments are planned in the Longer Rotation MA. See Forest Plan, Appendix D, Table APP-D3. An estimate of 1.5 X CMAI was used in modeling extended rotations but actual treatments may be somewhat longer or shorter.

PC# 4.0.6-11
Public Concern: The Forest Service should consider establishing a short rotation MA

Agency Response:
The reason for the Lon***ger*** Rotation MA is to provide an option to the General Rotation MA, which already emphasizes more even-aged management and short rotations based on CMAI, resulting in more young forests. In both of these MAs timber production is a key emphasis. (See MA Themes, Chapter 3, Forest Plans and D-LR-2, D-GF-4)

PC# 4.0.6-12
Public Concern: The Superior National Forest should retain the majority of land for General Forest emphasis to provide the optimum balance between commodities and intangible values.

Agency Response:
The National Forest Management Act, section 219.14 directs that "for the purpose of analysis, the planning area shall be stratified into categories of land with similar management costs and returns. The stratification should consider appropriate factors that influence the costs and returns such as physical and biological conditions of the site and transportation requirements." This is a widely accepted approach in land use planning, which facilitates effective and efficient allocation of Forest resources to meet multiple-use objectives by identifying sites with similar capabilities and prescribing appropriate management for each category. The Regional Forester selected Modified Alternative E to provide the maximum diversity for economic and recreational opportunities while maintaining ecological integrity. Aside from congressionally-designated wilderness area, the General Forest MA accounts for the largest allocation on the Forest (47% of lands outside of the BWCAW). General Forest Longer Rotation makes up another 31% of the allocation outside of the Wilderness. Together, these account for 78% (a majority) of the allocation outside the BWCAW. Even when wilderness acres are included, General Forest and Longer Rotation add up to approximately half of the entire forest.

PC# 4.0.6-12a
Public Concern: The Forest Service should set composition and age class guidelines with rotation age no greater than 1.5 times pathological rotation on Longer Rotation Forest MA.

Agency Response:
Computer modeling of harvest in the Longer Rotation MA assumed that all treatments are available in the first rotation and the rotation age was extended to 1.5 times CMAI in even-aged treatments. However, in individual project planning, actual rotations may be longer-lived species in the Longer Rotation MA than in the General Forest MA. A variety of treatments will be used, consistent with the desired condition for a variety of stand age structures. (See Appendix B of the FEIS)

Special Management Complexes MA

PC# 4.0.6-13
Public Concern: The Chippewa and Superior National Forests should classify and protect scientific management areas, potential wilderness, and special management complexes under allocations where silvicultural practices could be carried out to maintain the integrity of the sites.

Agency Response:
State Scientific Natural Areas and other similar designations on all ownerships were considered in the analysis of additional areas on the national forests needing potential protection to assure adequate representation of all ecosystems. This information was considered in the allocation of special designations in the revised Forest Plans and the Regional Forester determined that protection of representative areas could be attained through these MA allocations while meeting the desired condition for diverse recreational and economic opportunities. (See Record of Decision) Research Natural Areas (RNA) or Candidate RNAs, Minimum Management Areas, Unique Biological, Geological or Historic Areas, Riparian Emphasis Areas, and Experimental Forests are included in the alternative selected for implementation. Allocation to RNAs or Candidate Research Areas emphasizes management where natural processes control conditions found on the site. Maintaining the integrity of natural processes is a Forest-wide goal across all MAs. The selected alternative responds to this goal.

PC# 4.0.6-14
Public Concern: The Chippewa National Forest Plan should include Special Management Complexes and /or Minimum Management Areas identified in Alternative D and Alternative F and special social or ecological features, including the Bigfork River, identified in Alternative D and G.

Agency Response:
Management Area (MA) allocation varied greatly by alternative and the mix of MAs was dependant on the theme of the alternative. Alternative E emphasized a diverse economic base in local communities. This alternative would promote tourism and associated revenues by emphasizing resources such as recreational opportunities, scenic landscapes and diverse wildlife habitats. The revised Forest Plan for the Chippewa National Forest includes a mix of MAs including Unique Biological, Aquatic, Geological, or Historical Areas, Riparian Emphasis Areas, Semi-primitive Non-motorized Areas, RNAs and Candidate RNAs and Potential Wild and Scenic Rivers. The mix of MAs provide opportunity to protect and enhance special or unique values associated with these MAs. Your suggestions to modify Alternative E do not fit with the theme of this alternative. Other alternatives incorporate your recommendation for management direction.

PC# 4.0.6-14a
Public Concern: The Chippewa and Superior National Forest Plans should assure that each Landscape Ecosystem contains at least one representative Special Management Complex

Agency Response
Each Landscape Ecosystem is represented by a Candidate Research Natural Area (RNA) or RNA. The emphasis of the Special Management Complex MA is conservation and maintenance of large areas of contiguous, older forests. The emphasis of Candidate RNAs and RNAs is to assure that representative natural communities and natural processes are preserved. Opportunities for recreational uses and other management activities are much less limited under Candidate RNA or RNA allocation and consistent with the Forest Plan emphasis on diverse

recreation and economic opportunities. Flexible management and old forest will be provided for in every management area and landscape ecosystem in the selected alternative.

PC# 4.0.6-15
Public Concern: The Superior National Forest should designate all large areas of white pine along the Gunflint Trail as Special Management Complexes and /or Minimum Management Areas in its Forest Plan

Agency Response:
Forest-wide vegetation management objectives, including specific objectives for white pine, are identified in the Forest Plan to provide direction to establish and maintain desired distribution by age, class and vegetation type across the landscape. The area along the Gunflint Trail is allocated to Recreation Use in a Scenic Landscape which emphasizes a natural appearance, old forest and big tree character.

PC# 4.0.6-16
Public Concern: The Chippewa and Superior National Forests should not establish large areas of Special Management Complexes

Agency Response:
Your comment is noted. Large areas are not allocated to SMC MA in the revised Forest Plans. All lands on the Chippewa and Superior National Forests are allocated to management areas with consideration of site capabilities, opportunities, and unique characteristics.

PC# 4.0.6-17
Public Concern: The Forest Plans should include the SMC classifications outlined in Alternative G to protect the ecological integrity of these unique areas.

Agency Response:
See response to PC# 4.0.6-13 & 14

PC# 4.0.6-18
Public Concern: The Chippewa National Forest should include the SMC classifications and Longer Rotation MA allocation outlined in Alternative B to manage for various forest types and protect resources of special tribal interest.

Agency Response:
An important vegetation management objective of the revised Forest Plan is to allocate potential Research Natural Areas and maintain RNAs that represent all Landscape Ecosystems. Under the revised Forest Plan, a large portion of the areas of special tribal interest are allocated to Semi-Primitive Non-Motorized, Riparian Emphasis, and Longer Rotation MAs, which all emphasize less intensive management while providing for diverse economic opportunities. The Chippewa National Forest worked directly with the Leech Lake Division of Resource Management to ensure areas with very high tribal interest were mapped in Longer Rotation MAs or other more management restrictive MAs. Every alternative that was considered incorporated tribal input. Suggestions to modify Alternative E to incorporate all of the sMCs do not fit with the theme of this alternative. Please see the final EIS, Chapter 3 for further discussion. Other alternatives incorporated all or some of the SMCs. Flexibility to manage for old forest is provided for in every management area in the selected alternative. Important areas for tribal use will be managed in a way that is consistent with that use. The Chippewa National Forest regularly consults with the Leech Lake tribal council on a government-to-government basis on all issues affecting tribal

rights including Forest Plan revision. The Forest looks forward to LLBO continuing to be an active participant in Plan implementation and site-specific project planning to protect traditional uses and maintain treaty rights. (See also, response to PC# 2.7.5-2)

Recreation Use in a Scenic Landscape MA

PC# 4.0.6-19
Public Concern: The Forest Plans for the Chippewa and Superior National Forests should define more specific direction and objectives, by ranger district rather than Forest-wide, to provide more accountability regarding road closures in the Recreation Use in a Scenic Landscape MA.

Agency Response:
The purpose of the Forest Plans is to identify Forest-wide desired conditions and provide strategic direction to achieve these conditions. The Roads Analysis Process (RAPs) for each Forest provide an assessment of Forest-wide transportation management needs. Specific road closures and vegetation treatments are site-specific project level decisions which implement the direction of the Forest Plans and recommendations from the RAPs. Forest-wide monitoring will track on cumulative outcomes of project level implementation relative to desired conditions.

PC# 4.0.6-20
Public Concern: Using 1.5 X CMAI as a guide and allowing clearcuts and shelterwood harvests in the Recreation Use in Scenic Landscape MA is inconsistent with aesthetic and scenic objectives. The Forest Plans should provide more direction limiting timber harvest

Agency Response:
There is no statement in the management direction for this MA stating that "logged areas can be made scenic". The emphasis in this MA is natural appearing surroundings. In aspen, jack pine, spruce, and some boreal types, fairly frequent stand renewal is natural. Desired conditions promote wildlife viewing and habitat enhancement and allow that "management activities may be noticeable to visitors" including timber harvest. At the same time, "scenic quality and aesthetic goals will guide the design and implementation of vegetation management activities" including timber harvest. It is important to keep in mind the introduction to the *Treatment Methods Used in Modeling* section of Appendix B of the DEIS: "These treatment methods are described for modeling [effects] purposes only and will not necessarily be carried into management direction in the Revised Forest Plans." Actual rotations may be more or less than 1.5 X CMAI. Appendix B also states that while all harvest treatment types are included in modeling the Recreation Use in a Scenic Landscape MA, the 1.5 X CMAI rotation age applies to clearcut and shelterwood treatments.

PC# 4.0.6-21
Public Concern: The Chippewa and Superior National Forests should address fire risks in Recreation Use in Scenic Landscape MA

Agency Response:
Timber harvest and management-ignited fire are both included in this MA. These and other activities are designed to meet vegetation management goals, including fuels reduction, with special attention to aesthetic and scenic quality. In addition, Forest-wide desired conditions and objectives address fuels management. (See D-ID-1; O-ID-1 through 4)

Riparian Emphasis MA

PC# 4.0.6-22
Public Concern: The Forest Plans for the Chippewa and Superior National Forests should include standards that only allow logging in Riparian Emphasis Area MA for ecological reasons with verification by an independent panel of experts.

Agency Response:
The goal in the Riparian Emphasis MA is to restore, protect, and enhance riparian functions. Approximately 52% on the Chippewa and 33% of the land on the Superior National Forest allocated to this MA is not suitable for timber management. Thus no timber harvest will be scheduled on those lands. On the remaining acreage in the Riparian Emphasis MA, Forest-wide objectives, standards and guidelines that affect timber harvest are expected to adequately support the desired conditions in this MA and the emphasis of the Forest Plans on diverse economic opportunities. This includes all the Forestwide direction for riparian management zones, which will apply in the Riparian Emphasis MA just as it does to all other MAs. This direction includes standard S-WS-9 which states that the harvest of trees in the nearbank zone will be done only for purposes of maintaining or restoring riparian ecological function. We believe desired conditions can be supported without adding more limitations to timber harvest in the Riparian Emphasis MA.

PC# 4.0.6-23
Public Concern: The Chippewa and Superior National Forests should not include the Riparian MA in the final plans because it will not result in significant improvements in watershed health.

Agency Response:
We do not believe that the mitigative approach preferred by the respondent is sufficient to fulfill Forest Service policy for management of riparian areas. That's why the final Plans establish a proactive approach to management of riparian areas, including direction for purposeful management action where it can be done to protect, and where possible enhance, the ecological functions of these areas. Those functions include the protection of water quality as well as several other attributes such as aquatic and riparian habitat, and shoreline stability. Riparian management in the revised Plans is facilitated Forestwide on both Forests via the linear riparian management zones along lakes, streams and open water wetlands, as discussed in Chapter 2. The Riparian Emphasis MA was established as a way to provide a similar emphasis in select areas where the geographical complex of riparian resources, some of which have an especially high level of attached social value, is insufficiently addressed by a relatively narrow riparian corridor. We feel this is a good fit with the selected alternative (e.g. the final Forest Plans). Refer to section 3.3.2.a of the FEIS.

PC# 4.0.6-24
Public Concern: The Chippewa National Forest Plan should designate the Jessie Lake Watershed as a Riparian Emphasis Area.

Agency Response:
The Riparian Emphasis MAs are located along "major rivers and lakes". While not included in the Riparian Emphasis MA, Jessie Lake is recognized as a valuable aquatic resource on the Forest. Watersheds and riparian areas outside of Riparian Management Areas (including Jessie Lake) are considered through Forest-wide Desired Conditions, Objectives and Standards and Guidelines that protect, enhance or restore healthy watersheds and functioning riparian areas. See Forest Plan Goals, Desired Conditions, Objectives, and Standards and Guides for Watershed Health in Chapter 2 of the Forest Plan.

PC# 4.0.6-24a
Public Concern: In the final plans, the Superior National Forest should increase the amount of land allocated to the Riparian Emphasis MA, including all trout streams, water-impaired streams, Shipstead-Newton-Nolan lakes, and wetlands.

Agency Response:
The final Plans of both Forests include several forest-wide and MA-specific objectives, standards and guidelines designed to protect riparian areas from possible negative impacts of timber harvest. In particular, final Plan direction related to riparian management zones addresses protection and improvement at open water wetlands, and lakes and streams including those in the categories listed by the third respondent. Additional standards and guidelines in Chapter 2 of both Plans provide direction for protection of non-open water wetlands. Because this direction will apply Forestwide to riparian areas across both Forests, riparian protection will not be dependant on allocation to the Riparian Emphasis MA. (See Chapter 2 of the Forest Plans "Watershed Health, Riparian Areas, and Soil Resources" and "Transportation Systems")

Although it's true that the allocation to the Riparian Emphasis MA is smaller on the Superior than it is on the Chippewa, this is offset by the Superior's larger acreage allocation to the Research Natural Area/Candidate Research Natural Area MAs and the Potential Candidate Wild, Scenic and Recreational Rivers MA. All three of these MAs afford riparian areas a relatively high level of resource protection.

Regardless of Management Area allocation, the concern about impacts of recreational motor vehicle use on riparian areas should be considerably lessened by the final Plan direction which prohibit cross county OHV use on both the Chippewa and Superior NFs.

PC# 4.0.6-25
Public Concern: The plans for both Forests should designate a network of aquatic ecosystem reference areas consistent with recommendations included in the Superior Mixed Forest Ecoregional Plan, 2002, by the Nature Conservancy.

Agency Response: We reviewed the information on the priority aquatic sites included in the Appendix 1 excerpts from the Nature Conservancy's Superior Mixed Forest Ecoregional Plan. We have decided to not add any more acres to the Riparian Emphasis Area MA designations in draft Plan Alternative E, or create a new MA designation, for the purpose of achieving aquatic ecosystem representation. In the mix of alternatives addressed in the draft EIS, aquatic ecosystem representation was a factor in identifying the network of Special Management Complexes (SMCs). Although SMCs constituted a sizeable allocation under some alternatives, notably Alternatives B and G, no SMCs are allocated in draft Alternative E or in the final Plans of either Forest. The final Plans for both Forests assign the Riparian Emphasis MA allocation on a limited basis to sites that not only benefit from large block (as opposed to linear corridor) riparian emphasis, but also are important to recreation and tourism, We feel that this is in keeping with the selected alternative's emphasis on maintaining a diverse economic base in local communities. Blanket placement of additional restrictions on public access in Riparian Emphasis MAs would further depart from the recreation and tourism focus of the selected alternative.

PC# 4.0.6-27
Public Concern: The Chippewa and Superior National Forests should minimize recreational development in riparian areas to avoid negative impacts

Agency Response:
The respondents are concerned about impacts of recreational use on riparian areas. These concerns should be alleviated to a large extent by the final Plans'Forestwide direction to prohibit cross-country OHV use on both

Forests. A number of Forestwide and MA-specific objectives, standards and guidelines provide direction designed to limit the negative impacts of other recreational activities on riparian resources. Protection of riparian resources from impacts of recreational use is not dependant on allocations to the Riparian Emphasis MA

Potential Candidate Wild, Scenic, and Recreational Rivers MA

PC# 4.0.6-28
Public Concern: The Chippewa and Superior National Forests must take care to avoid or mitigate adverse effects on rivers identified in the NRI compiled by the National Park Service

Agency Response:
The Forest Service evaluated eligibility of river segments identified in the NRI. The river segments that do not meet eligibility do not receive special protective status under the Forest Plan but are managed under direction to protect riparian and watershed values. All of the eligible river segments are identified in Chapter 3 of the revised Forest Plans as allocated to the Eligible Wild, Scenic, and Recreational River MA in the Superior National Forest Plan or Eligible Scenic River MA in the Chippewa National Forest Plan. This MA provides interim protection of river corridors. (See also Response to PC# 4.0.6-33)

PC# 4.0.6-29
Public Concern: The Superior National Forest should consider additional wild and scenic rivers

-Including the upper St. Louis River as Wild and Scenic
-Including the Brule, Cloquet, Pigeon, St. Louis, Temperance, Vermillion

Agency Response:
The Superior National Forest evaluated eligibility of segments of the Brule, Cloquet, Pigeon, St. Louis, Temperance, Vermillion, and Sturgeon rivers. All of these river segments, with the exception of the Sturgeon River, are identified in Chapter 3 of the revised Forest Plan as allocated to the Eligible Wild, Scenic and Recreational River MA which provides interim protection of river corridors. Sturgeon River was not found to be eligible. Suitability studies are required before rivers can be recommended for official designation. See also response to PC# 4.0.6-33.

PC# 4.0.6-30
Public Concern: The Chippewa National Forest should consider Leech Lake River for designation a as Wild and Scenic

Agency Response:
The Forest Service evaluated eligibility of river segments identified in the NRI. The riversegments that do not meet eligibility do not receive special protective status under the Forest Plan but are managed under direction to protect riparian and watershed values. All of the eligible river segments are identified in Chapter 3 of the revised Forest Plans as allocated to the Eligible Wild, Scenic, and Recreational River MA in the Superior National Forest Plan or Eligible Scenic River MA in the Chippewa National Forest Plan. This MA provides interim protection of river corridors.

PC# 4.0.6-31
Public Concern: The Chippewa National Forest should expand the RMA of the Mississippi throughout the Forest

Agency Response:
Approximately 310 acres of the Mississippi River corridor has been allocated to the Unique, Biological, Aquatic, Geological or Historical Areas MA in the revised Forest Plan.

PC# 4.0.6-32
Public Concern: The Chippewa and Superior National Forests should include standards and guidelines that protect potential candidate wild and scenic rivers

Agency Response:
Each candidate river or river segment is identified with potential classification in the Forest Plan for each Forest. Objectives, standards and guidelines provide management direction to maintain the outstanding values appropriate for each of the river classifications. Vegetation manipulation is only allowed in potential Wild, Scenic, or Recreational River segments to enhance or improve river values. See also the response to PC# 4.0.6-33 regarding maintaining eligibility prior to designation.

PC# 4.0.6-33
Public Concern: The Forest Service must follow through on commitments contained in the 1988 agreement regarding wild and scenic rivers

Agency Response:
An agreement was reached with American Rivers Conservation Council on appeal of the Forest Plans (in part) for the Chippewa and Superior National Forests on July 21, 1987. (Note this is presumed to be the same agreement referred to in comment as 1988.) The Forests agreed to determine whether the NRI river areas, and any other rivers they (Forests) may identify as potentially eligible, meet the eligibility criteria specified in subsection 1 (b) and 2 (b) of the Wild and Scenic Rivers Act. The Forests also agreed to document their findings including potential river segment classifications for segments within the proclaimed National Forest boundaries. These eligibility studies have been completed with seven rivers found eligible under the Wild and Scenic Rivers Act in fulfillment of the agreement.

The rivers in question have maintained their eligibility status through the development of standard and guidelines within a specific Management Area of the current Forest Plan. The revised Forest Plans continue with this course of action along with the refinement of standards and guides for the perpetuation of eligibility status for the seven rivers.

The 1987 agreement did not require the Forest Service to do suitability studies on these rivers within a certain timeframe. Nor are there any other requirements that the Forest Service undertake suitability studies for eligible rivers as part of the forest plan revision process or to develop a timeframe such studies. The agreement did state that the Forest Service should work cooperatively in getting suitability studies done. Local river management plans were developed for the Vermilion and St. Louis Rivers. Based on those studies and plans, the Forests were not encouraged to recommend to Congress inclusion of the rivers in the National Wild and Scenic River System.

This is a repeat of the paragraph above…The seven rivers in question have maintained their eligibility status through the implementation of standard and guidelines within a specific Management Area of the previous Forest Plans. The revised Forest Plans continue with this course of action along with the refinement of standards and guides for the perpetuation of eligibility status for the seven rivers.

Both Chapter 1, Introduction of the Forest Plans, and Eligible Wild, Scenic and Recreational Rivers Management Area, contain the intent of all the direction of the 1986 Plans as amended by the 1987 agreement. Chapter 1 includes a description for how the Forests are meeting the Wild and Scenic Rivers Act and the Management Area direction includes more specific direction for these rivers. There is no requirement that the Forest Service undertake suitability studies for eligible rivers as part of the forest plan revision process. Agency policy provides latitude on conducting suitability, however during the interim period before such a study is completed, the forest plan must provide for protection of the river area. As the revised Forest Plans are being implemented, Forest priorities, issues, concerns, interest (public and political), and budgets will be reviewed periodically and adjustments made. When warranted, a schedule with full public involvement will be developed to address suitability studies.

The Forest believes it is meeting the 1988 agreement. Section 1.6 of the EIS explains why Wild and Scenic Rivers were not addressed as a Forest Plan revision topic. The Forest Plan includes a description for how the Forests are meeting the Wild and Scenic Rivers Act (Chapter 1 Introduction). The Forest Plan MA direction for Wild, Scenic, and Recreational Rivers contains the intent of all direction in the 1986 Plans as amended by the 1988 agreement.

The 1988 agreement did not require the Forest to recommend that Congress include the rivers in the National Wild and Scenic River System. The primary requirement of the 1988 agreement was for the Forest to maintain the eligibility of the six rivers and the Forest Service has done that and will continue to do so.

PC# 4.0.6-34
Public Concern: The Chippewa National Forest should confirm harvest estimates for potential candidate scenic and recreational river MA. The harvest acreage in Appendix D, pg D-3, for the first decade is more than total acres in this MA.

Agency Response:
It is important to understand that the planned management is uneven-aged or partial harvest treatments which involve more than one entry to an area over many years. If you simply add the acres of treatment across the first two decades you will “double count” acres and the total does not represent actual suitable acres in the MA.

PC# 4.0.6-35
Public Concern: The Superior National Forest should revise S-WSR-8 in the Plan to state that no more than five miles of snowmobile trail will be maintained.

Agency Response:
S-WSR-8 was clarified for the Final Superior National Forest Plan. Because the standard applies only to wild segments and the wild segments do not currently have any snowmobile trails, the reference to the potential to maintain snowmobile trail was deleted. The standard now states: All public motor use is prohibited on all National Forest System classified and unclassified roads, trails, and in cross-country travel.

<u>Semi-primitive Non-motorized MA</u>

PC# 4.0.6-36
Public Concern: The Forest Service should drop the Semi-primitive Motorized use MA

Agency Response:
The term "Semi-primitive" refers to the setting and level of improvement provided for recreational activities, not necessarily the type of recreation. Therefore, the intent of the semi-primitive motorized management area (MA) is to provide an opportunity for motorized recreation in a relatively undeveloped setting. The "Semi-primitive non-motorized" MA provides a similar setting and level of development for non-motorized use.

PC# 4.0.6-37
Public Concern: The Chippewa and Superior National Forests should greatly reduce proposed harvest in the SPNM MA to provide additional acreage for non-motorized recreation.

Agency Response:
Of the 2,486 acres of suitable land allocated to this MA by the Superior National Forest Plan, 6.5% is planned for harvest during the first decade. On the Chippewa, 6.7% of the 10,143 acres of suitable land is planned for harvest during the first decade. All of the planned vegetation management includes uneven-aged treatments. This management is consistent with Forest-wide objectives and desired conditions for this MA: "management activities may include….harvesting timber…" and "management activities... may occasionally be noticeable to visitors." See also response to PC# 3.3-4 and 3.3-6.

PC# 4.0.6-38
Public Concern: The Chippewa National Forest should allocate more land to semi-primitive non-motorized use to better meet user demands.

Agency Response:
Under NFMA, allocation of Forest resources to meet multiple-use objectives is achieved by identifying sites with similar capabilities and prescribing appropriate management for each category. On the Chippewa National Forest, a large portion of the Forest was inventoried as Roaded Natural in the Recreation Opportunity Spectrum (ROS) inventory. This indicates a limited opportunity to increase SPNM. During site-specific project planning, some small amount of additional acres may be identified as SPNM but any large re-allocation is not anticipated.

PC# 4.0.6-41
Public Concern: The Chippewa and Superior National Forests should include much more specific objectives, standards, and guidelines that include accountability regarding SPNM MA in their Forest Plans.

Agency Response:
The Forest Plan is meant to provide strategic direction for management activities and not prescribe detailed instruction. However, in response to your and other comments, the Forests revised and clarified several Forest-wide objectives, standards and guidelines regarding recreational motor use as well as SPNM MA direction. (See Response to PC# 4.0.6-43 ,a, b,c)

PC# 4.0.6-42
Public Concern: The Superior and Chippewa National Forests should reduce the amount of logging allowed in the SPM MA under the Forest Plans

Agency Response:
The Chippewa National Forest Plan does not allocate any acres to the SPM MA. It is important to note that under the SNF, 4.5% represents 163 acres of partial and restoration treatments over ten years with the objective to enhance recreational and aesthetic values. This level of management is consistent with Forest-wide vegetation

management objectives and management direction for the SPM MA: "Management activities such as timber harvest and management –ignited fire may be used to achieve vegetation objectives…"

PC# 4.0.6-43
Public Concern: The Chippewa and Superior National Forests should change G-SPNM-2 and G-UB-9 to standards that prohibit motorized trail construction in the specific MAs

Agency Response:
G-SPNM-2 was changed to a standard to better meet the desired conditions for that management area. G-UB-9 (CNF) and G-UB-8 (Superior) were not changed because the desired conditions for that management area are not necessarily only non-motorized.

PC#4.0.6-43a
Public Concern: The Chippewa and Superior National Forest Plans should revise D-SPNM-8 to state "all temporary roads will be obliterated within one year of construction" and "all roads will be closed to public motor vehicle use".

Agency Response:
A Desired Condition is a description of land resource conditions if all long-term goals are achieved. Objectives, standards and guidelines provide more direction on how, when, and where activities will take place to achieve the Desired Condition. However, it is not appropriate to prescribe an arbitrary timeline for obliteration as some projects may take longer than one year to complete. Direction is provided regarding motorized use until temporary (unclassified) roads are obliterated. S-SPNM-2 limits motorized use in this MA. Forest –wide standard S-TS-3 also addresses closures: "Temporary roads will be stabilized and effectively closed to motorized traffic as soon as land access use is completed. Re-vegetation will be established within 10 years after the termination of the contract, lease or permit." (See Response to PC# 4.0.6-43c)

PC# 4.0.6-43b
Public Concern: The Chippewa and Superior National Forest Plans should revise G-WSR-9 and D-RE-9 to state: "ATV use on unclassified roads will be prohibited upon adoption of a Final Forest Plan" in order to achieve the desired conditions and meet user expectations for a non-motorized area.

Agency Response:
G-SWR-9 and D-RE-9 were deleted and are represented by a new guideline: G-RMV-4 which provides more specific direction regarding RMV use of Forest Service roads. Scenic and Recreation segments in the Eligible WSR and Riparian Area MAs do not have non-motorized Desired Conditions and Objectives. However, S-WSR-8 prohibits all motor use in wild segments of Eligible Rivers because those segments have a designated non-motorized ROS objective.

PC# 4.0.6-43c
Public Concern: The Chippewa and Superior National Forest Plans should revise S-SPNM-2, S-UB-4 to state: "ATV and snowmobile use on classified and unclassified roads will be prohibited" in order to achieve the desired conditions and meet user expectations for a non-motorized area."

Agency Response:
S-SPNM-2 was revised to state: "All public motor use is prohibited on all Forest classified and unclassified roads,

trails, and in cross-country travel." In addition, in the Superior National Forest Plan, S-UB-4 was revised to state: "RMV use on unclassified roads is prohibited" and G-UB-new was added which states: " RMV use on OML 1 and OML 2 roads is generally prohibited." This management direction is consistent with the desired condition that most roads would be closed for public motor vehicle use.

PC# 4.0.6-45
Public Concern: The Superior National Forest should increase the emphasis on SPM and SPNM designations per the Proposed Forest Plan.

Agency Response:
Your comment is noted. This emphasis is carried forward in the revised Forest Plan.

Conservation and Rare Features

PC# 4.0.6-46
Public Concern: The Superior National Forest should increase the emphasis on Conservation and Rare Features, per the Proposed Forest Plan.

Agency Response:
Your comment is noted. This emphasis is carried forward in the revised Forest Plan.

Unique Biological, Aquatic, Geological, or Historical MA

PC# 4.0.6-47
Public Concern: The Superior National Forest should include all pRNAs not protected as RNA under the Unique biological, Aquatic, Geological, or Historical MA in its Forest Plan. The acreage for this MA should be at least 25,000.

Agency Response:
While both of these MAs provide some opportunities for educational purposes and neither is suitable for timber harvest, there are important differences between the management emphasis for RNAs and for Unique Biological, Aquatic, Geological, or Historical MAs. The later are select, unique areas and are primarily maintained for interpretive purposes. In contrast, Research Natural Areas (RNAs) are located across the landscape, selected to represent the range of ecosystem processes and managed for ecological research, observation, genetic conservation, and monitoring purposes. To automatically allocate areas to Unique designation that did not meet criteria for RNA or allocate a specific acreage without supporting rationale would be an arbitrary decision. See also the expanded discussion in Section 3.7.2 of the FEIS.

PC# 4.0.6-48
Public Concern: The Superior and Chippewa National Forest Plans should include specific distance and clearly delineate activities allowed for buffers around Unique biological, Aquatic, Geological, or Historical MA's in its Forest Plan

Agency Response:
The direction provided by G-UB-2 is a guideline for protective measures that will be based on site-specific potential effects and may include, but not be limited to, buffers. Specific measures to protect Unique Area values

is a project- level decision to be determined when stands near and adjacent to the Unique Areas are proposed for management action because unique qualities will vary and appropriate protection will also vary.

PC# 4.0.6-49
Public Concern: The Superior National Forest should clarify delineation between pRNA's and Unique biological, Aquatic, Geological, or Historical MAs

Agency Response:
Additional discussion regarding pRNAs and Unique areas is included in Section 3.7.2 of the FEIS.

PC# 4.0.6-50
Public Concern: The Chippewa National Forest should include clear prohibition on commercial logging in the Unique biological, Aquatic, Geological, or Historical MAs in its Forest Plan

Agency Response:
The Unique Biological, Aquatic, Geological or Historical MA is not classified as suitable for timber harvest in either the Chippewa or Superior National Forest Plans.

PC# 4.0.6-51
Public Concern: The Chippewa National Forest should designate all Unique biological, Aquatic, Geological, or Historical MA areas identified in Alt F

-To protect heritage resources per "Public Trust"
-To protect biological resources for Maximum Value

Agency Response:
The allocations in the Forest Plan allow for continued research and interpretation of the biological and human history of the Chippewa National Forest. Site-specific surveys and analysis will be conducted as part of project level planning including vegetation management.
The Leech Lake Band of the Ojibwe as well as other interested parties have been consistently consulted throughout development of the revised Chippewa Forest Plan and will continue to be involved during implementation regarding tribal interests and treaty rights.
In response to public comments, the Chippewa National Forest re-evaluated and selected four of the potential RNAs from Alternative F because of their unique values and characteristics, and designated them as Unique Biological, Geological, Historic Areas. (See also, response to PC# 4.0.6-18)

PC# 4.0.6-60
Public Concern: The Chippewa National Forest should include a statement in the management direction for Unique biological, Aquatic, Geological, or Historical MAs regarding the significance of the Bear Island areas to tribal interests.

Agency Response:
The referenced text has been edited as follows: " Bear Island: An undeveloped island in Leech Lake that is significant in American Indian heritage and contains unusual plant communities because of its location in a warmer, lake-effected microclimate."

Experimental Forest MA

PC# 4.0.6-52
Public Concern: The Chippewa and Superior National Forests should establish Experimental Forest Management Areas acres in each of the LE's on both Forests.

Agency Response:
Additional Experimental Forests on the Superior National Forest was not identified as a needed change during early scoping with the North Central Forest Experiment Station or other interests. However, the focus of the RNAs to preserve and maintain areas representative of all LEs for ecological research, observation, genetic conservation, and monitoring purposes presents opportunity for the type of research referenced by the commentor. In addition, Forest-wide vegetation management objectives provide specific direction to attain desired vegetation age/type/spatial distribution across the landscape.

PC# 4.0.6-53
Public Concern: The Final EIS should explain why the number of acres in the Experimental Forest Management Area has increased

Agency Response:
In Aug. 2002, District Ranger Wade Spang signed a decision to allow the construction of new Experimental Station Facility outside of the existing Marcell Experimental Forest Boundary. The Experimental Forest boundary was not adjusted at that time as allocation of Management Areas is a Forest Plan (not project) level decision. During Forest Plan Revision an adjustment of the boundary to include the new facility site was incorporated into the alternatives and resulted in increased acres within Experimental Forests on the Chippewa. The Forest Plan Revision process is the appropriate means to address this issue and includes ample opportunity to comment on this and other proposed changes in Management Area Allocation.

PC# 4.0.6-54
Public Concern: The Forest Service should establish the Chippewa National Forest as a national preserve of 1,681,000 acres and designate the Chippewa National Forest as a National Wilderness of 1,093,000.

Agency Response:
The Forest Service does not have authority to re-designate an entire National Forest. The National Forest Management Act requires that national forests be managed for multiple resource benefits that include sustainable renewable resources. Based on this premise, the need for change and analysis of alternatives, the Regional Forester selected a management direction that balances the various resource needs on the Chippewa National Forest. Forest-wide objectives, standards and guidelines along with allocations to management areas in the revised Forest Plan protect sensitive scenic and biological attributes. An analysis of potential wilderness areas did not identify any areas on the Chippewa that meet criteria to be recommended for wilderness designation.

PC# 4.0.6-55
Public Concern: The Forest Service should establish the Superior National Forest as a National Reserve of 4,256,000 acres and designate the Superior National Forest as a National Wilderness of 3,619,000 acres.

Agency Response:

As noted in the previous response, the Forest Service does not have authority to re-designate an entire National Forest. The National Forest Management Act requires that national forests be managed for multiple resource benefits that include sustainable renewable resources. Based on this premise, the need for change and analysis of alternatives, the Regional Forester selected a management direction that balances the various resource needs on the Superior National Forest. Forest-wide objectives, standards and guidelines along with allocations to management areas in the revised Forest Plan protect sensitive scenic and biological attributes. An analysis of potential wilderness areas did not identify any areas on the Superior that meet criteria to be recommended for wilderness designation.

PC# 4.0.6-56
Public Concern: The Forest Service should manage the Chippewa and Superior National Forests as Wildlife Fish Plant Habitat Preserve Sanctuaries

Agency Response:
The National Forest Management Act requires that national forests be managed for multiple resource benefits that include sustainable renewable resources. Based on this premise, the need for change and analysis of alternatives, the Regional Forester selected a management direction that balances the various resource needs on the Chippewa and Superior National Forests. Forest-wide objectives, standards and guidelines along with allocations to management areas in the revised Forest Plan provide direction to maintain habitat for all desired wildlife, fish and plant species.

PC# 4.0.6-58
Public Concern: The Chippewa and Superior National Forests need to define the Minimum Management Natural Area in the Draft EIS.

Agency Response:
The Minimum Management Natural Area MA is defined in section 2.3.4 of the FEIS. This MA only applies to Alternative D. The revised Forest Plans are based on Modified Alternative E. Additional information regarding management within this MA is contained in section 2.4.4 of the FEIS.

Natural Resource Management

Timber

Timber – General (4.1)

PC# 4.1-2
Public Concern: The Forest Service should include all timberlands during modeling to avoid artificial restraints on timber volumes.

Agency Response:
Timberlands is the term used by Forest Inventory Analysis (FIA) to identify productive lands capable of being managed to produce commercial forest products and not restricted by administrative or legislative action. Timber harvest was modeled on all lands identified as suitable for timber management as defined by the Forest Service

(see FSH 2409.13). Our inventory data was used to eliminate forestlands with low site index values or regeneration problems from the timber suitable lands. In addition some of the Management Areas, such as candidate RNAs or Unique Biological Areas, were identified as having direction that would preclude managing for timber products. The lands identified as suitable for timber management varied by alternative. Only the benchmark runs identified all timberlands as available for harvesting. Approximately 73% of the forested lands on the Chippewa and 70% of the forested lands outside of the BWACAW on the Superior are currently in the suitable base.

PC# 4.1-3
Public Concern: The Chippewa and Superior NFs should rerun the timber harvest model using the acres within the ¼ mile corridor.

Agency Response:
The Forests follow agency direction (Agriculture Handbook 701) on scenery management. The lands within ¼ mile of scenery sensitive trails, roads and waterways are available for harvest and were considered during harvest modeling. Forest Plan G SC-1 states that temporary openings in high scenic integrity areas will be similar in size, shape and edge characteristics to natural openings in the landscape being viewed. Model constraints did not allow clearcutting in highly sensitive scenic areas. All harvest methods are available in the moderately sensitive scenic areas in the selected alternative within this ¼ mile area.

PC# 4.1-4
Public Concern: The Final EIS and Plans should detail the bases for 7% reduction in area of available timberland.

Agency Response:
The basis for this reduction in timberlands is from the MNGEIS, page 251 of Maintaining Productivity and the Forest Resource Base, A Technical Paper for a Generic Environmental Impact Statement on Timber Harvesting and Forest Management in Minnesota, December 1992.

PC# 4.1-5
Public Concern: The Final EIS and Plans should consider the volume from Alternative D as contributing to the Allowable Sale Quantity (ASQ).

Agency Response:
The Management Areas identified for Alternative D do not include producing commercial forest products for societies needs as part of the Management Area purpose, thus do not fit the Forest Service definition of lands suitable for timber production. Only volume harvested from lands suitable for timber production can contribute to ASQ (FSH 2409.13). The volume modeled from harvesting in Alternative D was considered in the effects analyses of the FEIS (Chapter 3). It was not referred to as ASQ.

PC# 4.1-6
Public Concern: The Final EIS should substantiate the assertion that reduced harvesting on National Forest lands will increase harvesting on private lands and increase imports through an independent study.

Agency Response:

The information that reduced harvesting on National Forest lands results in increased harvesting on private lands and increased imports from outside Minnesota comes from a DNR publication that can be found online at http://files.dnr.state.mn.us/forestry/um/ mnforestresources.pdf, page 16 of the 2003 version. This is an annual report that is updated each year. The information in the EIS was from the 2002 publication. The information is further substantiated in the Governor's Advisory Task Force Report on the Competitiveness of Minnesota's Primary Forest Products Industry (State of MN, 2203)

PC# 4.1-7
Public Concern: The Chippewa and Superior NFs should have the yield tables used in the analysis peer reviewed for accuracy.

Agency Response:
The development of the yield tables has two objectives. The first is to provide the volume information necessary to display volume and stumpage value differences for each alternative analyzed in for the Forest Plan Revision. The second objective is to document the volume yields used in the analysis for comparison with actual yields obtained during implementation of the future revised Forest Plan. This will require monitoring and evaluation to determine if the projected yields are actually being realized. The Washington Office Service Center in Ft. Collins, Colorado, supplied the software and expert advice used to create the yield tables. Three major software programs were used: PreSuppose, Suppose and FVSStand. Several modifiers are available to improve the volume projections from FVSStand. The following modifiers were used to improve the growth projections: readcord, biamult, mortmult and fixmort. Readcord and Biamult are modifiers that change the diameter growth of individual trees. Mortmult and Fixmort are modifiers that change the rate of mortality for individual tree species.
After developing these yield tables, it was suggested they be compared against other information in an attempt to validate their accuracy. One such comparison was done with the Lakes States Manager's Handbook series of publications, which usually included some yield information. Another comparison was done with RPSIM, a model developed to project red pine growth. Finally, comparisons were made between yields from past harvest volumes on both Forests to those projected by yield tables. Adjustments to the yield tables were made at several points throughout the process and reflect what experienced land managers believe is a good representation of those yields that will be achieved during implementation of the Forest Plans.

Monitoring of harvest activity and yields generated will occur from the onset of the Plan implementation. If it is determined that the yield tables and therefore the ASQ were set too low or too high are too high to meet vegetation objectives or projected outputs, the Plans can be amended.

PC# 4.1-8
Public Concern: The Final EIS should use harvest volume, rather than sold volume when describing 'current situation'.

Agency Response:
Section 3.4. of the FEIS identifies both the historic harvest and sold volumes from the National Forests. Forest Plans establish appropriate maximum sale volumes. Harvest volumes are dependant on on market factors outside of the Forests' control. The question our Forest Plans are attempting to answer is the amount of volume to sell during the next ten years. All volume sold is available for harvest, though some sold volume does remain unsold during the year. The actual volume that may be harvested each year varies from year to year, but should be close to the sell volume over a ten-year period. The sell volume over the ten-year period is our best estimate of the volume that will be harvested in the next ten years.

PC# 4.1-9
Public Concern: The Final EIS should include information on the 1986 Plans intended cutting levels and the total sale program quantities.

Agency Response:
The ASQ values identified the timber sale program quantities (TSPQ) for each Forest in the 1986 Forest Plans. These values were 97 MMBF for the Superior NF and 79 MMBF for the Chippewa NF. The FEIS will include these values as suggested.

PC# 4.1-10
Public Concern: The Final EIS should include more, clearer information on volume sold by year by Forest.

Agency Response:
Information for 2001 and 2002 has been added to the tables and graphs in Section 3.4.2 and attempts have been made to enlarge and improve these products in the FEIS. Information on the TSPQ during implementation of the 1986 Plan can also be found in the monitoring reports for each Forest. ASQ is a maximum ceiling, it is not a target.

PC# 4.1-13
Public Concern: The Final EIS should disclose the current amount of timber supplied from the National Forests and how it contributes to the total Minnesota timber supply.

Agency Response:
The National Forests are managing for multiple resources including the production of timber for societies needs. Seven alternatives were identified and considered with the effects of each displayed in Chapter 3. The timber sale program quantity identified in the new Forest Plans is the Allowable Sale Quantity (ASQ) values expressed on an annual basis. This ASQ only includes volume chargeable as ASQ. It does not include firewood. Some volume will be harvested in the next 10-15 years that is non-chargeable to ASQ. This wood is expected to come from harvesting on non-suitable timberlands (Forest Service lands with LSC codes in the 800 series – productive timberlands with other resource emphasis than producing timber) to meet resource objectives other than producing commercial wood for societies needs and firewood products that are harvested from suitable timberlands. Chapter 3 of the FEIS (section 3.4.2) does identify the amount of wood harvested from the National Forests in Minnesota and the total amount of wood used by industry in Minnesota. Improvements to the display of this information have occurred compared to the Draft EIS due to this and other comments.

PC# 4.1-14
Public Concern: The Final EIS should respond to the Governor's Task Force on the Competitiveness of Minnesota's Primary Forest Products Industry Report.

Agency Response:
The National Forests are managing for multiple resources including the production of timber for societies needs. Seven alternatives were identified and considered with the effects of each displayed in Chapter 3. The effects of the reduced harvesting the past five years are recognized. Future harvest effects on the identified indicators, including employment and income, are analyzed for each projected harvest level for each alternative. The tie between the Landscape Ecosystem age class objectives and the even-aged harvesting used to achieve these objectives should stimulate a harvest level closer to the ASQ amount than has occurred in past years. ASQ is a maximum ceiling not a target. The question of the FS taking a lead in third party certification of wood harvested on national forest lands is considered to be an agency task and not a Forest Plan level decision.

PC# 4.1-15
Public Concern: The Final EIS should assess the ability of the forest products industry in Minnesota to utilize the volume projected for the next 100 years.

AND

PC# 4.1-19
Public Concern: The Final EIS should correct the faulty assumption that national demand for wood fiber is increasing.

Agency Response:
Numerous publications state demand for wood products will increase in the future. The Forest Products Laboratory Research Note (FPL-RN-0287) dated December, 2002, suggests the low interest rates will continue the current strength in the housing sector, which is creating demand for softwood sawtimber, plywood and oriented strandboard. Domestic paper and paperboard production has declined during the past two years. This is accredited to trade patterns resulting from the weakened US economy and the strong dollar. Locally, the Governor's Task Force Report on the Competitiveness of Minnesota's Primary Forest Products Industry (July, 2003) suggests 'wood and fiber availability and price are the number one factor impeding the ability of Minnesota's mills to compete. The Minnesota's Forest Resources (revised 8-28-2002) identifies Minnesota's mills have become a net importer of wood as stumpage prices have risen and wood availability has declined. In the next 50 years the demand for wood and wood fiber in the United States is expected to increase by 40 percent, primarily due to increasing population, not increased per capita consumption (USDA-FS, NC-228, May, 2002). Minnesota's mills using wood from the National Forests may or may not successfully compete in the market place over the next 100 years. The ASQ figures for the two National Forests are driven by the desired vegetation objectives and Management Area direction. This outcome identified for the preferred alternative has resulted in ASQ values lower than the 1986 Forest Plans but higher than the volume that has actually been sold over the past several years.

PC# 4.1-16
Public Concern: The Final EIS should disclose how the increased demand for wood can be met by the Forests as described in table TMB-13.

Agency Response:
Table TMB-13 identifies the percentage of the two harvest levels disclosed in the MNGEIS that may be supplied by the National Forests for each alternative. The table reflects the percentage, by alternative, for those two volumes only and if demand were to increase or decrease, the percentage of the total produced by the National Forest would also change. The ASQ is a maximum ceiling and is set in million board feet, not as a percentage of demand. The FEIS displays the effects for all indicators of producing the ASQ for each alternative. Recent harvest levels have been slightly less than the lower figure of 4.0 million cords shown for Minnesota. The preferred alternative is comparable to historic harvest levels on the National Forests in Minnesota.

PC# 4.1-17
Public Concern: The Final EIS should disclose Mr. Reeves credentials and the sources quoted should be in the planning record.

Agency Response:
Mr. Reeves credentials have been included in section 4.2.7 of the FEIS. The official record has copies of the appropriate mill surveys.

PC# 4.1-20
Public Concern: The Final EIS and Plans should use a spatial model to estimate timber outputs.

Agency Response:
The Final EIS did use a spatial model as suggested. The effects analysis for selected alternative is based on outputs from those modeling efforts.

PC# 4.1-21
Public Concern: The Final EIS should provide information on interstate log flows.

Agency Response:
Interstate log flows would not be a good indicator of the difference in effects between alternatives. The indicators chosen for analysis are chosen so that they can provide the decision maker with information that will help to choose one alternative over another. The Governor's Advisory Task Force Report (State of MN, 2003) list several factors that influence interstate log flows including high stumpage prices, the existing transportation system, timber certification and several others that contribute to the net import and export of wood in Minnesota. It also shows that as timber harvest declined on public lands, there was a accompanying rise on timber harvest from private lands. Also, the analysis of effects is based on the ASQ as a maximum ceiling. The ASQ for both Forests while higher than recent harvests is lower than the ASQ in the 1986 Plans and is similar to the averages harvested over the past decade.

PC# 4.1-22
Public Concern: The Final EIS should demonstrate the Forest Service maximizes the price received for wood.

AND

PC# 4.2.1-22a
Public Concern: The Forest Service should not subsidize the timber industry.

Agency Response:
The following statements are part of the 'Forest Service Comments on the Report Entitled "The Economic Case Against National Forest Logging" ', cover letter signed by Ann M. Bartuska, Director, Forest and Rangeland Staff on November 6, 2000 (http://www.ifia.com/Special_Reports/Talberth_Letter.PDF). These statements fully respond to the concerns.

> "When a sale is offered, it is offered competitively – and the contract is normally awarded to the firm offering the highest bid. These requirements have been imposed to help insure that the government is justly compensated for any timber it sells. Arguments of a subsidy arise from the fact that the price the government charges for timber is not always sufficient to cover its full costs of sale preparation and administration. … the Forest Service cannot always price its timber high enough to cover its full costs of production, because if it did so – in some instances it would only succeed in driving itself out of the market – which would compromise its ability to use timber sales as a management tool … Given that the US is a net importer of wood products, the argument that national forest timber sales adversely affect private forest owners is difficult to accept. The domestic market is large enough to accommodate all interested domestic producers."

PC# 4.1-24
Public Concern: The Final EIS should cite the sources and analysis for the statements in Appendix H.

Agency Response:
As stated on page H-7, the impacts and conclusions are from the MN GEIS with consideration of the direction in the Forest Plans. National Forest management is guided by, among other things, the Organic Act and by the

Multiple Use Sustained Yield Act and it is unclear if land managed under this direction is analogous to the respondents use of the term "wild forests". The effects of the proposed level of harvest are displayed in Chapter 3 of the FEIS.

PC# 4.1-25
Public Concern: The Final EIS should adjust stumpage values to display the different revenues realized when using different types of harvest treatments.

Agency Response:
The Forest Service agrees with the stated concern but rather than adjust stumpage values which vary from year to year and sale to sale, we addressed this concern during modeling. Appendix B of the FEIS identifies the different sale preparation and administration costs used in the model when clearcutting versus partial harvesting. In this way, differences between the mix of harvest methods is reflected in Net Present Value (NPV) by alternative. See Response to PC 5.5-1 and 5.5-3 for more information on NPV.

PC# 4.1-26
Public Concern: The Final EIS should explain how the types of harvest in Chapter 3 relate to the types of harvest described in Appendix B.

Agency Response:
The Final EIS will explain the relationship as requested (See Sect. 3.4.1.b of the Final EIS). In Appendix B the treatment types are numbered with values of 1 through 17. The treatment types 1 through 5 were considered even-aged treatments in Table TMB-2 in the Final EIS. Treatments 6 through 12 and treatments 15 & 16 were considered uneven-aged treatments. Treatment 13, 14 and 17 are not modeled as harvest treatments and not included in Table TMB-2.

PC# 4.1-27
Public Concern: The Final EIS should explain the meaning of 'proposed and probable' in Tables FAC-31 and FAC-32, also relate the acres to volume and the funding basis used.

Agency Response:
In the FEIS and Forest Plans the term 'proposed' refers to the modeled management activities occurring during the first decade of implementation and the term 'probable' refers to those occurring in the second decade of plan implementation. The two tables referenced are displaying the average acres by treatment that was modeled to occur during the first two decades. The acres have not been related to volume other than in a general discussion of the differences between even-aged and uneven-aged and number of trees retained in section 3.4.1 of the FEIS. The funding was an input to the FEAST analysis, mentioned in Appendix B under heading Economic Impact Analysis and is available in the official record. The timber funding related to the harvest is similar to past funding levels.

PC# 4.1-28
Public Concern: The Forest Service should provide specific information regarding logging methods used and define desired conditions.

Agency Response:
The Landscape Ecosystem Objectives in Chapter 3 of the Forest Plan are driving the vegetation conditions by individual Landscape Ecosystem. The Management Areas (MA) have direction that generally relates to where on

the Forest different vegetation conditions will occur – more older vegetation for example. Appendix D of the Forest Plan identifies the activities that were modeled to occur within each MA when achieving the vegetation objectives by LE and following the MA modeling rules thought to best represent future activities within each MA. The strategic guidance provided in the Forest Plan does not restrict the type of harvest that can occur within a MA, although it does identify when within the rotation ages, scheduled harvesting may occur.

PC# 4.1-29
Public Concern: The Final EIS should present the negative effects of even-aged management, especially clear-cutting.

Agency Response:
Chapter 3 of the FEIS displays the positive and negative effects of even-aged and uneven-aged harvesting on all analyzed resources. When clearcutting or even-aged treatments have significant negative effects on a resource area, those effects are disclosed when the specific resource is discussed. See section 3.3.2.a for an example.

PC# 4.1-30
Public Concern: The Final EIS should consider changing the uneven-aged indicator term to a broader mixed-age management.

Agency Response:
The Society of American Foresters, Dictionary of Forestry (1998) describes uneven-aged stands as those stands that have three <u>or more</u> distinct age classes. Using this established definition provides some consistency during implementation. Desired Future Conditions and Objectives for Vegetation Composition and Structure (D-VG-6, O-VG-7 through 10 for the CNF and O-VG-6 through 9 for the SNF) provide a framework for increasing structure and diversity both within and across stands and the term “uneven-age management” conveys that intent.

PC# 4.1-31
Public Concern: The Final EIS should separate Table TMB-3 and TMB-4 by Forest to make the information more meaningful.

Agency Response:
The Final EIS separates these tables as suggested.

PC# 4.1-33
Public Concern: The Final EIS should improve the cumulative effects section for timber supply.

Agency Response:
The cumulative effects of each section attempt to look at the larger landscape. We have chosen to summarize the cumulative effects at the Section Level of the National Hierarchical Framework of Ecological Units for most issues. Some issues lend themselves to cumulative effects at larger landscapes, such as the State of Minnesota or the Lake States, rather than ecological units. The effects of harvest levels for each of the alternatives are discussed throughout the FEIS, including the environmental effects of increasing the harvest levels on national forest administered lands.

PC# 4.1-34
Public Concern: The Chippewa and Superior NF should emphasize more sawtimber.

AND

PC# 4.1-35
Public Concern: The Plans should include desired conditions for high quality pulpwood and sawtimber.

Agency Response:
The amount of sawtimber estimated for each alternative is identified in section 3.4.3 of the FEIS. The selected alternative will provide increased amounts of sawtimber compared to the 1992-2000 years. Quality of wood is represented by age of the stand that is harvested to some extent. Stands harvested shortly after reaching the minimum harvest age, usually provide higher quality pulpwood. Stands harvested at older ages will normally have more, higher quality sawtimber. The selected alternative schedules regeneration harvesting in all age classes greater than the minimum harvest age and also includes thinning. Since more, older age classes are managed on the landscape in the future, more, higher quality sawtimber will be provided to industry. Pulpwood products from these older stands will generally be of less quality than products from younger stands. The species/product mix produced by the preferred alternative is strongly related to utilizing harvesting to meet the landscape ecosystem objectives.

PC# 4.1-37
Public Concern: The Plans should not allow trees harvested to be used in wood-burning energy plants.

Agency Response:
The Forest Service sells stumpage to the highest bidder using timber sale contracts that require the trees to be harvested and removed. The Forest Service does not determine which industry will utilize the wood harvested or the actual end product manufactured (in this case energy).

PC# 4.1-38
Public Concern: The Chippewa and Superior NFs should include the volume from trees cut for road construction in the ASQ and they should reforest roadways after harvest.

Agency Response:
The Forest Service includes all commercial wood harvested from suitable timberlands as part of ASQ, including those trees that are harvested as part of road construction. If constructed roads are not planned for future use as openings, roads, trails or other use, they are reforested. This is usually decided during project analysis.

PC# 4.1-39
Public Concern: The Final EIS and Plans should mention harvest on non-suitable timberlands.

Agency Response:
Timber may be harvested from non-suitable timberlands, however, it will not be planned as a regularly scheduled activity. Timber may be harvested from these lands for objectives other than timber production, for example harvest may occur prior to planting or conversion to enhance riparian function in the near bank riparian zone. The amount of volume and acres treated cannot be predicted, but it is expected to be small and would not clearly

indicate differences between alternatives. Since, it cannot be predicted no amount is estimated and included in the FEIS or Forest Plan. The FEIS and Forest Plans will mention harvest on non-suitable timberlands as suggested.

PC# 4.1-40
Public Concern: The Final EIS and Plans should include additional areas identified as 'not suitable for timber production'.

Agency Response:
Suitable lands are those lands that include timber harvesting as an identified and scheduled management practice. The full definitions for suitable and tentatively suitable lands are included in the FEIS (Sect. 3.4.2). Land identified as suitable for timber production varies by alternative. Lands not suited for timber production include those lands withdrawn due to Management Area direction, but also those lands that have been withdrawn by Congress, those lands where there is not a reasonable expectation that re-stocking will occur within five years, and those lands where the protection of soil productivity and watershed conditions cannot be adequately assured.

PC# 4.1-41
Public Concern: The Plans should address the factors identified for reduced harvest in recent years.

Agency Response:
The identified factors are addressing changes that have taken place since the 1986 Forest Plans were implemented. Forest Plan revision analysis efforts have taken this into consideration. The effects analysis uses current condition as a starting point and such things as insect and disease, beaver flooding and increased timber sale costs are reflected in the current condition. If funding is provided, the new plan can be implemented providing the volume identified however Congress ultimately determines the funding levels and resulting targets.

PC# 4.1-42
Public Concern: The Plans should include harvesting in Management Areas other than General Forest.

Agency Response:
The Plans do include harvesting in other Management Areas. See Appendix D of the Forest Plan for acres harvested within each MA. Under the selected alternative, approximately 73% of the forested lands on the Chippewa and 70% of the forested lands outside of the BWACAW on the Superior are in the suitable base. Suitable lands occur in most management areas. These are listed at the front of each MA description in the Forest Plans.

PC# 4.1-43
Public Concern: The Chippewa should allow the harvest of those stands where investments by the Forest Service and others have improved the wood quality.

Agency Response:
Lands classified as suited for timber production are available for harvest. Approximately 73% of the forested lands on the Chippewa are classified as suitable for harvest. It is unclear which specific stands that the commenter refers to, however they are likely available for continued timber management.

PC# 4.1-44
Public Concern: The Chippewa and Superior NFs should establish and manage toward a timber harvest target to be accountable to people in local communities.

Agency Response:
The Forest Plan includes desired conditions and objectives to supply a consistent level of timber harvest for industry. Appendix D of the Plan identifies the percentage of the harvesting that is associated with even-aged management which is directly tied to the Landscape Ecosystem age class objectives. If we do not approach the sell volumes identified in the Plan, we will not achieve the vegetation resource objectives desired in the Plan. Other than the maximum amount of commercial volume that may be harvested during the ten-year planning period (ASQ), no target volumes for amount of harvest are stated. The sell volume is set by Congress each year through the budget process for the nation and allocated by the agency to each National Forest.

PC# 4.1-45
Public Concern: The Plans should include a statement of the ecological rationale and practicality of an ASQ above the level of harvest during the previous planning period.

Agency Response:
The Plan includes goals, desired conditions, objectives, standards and guidelines related to all resources, including timber harvest levels. The Record of Decision (ROD) includes the rationale for selection of the selected alternative.

PC# 4.1-46
Public Concern: The Plans should include direction on when timber sales can fund stewardship contracts under President's Healthy Forest Initiative.

Agency Response:
The Plan is concerned with achieving the desired goals, objectives and resource conditions in an environmentally acceptably manner. It does not specify the types of contracts used to achieve the desired conditions. With direction provided by the HFI and HFRA, Congress believes it has provided the Forest Service with the tools necessary to address hazardous fuels and risk of wildfire along with associated issues of salvage, forest health and stewardship contracting. This direction will be used during project planning.

PC# 4.1-49
Public Concern: The Plans should promptly salvage dead trees in the Ten Section Area on the Chippewa NF.

Agency Response:
See O-WL-24 (SNF) & O-WL-26 (CNF), which calls for leaving dead trees to meet habitat needs of Three-toed woodpecker or Black-backed woodpecker, respectively. Also see O-VG-11&12, which identify the need to retain naturally disturbed areas that are not salvaged. Salvage will continue to be analyzed using the NEPA process after an event occurs to determine how much if any salvage should occur to meet Forest Plan direction. The BWCA Wilderness and Research Natural Areas (including potential RNAs) are the only MAs where salvage is not an option. The recent Healthy Forest Restoration Act gives guidance related to salvage. Objective O-ID-3 also encourages harvest where fuel management concerns create an unacceptable risk of wildfire.

PC# 4.1-51
Public Concern: The Chippewa and Superior NF should consider acres harvested as an indicator for timber supply.

Agency Response:
The Forest Plans use both acres for vegetation objectives and volume supplied to industry as indicators. The acres are a quantified objective, while the volume sold is shown in Appendix D. The volume sold is estimated by applying the proposed and probable treatments to the identified acres. If, through monitoring and evaluation, the volume estimate is shown to be in error, the Forest Plan could be amended.

PC# 4.1-52
Public Concern: The Chippewa and Superior NF should manage using longer rotation ages.

AND

PC# 2.7.1-29
Public Concern: The Chippewa and Superior Forest Plans should provide rotation ages by management areas and legacy patches.

Agency Response:
The Forest Plans give direction for the amount of each age class to be present by Landscape Ecosystem. This direction along with the minimum harvest age determines at what age stands will be harvested. The Plan does not specify specific rotation ages, rather LE age class objectives are set and lands managed to meet these objectives. Generally, more older age classes are desired in each LE. The management approach to achieve this condition in the long-term is to only do even-aged harvest on the amount shown for the youngest age class, (0-9) in any one decade. The Management Areas set direction and emphasis as to where specific activities may occur, but do not drive the vegetation objectives. Vegetation objectives including age classes are set based on the Landscape Ecosystem.

PC# 4.1-54
Public Concern: The Chippewa and Superior NFs should define the term 'manageable forested stands' in guideline G TM-3.

Agency Response:
The term 'stand' is defined in the glossary. Stands are the management entity we use to manipulate vegetation. Generally, forested stands are ten acres or larger, unless a management need exists to have smaller stands.

PC# 2.7.1-21
Public Concern: The Chippewa and Superior NFs should use primarily natural regeneration along with diverse native seed stock where mechanical regeneration is used and not convert native forests to plantations because forest cover should be managed for natural complexity.

Agency Response:
We cannot achieve the desired vegetation objectives using only natural regeneration due to missing seed sources of desirable species in many stands and difficulty in achieving natural regeneration of some tree species. When tree species are planted, safeguards are in place to assure the seed source is appropriate for the site. Tree species diversity objectives will contribute to within stand tree species diversity. The objectives are different for each LE to provide a representation of the conditions that occurred historically. Some stands will still be managed with one species dominating when that was determined to exist historically. Aspen, jack pine, lowland black spruce

and red pine are examples of such stands – recognizing that mixed species stands of these forest types are also desired.

PC# 4.1-56
Public Concern: The Chippewa and Superior NFs should specify how long between harvests in legacy patches, compartments and management areas.

Agency Response:
The legacy patches identified in S TM-5 are areas reserved from harvest during clearcutting of the stand. The intent is for these areas to remain until the next commercial harvest entry (either thinning of the stand 25 years or more after the clearcut or the next regeneration harvest in 40 or more years). Timber harvest will be used as one of the tools to meet vegetation objectives by LE. A standard "hands off or time out" period by compartment or management area would likely hamper the decision maker's ability to meet vegetation, spatial and forest health objectives. Cumulative effects of repeated entries into MAs and LES will be analyzed for each project.

PC# 4.1-57
Public Concern: The Chippewa and Superior NFs should not harvest in lowland conifers.

Agency Response:
Most of the lowland conifer stands on both Forests meet the definition of suitable timberlands. Exceptions include stands of northern white cedar and stands with low site indexes. The lowland conifer stands identified as productive forestlands without regeneration concerns, located in Management Areas that allow harvesting, are identified as suitable for timber management. Vegetation objectives for age classes by LE will direct the amount of harvesting that occurs. Monitoring will occur to ensure that regeneration and re-stocking meets NFMA standards.

PC# 4.1-58
Public Concern: The Plans should include a standard restricting the harvest of cedar.

Agency Response:
The northern white cedar stands are not scheduled for regular harvest and not considered suitable for timber management. Only experimental treatments to learn how to successfully regenerate cedar are permitted. G TM-4 directs that cedar will only be harvested when re-growth is likely or for research purposes. The Forest Service believes this direction is better stated as a guideline than a standard.

PC# 4.1-60
Public Concern: The Plans should include guidelines to protect ecosystem recovery and use least intrusive techniques, except under special circumstances.

Agency Response:
The Forest Service is managing for multiple resource objectives. Ecological safeguards are included in the Plans as objectives, standards and guidelines. The effects of the planned treatments are disclosed in the FEIS and determined in the ROD to be acceptable with the direction given in the Plan.

PC# 4.1-61
Public Concern: The Plans and Final EIS should clearly state the types of harvest prescriptions

allowed for each Forest to address the vegetation differences between the two Forests.

Agency Response:
As suggested this information will be separated for each Forest in the FEIS. Each Plan also includes information by Forest in Appendix D of the Plan.

PC# 4.1-63
Public Concern: The Chippewa and Superior NF should separate the vegetation and recreation goals in the Forest Plan into separate resource areas to make it easier to determine the effects on each resource.

Agency Response:
The intent of the Forest Plans is to be strategic in nature and to recognize the integration of resources in terms of ecosystems, social, and economic conditions. Given those expectations, the format of the Final Plans is intended to reflect those connections and therefore discusses the variety of goals together. There are a number of items in the revised Forest Plans and EIS that were clarified for better understanding in response to comments. If you have further questions, please call either the Chippewa or the Superior NF, as identified in the revision documents.

PC# 4.1-64
Public Concern: The Chippewa NF should increase the amount of trees retained in clearcuts as legacy patches.
Agency Response:
In the 1986 Plan the Standard and Guideline called for retaining patches or inclusions of deciduous species in conifer stands and vice versa [where they exist] for all clearcut stands greater than 15 acres in size and also states that these leave patches will aggregate to no more than 10 percent of the stand area and inclusions will be at least ¼ acre. In the new CNF Plan, all stands greater than 20 acres that are clearcut will retain a minimum of 5% in legacy patches and these patches will be at least two acres in size whenever possible. We will also incorporate MFRC guidelines for leave tree retention within the stand. The two standards are not completely comparable, monitoring will occur to determine if the legacy patch standards are meeting diversity objectives.

PC# 4.1-65
Public Concern: The Chippewa and Superior NF should reforest areas harvested to sustain the forest and clean the air.

Agency Response: The Forest Service does reforest areas harvested, unless the harvest is done to create non-forested conditions, such as wildlife openings, roads or recreation sites. S TM-5 gives direction to reforest areas within five years.

PC# 4.1-66
Public Concern: The Plans should include a standard or guideline for retaining leave trees.

-To provide a large tree resource for cavity dependent animals.
-To clump the residual trees rather than leave them scattered.

Agency Response:
We have adopted the MFRC's site-level guidelines as guidelines to allow the flexibility of either leaving reserve trees as scattered individuals or clumps. In addition S TM-5 directs the retention of legacy areas in clearcuts.

PC# 4.1-67
Public Concern: The Forest Plans should have a standard clearly specifying that only dead trees be salvaged.

Agency Response:
The Forest Plan definition for salvage is consistent with the definition of salvage in the Dictionary of Forestry (Society of American Foresters, 1998) "the removal old dead trees or trees damaged or dying because of injurious agents other than competition, to recover economic value that would otherwise be lost." Salvage normally occurs after damage from insects, disease, wind or fire. Stands may be damaged to the point where removing the damaged trees would leave stands with less tree stocking than desired, triggering a regeneration harvest where additional live are harvested. In other instances damaged trees can be removed retaining an adequately stocked stand. Trees that have been dead for more than a couple of years are usually not merchantable. Frequently, mills cannot use trees that have been dead more than 6 months. During eastern spruce budworm epidemics, dead balsam fir trees are usually not merchantable due to loss of moisture. Salvage to recover economic value needs to occur prior to mortality. Also see response to PC 4.1-49.

PC# 2.6.4-42
Public Concern: The Chippewa NF Plan should reduce the amount of harvest in northern hardwood forest because:

- **There is limited market for it outside firewood.**
- **It appears that it is being heavily targeted just to increase the harvest acreage.**
- **It is provides important resource for tribal members.**

Agency Response:
Stands identified as important for some traditionally gathered products (maple syrup) were removed from suitable timberlands. The market for northern hardwood species is rapidly improving as mills are substituting these species for aspen in manufacturing of paper and panelboard. Northern hardwood species are also used for sawtimber. Forest wide Vegetation Objectives (Forest Plan Table DPL-2) call for a slight increase in Northern hardwood type of +1% in the first decade with a long term goal of increasing the northern hardwood type by 4% across the Forest.

PC# 2.6.4-64
Public Concern: The Chippewa and Superior NFs should continue and expand stand entries to conifer plantations to improve diameter and fiber quality while increasing understory abundance and diversity.

Agency Response:
Thinning and other treatments, including multi-aged management with multiple stand entries are planned to meet multiple use objectives. See the Forest Plan Desired Conditions and Objectives for Vegetation Composition and Structure for increasing within stand diversity.

PC# 2.6.7-29
Public Concern: The Plans should change S-TM-7 to increase the minimum allowable age for even-aged regeneration for white pine to much older than 60 years old.

Agency Response: The minimum age is identified at the culmination of mean annual increment to meet the intent of the National Forest Management Act of 1976. The actual harvest ages are related to the age class objectives identified for each LE.

PC# 2.6.7-29a
Public Concern: The Chippewa and Superior NFs should use good timber, a renewable resource.

Agency Response:
The Forest Service makes an effort to sell timber sales shortly after sale preparation is complete, however, events such as appeals and litigation may delay the sale. Timber that is sold and marked may be harvested at any time within the contract period (usually five years). Timber sales are the primary means of managing vegetation on the Chippewa and Superior NFs.

PC# 1.4.1-1
Public Concern: The Chippewa and Superior NFs should add more detail to Appendix B of the Final EIS in the description of the modeling, particularly model assumptions and uncertainties.

Agency Response:
More information and clarification has been added to Appendix B Model uncertainty does exist. Models are meant simulate current conditions and projected sets of actions and then to project likely outcomes based on the best available information.

PC# 2.3.3-1
Public Concern: The Plans should include goals, desired conditions and objectives to improve forest productivity, because current growth rates are far below potential growth rates.

Agency Response:
Increasing forest productivity (growth and yield) emphasizes only the commodity values of the forest. The Forest Service operates under a multiple-use mission, which dictates that the forest be managed for a much broader purpose than its commodity values. This plan is outcome based, meaning that desired future conditions, objectives, and goals are centered around what condition the forest will be left in after management actions take place. Outcomes will be based on such things as short and long term species composition, age-class distribution, spatial arrangement and patterns, variety of habitat types and conditions, variety of recreation settings, general vigor and health of the forest and ecosystems, sustainability of ecosystems over time to provide a variety of uses, values, products and services for present and future generations, etc. These outcomes are not necessarily at odds with improved growth and yield, but represent a broader purpose than the commodity value alone. Forest productivity is given consideration within the context of the overall mission of the agency. Elevating increased growth and yield objectives to stand alone goals would be at odds with an outcome based plan. Alternatives A and C proposed more intensive management of timber resources that may have increased growth rates and increased removals as a percent of total growth. In Modified E, the General Forest MA emphasizes wood production and will have the most amount of young forest and the largest sized timber harvest units.

<u>Amount of Timber Harvested (4.2.1)</u>

PC# 4.2.1-1
Public Concern: The Superior NF should use a more ecological approach in determining harvest volumes.

Agency Response:
The existing revised plan does use an ecological approach to determining harvest volumes. The desired ecological conditions for each landscape ecosystem were set for each alternative and a model used to identify the resulting harvest volumes.

PC# 4.2.1-2
Public Concern: The Chippewa and Superior NF should not increase logging.

AND

PC# 4.2.1-3
Public Concern: The Chippewa and Superior NFs should reduce harvesting.

-To focus on education about conserving natural resources.
-To improve scenic quality, wildlife habitat.
-To restore diversity, provide viable wildlife populations, mimic natural variation, provide riparian needs, spatial needs, and meet recreational demand.
-To include natural disturbances in the young age class objectives.
-To a level closer to current levels.
-To allow the forest to recover growth.
-To be responsible.
-To consider natural disturbance rates on the timber base and lands, inside and outside the BWCAW.

AND

PC# 4.2.1-4
Public Concern: The Chippewa and Superior NFs should only harvest for restoration purposes.

AND

PC# 4.2.1-5
Public Concern: The Plans should reduce development and logging.

-To preserve the natural state of the forest.
-To improve wolf habitat.
-To benefit economics, wildlife habitat, ecological diversity, bird watching, berry picking, hiking, snow shoeing, fishing, and hunting.

AND

PC# 4.2.1-6
Public Concern: The Chippewa and Superior NFs should manage for more older stands, more larger patches, fewer roads, less aspen, less intensive forestry, and fewer deer to reduce exotic species, improve habitat for interior sensitive species, and increase hemlock, yew and cedar.

AND

PC# 4.2.1-7
Public Concern: The Chippewa and Superior NF should avoid excessive harvesting.

AND

PC# 1.0.3-3
Public Concern: The Final Plans should emphasize ecosystem restoration, maintenance and protection in order to assure the future abundance of forest resources.

AND

PC# 4.2.1-17
Public Concern: The Chippewa and Superior NF should use limited logging.

-To emphasize diversity.
-To restore white pine and other species.
--To emphasize recreation.
To make the forest more beautiful.

AND

PC# 4.2.1-18
Public Concern: The Chippewa and Superior NF should reduce the amount of commercial logging on National Forests with the long term goal of eliminating commercial logging.

-To emphasize recreation, spiritual enrichment, scientific study, soils, water quality, air quality, wildlife habitat, genetic resources, and climatic stabilization.
-To protect air quality, wildlife habitat, reduce exotic species, reduce erosion, reduce fire risk, and maintain life on the planet.
-To meet the desire of most Americans.
-To meet God's direction.
-To generate more value of goods and services.
-To preserve the forest and benefit tourism.

Agency Response:

The Forest Service is required to plan the National Forest System land management and resource uses under the Multiple-Use Sustained-Yield Act, the National Forest Management Act, and other applicable laws and regulations. The Plans include management guidelines, an assessment of suitability of the lands, and consistency with the two laws relating to the management of National Forests: The Multiple-Use Sustained-Yield Act of 1960, and the Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974. The NFMA implementing regulation at 36 CFR 219.1(a) states that "the resulting plans shall provide for multiple use and sustained yield of goods and services from the National Forest System in a way that maximizes long term net public benefits in an environmentally sound manner." Courts have held that in order to achieve the purposes of MUSYA, the Secretary may sell timber (*id*. at 1337-1338; 16 U.S.C. Section 472a).

Various alternatives were considered, each having a different set of vegetation objectives. One alternative had a theme of restoration to conditions that existed prior to logging in Minnesota; others emphasized timber production. The projected harvest volumes for each Forest are less than the highest volumes obtained in the past and more than the harvest volumes realized the last five years. The Regional Forester outlines the basis for his decision in the ROD. The selected alternative increases the amount of older age classes in most LEs, reduces that amount of aspen and increases pine. The positive and negative effects of implementing the identified Forest Plans are disclosed in the FEIS.

PC# 4.2.1-11
Public Concern: The Chippewa and Superior NFs should depart from non-declining, even-flow harvesting.

-To increase harvesting the first decade.
-To improve health of forest, improve economics, achieve ecological objectives, retain industry, harvest prior to mortality, protect non-federal forests, and reduce fire hazard.
-To avoid setting a cap on future harvests.

Agency Response:
Various alternatives were considered including departing from non-declining, even-flow in order to capture mortality anticipated with our current age class distribution. Short-lived forest types, such as aspen, are prevalent in older age classes. Alternative A would have maintained the existing forest plan direction. Harvest volumes were considered that are much higher and much lower than the 1986 plans. The effects of implementing the identified Forest Plans are disclosed in the FEIS. The Benchmark runs are shown in Appendix B both with and without the 'nondeclining, even-flow constraint' to assess the impact of having the constraint. During the development of alternatives, Alternative C and Alternative D were considered to depart from the 'nondeclining, even-flow constraint'. It is permissible for the Forest Service to select an alternative that departs from the 'nondeclining, even-flow constraint' as long as it is consistent with the multiple use management objectives (see NFMA and FSH 2409.13). Thus, we have considered alternatives that depart from this constraint and assessed the effects in Chapter 3. An alternative was selected to meet identified desired vegetation objectives set by Landscape Ecosystems. The ROD provides rationale for selection of Modified Alternative E over other alternatives. The resulting harvest volumes are a result of managing to meet these vegetation objectives.

PC# 4.2.1-12
Public Concern: The Chippewa and Superior NFs should increase harvesting.

-To improve health of forest, improve economics and reduce fire hazard.
-To meet the intent of the laws establishing National Forests.
-To benefit wildlife.
-To harvest a higher portion of growth.
-To include the volume not sold during implementation of the 1986 plans.
-To harvest prior to mortality and to improve wood quality supplied to mills.
-To prevent the loss of cover types.
-To protect the health of all Minnesota's forests.
-To reduce the artificially high price for fiber.
-To comply with the BWCA Act's provision for intensifying timber production on lands outside the BWCAW

AND

PC# 4.2.1-12a
Public Concern: The Chippewa and Superior NFs should keep planned harvest at the same level as the 1986 Plans.

AND

PC# 4.2.1-13
Public Concern: The Chippewa and Superior NFs should increase the acres treated to offset the volume lost from partial harvesting.

AND

PC# 4.2.1-14
Public Concern: The Chippewa and Superior NFs should regenerate most of the older aspen.

AND

PC# 4.2.1-21
Public Concern: The Chippewa and Superior NFs should provide a stable long-term supply of timber.

Agency Response:
The Forest Service is required to plan the National Forest System land management and resource uses under the Multiple-Use Sustained-Yield Act, the National Forest Management Act, and other applicable laws and regulations. The NFMA implementing regulation at 36 CFR 219.1(a) state that "the resulting plans shall provide for multiple use and sustained yield of goods and services from the National Forest System in a way that maximizes long term net public benefits in an environmentally sound manner." Regulation 36 CFR 221.3 states that stabilizing local communities is subject to timber management constraints and must be coordinated with other National Forest uses. MUSYA does not contemplate that every acre of National Forest be managed for every multiple use. Congress recognized "that some land will be used for less than all of the resources" (16 U.S.C. Sec. 531 (1988)). The touchstone of the MUSYA is that the Forest Service must give due consideration to the competing uses in the overall planning effort (*Sierra Club v. Hardin*, 325 F. Supp. 99, 123 (D. Alaska 1971)). Due consideration under the Act does not mean equal consideration (*Id*.) Although there is no statutory requirement for, or definition of, community stability within the Organic Act, MUSYA, or NFMA, the stability of local communities has long been a concern of the Forest Service. The requirement that forest plans maximize long term net public benefits in an environmentally sound manner allows the Forest Service to include stabilization of local communities as one of the criteria in choosing the alternative to be the Forest Plan (36 CFR 219.1; 219.3). The amount of logging identified in the Forest Plans is strongly related to the vegetation objectives set for each Landscape Ecosystem. Biodiversity, restoration of species, recreation and scenery are important aspects of the new Forest Plans. Various alternatives were considered in detail, including one that only harvests to restore conditions that occurred prior to logging in Minnesota. Providing forest products for industry has been a part of the management of the Chippewa and Superior NFs since they were established. The selected alternative continues to provide raw material for industry into the foreseeable future. The estimated effect on employment and income for each alternative are disclosed in the FEIS. Providing a sustainable long-term supply of timber is identified as a desired condition under the heading Timber in the Forest Plans. Estimated quantities are shown in Appendix D of the Forest Plan.

PC# 4.2.1-16
Public Concern: The Superior NF should minimize the amount of disturbance of the forest to provide clean air.

Agency Response:
Air quality is addressed in the FEIS for each alternative considered in detail. Specific direction on air quality is also provided in the Forest Plans. Monitoring of ambient air quality as wells as project specific air quality monitoring will continue.

PC# 4.2.1-19
Public Concern: The Chippewa and Superior NF should harvest trees to increase forest health.

-By reducing insect and disease damage, weather related damage, and fire danger.
-By achieving restoration goals.
-By reducing global warming.

Agency Response:
Forest health is an issue and is addressed in the FEIS under Forest Vegetation in section 3.2.3. The selected alternative includes harvesting trees and allows for salvage when events occur that create opportunities for salvage. The Healthy Forest Initiative and Healthy Forest Restoration Act also provide direction to National Forests for restoring forest health. Reducing hazardous fuels and the risks of wildand fire are also addressed.

PC# 2.6.4-58
Public Concern: The Chippewa NF should harvest 4000 acres per year, with an overall level of a minimum of 6500-7000 acres per year.

Agency Response:
The various alternatives harvested differing amounts of acres per year, including aspen. The figures suggested are within the range of alternatives considered. The Forest Plan for the Chippewa NF displays the total acres of proposed harvest in Appendix D. The selected alternative is also within the range of the figures suggested.

PC# 2.6.4-83
Public Concern: The Final EIS and Plans should limit RNV rationale for lowland conifer harvest to productive black spruce sites (site index >25) that can be managed for timber.

Agency Response:
The productive black spruce and tamarack lowland conifer stands were identified as tentatively suitable for timber management when the site index values were equal to or greater than 20. This is the site index value used by the Research Branch of the Forest Service to identify productive timberlands on Forest Inventory Analysis Plots (FIA). Harvesting is restricted to lands identified as suitable for timber management, which are those tentatively suitable lands within Management Areas that allow timber harvesting. Activities within lowland stands are also guided by standards and guides for soil and wetland protection. Monitoring will occur to ensure that these stands are adequately re-stocked after harvest (S-TM – 4). The setting of age class objectives for each alternative considered the amount of non-productive lowland conifer stands. See the official record for specifics.

Type of Harvest Treatments (4.2.2)

PC# 4.2.2-1
Public Concern: The Chippewa and Superior NF should utilize timber harvest practices that mimic large natural fires.

Agency Response:
The types of harvest identified in the Forest Plan and FEIS, provide conditions similar to various types of natural disturbances. The maximum even-aged harvest size has been increased to 1,000 acres to more closely mimic the large fires. Larger even-aged harvest treatments are allowed, pending public comments and Regional Forester review. See S TM-2 in the Forest Plan. Also see response to PC 2.7.3 and PC 2.7.4.

PC# 4.2.2-2
Public Concern: The Chippewa and Superior NF should continue the existing management practices.

Agency Response:
Existing management practices are included in the types of treatments expected to occur in the future. In addition, partial cutting methods will be used to allow harvesting while providing for various multiple resources including scenery and wildlife habitat. The success of these treatments will be monitored and evaluated to insure they are meeting the objectives of management. The treatment methods are described in Appendix B of the FEIS.

PC# 4.2.2-5
Public Concern: The Chippewa and Superior NF should increase the amount of clear-cutting with reserve trees to replicate natural disturbances.

AND

PC# 4.2.2-6
Public Concern: The Chippewa and Superior NFs should increase the amount of clear-cutting in aspen and reduce the amount of partial harvest in aspen.

AND

PC# 4.2.2-7
Public Concern: The Chippewa and Superior NFs should increase the amount of clear-cutting.

-To improve wildlife habitat and economic values from timber sales.
-To provide for the healthiest and most diverse forest ecosystem.

AND

PC# 4.2.2-14
Public Concern: The Chippewa and Superior NF should continue clear-cutting and managing for aspen.

-To improve wildlife habitat, oxygen, and future harvest necessary for the financial health of Northern Minnesota.
-To correct the aspen age class and reduce stumpage prices.
-To manage aspen consistent with historic disturbances.

Agency Response:
According to Forest Service Manual 2471.11: Forest should : "Before applying any even-aged regeneration cutting method to a stand, consider the standards and guidelines in the forest plan concerning the culmination of mean annual increment along with the size, shape, dispersal, and duration of openings. Apply clearcutting only where it has been found to be the optimum method of regeneration to meet multiple-use objectives". Although the amount of clearcutting is reduced, it is retained as a treatment practice (see section 3.4.1 of the EIS). Clearcutting is one of the treatments referred to as even-aged management. Only the even-aged management treatments contribute to the Landscape Ecosystem Vegetation Objectives for the 0-9 age class. Each of the alternatives included varying amounts of clearcutting with the effects disclosed in Chapter 3 of the EIS. Clearcutting is used to harvest and regenerate the aspen type. Other treatments are also used to harvest aspen when the objective includes regenerating the stand to a different forest type. Although clearcutting is not the same as the historic natural disturbances, it does provide the necessary conditions for establishing and growing species that characteristically were regenerated by stand replacement type disturbances that created open conditions. The amount of even-aged harvesting is directly related to the amount of 0-9 age class objective set for each Landscape Ecosystem. The Plans intend to achieve the 0-9 age class objective through even-aged timber harvesting in patch sizes from 1 acre to 1,000 acres. In addition, direction is provided to establish and maintain large patches of mature and older vegetation. Direction is provided as desired conditions, objectives, standards and guidelines. All clear-cutting was modeled as clearcutting with reserve trees. MNFRC guidelines are

implemented to direct the amount of reserve trees retained with even-aged management. Clearcutting not an objective of the Forest Plan, instead it is one of many tools that will be used to achieve the vegetation objectives.

PC# 4.2.2-8
Public Concern: The Chippewa and Superior NFs should do more uneven-aged management.

-To produce positive effects on economy, wildlife and biodiversity.
-To realize the full volume potential of intensively managing northern hardwoods.
-To promote spatial patterns and practices representative of natural disturbances.

AND

PC# 4.2.2-10
Public Concern: The Chippewa and Superior NFs should emphasize harvest practices that create more biodiversity to benefit saw-timber production using selection cutting.

Agency Response:
The revised Forest Plans direct more uneven-aged management than the 1986 Plans. The 1986 Plans called for very little uneven-aged management. Alternatives B through G increase the amount of uneven-aged management compared to the 1986 plans. Each of the alternatives direct different vegetation conditions that are achieved by using different mixes of even-aged and uneven-aged management with the effects disclosed in the FEIS. Generally, the northern hardwood forest types are to be managed for an older vegetation condition, which will result in greater use of uneven-aged management. The amount of 0-9 age class objective for each Landscape Ecosystem will be accomplished using even-aged management. More sawtimber is realized from the revised plans compared to the 1986 plans according to the model outputs (see Appendix D of forest plan). The Forest Plans also included goals, Desired Conditions and Objectives for increasing diversity within stands and across the landscape (Forest Plan, Chap. 2)

AND

PC# 4.2.2-13
Public Concern: The Chippewa and Superior NFs should eliminate clear-cutting.

-To avoid destroying the Forest and making a tangled mess.
-To protect the beauty and habitat of native species.
-To reduce fragmentation of the forest.
-To reduce leeching of toxic metals into water.
-To improve the health of the ecosystem.

AND

PC# 4.2.2-9
Public Concern: The Chippewa and Superior NFs should reduce the amount of clear-cutting.

-To promote diversity.
-To reduce fragmentation and soil erosion.
-To reduce the impacts on the scenic landscape.
-To reduce damage to our forest, loss of species, loss of wildlife habitat and conflicts with traditional gathering.
-To reduce losses from wind.
-To more closely mimic natural disturbances.

AND

PC# 4.2.2-3
Public Concern: The Plans should have restrictions on how much even-aged harvesting occurs.

Agency Response:
The revised plans do reduce the amount of clearcutting compared to the 1986 plans. This was done in part to meet national direction to reduce the amount of clearcutting, but also to meet vegetation age class objectives by LE and to meet the objectives for vegetation composition and structure (Forest Plans, Chap 2). The effects of all timber harvest is disclosed in Chapter 3 of the FEIS.

PC# 4.2.2-11
Public Concern: The Chippewa and Superior NFs should remove balsam fir and aspen using selective logging to improve species mix; promote safer use of fire; help restore jack pine, red pine, and white pine; increase economic return.

Agency Response:
Each of the alternatives increase the amount of selective harvesting compared to the 1986 plans. More jack pine, red pine and white pine are established to meet the vegetation objectives for each Landscape Ecosystem. Partial harvest methods will be used to remove some of the aspen, while maintaining canopy closure to meet multiple objectives. Forest wide objectives for hazardous fuel reduction are included in Chapter 2 of the Forest Plans.

PC# 4.2.2-12
Public Concern: The Chippewa and Superior NFs should utilize thinning.

-To reduce the risk of fire in the urban interface.
-To reduce the impacts of fire.
-To supply wood for mills.
-To provide more fiber to fuel economic and social benefits, while protecting and enhancing the environment.

-To develop characteristics of older stands at an earlier age than un-thinned stands.

Agency Response:
Thinning is utilized for a variety of reasons, including those identified. The effects are disclosed in Chapter 3 of the FEIS. The landscape ecosystem objectives direct more, older vegetation conditions for each LE, which will result in stands being retained longer than normal rotation ages. This will result in more thinning opportunities than the 1986 plans.

PC# 2.7.7-14
Public Concern: The Forest Plans should emphasize aspen management.

-Except on unproductive aspen sites where other species may be more suitable.
-By not allowing a reduction in aspen acres in the Forest Plans.
-In order to support golden-winged warbler, woodcock, and moose populations.
-Because young aspen is better habitat for game species.
-Because based on usage, most forest should be managed for aspen.
-In order to maintain the hunting lifestyle and economies of those in the Chippewa.
-In order to maintain hunting opportunities on National Forests.
-To maintain amounts of aspen and harvest levels in the 1986 Plans.

-To be responsive to taxpayers who use the Chippewa.
-Because young deciduous forest habitat is declining in the eastern United States.
-By continuing cutting practices similar to what they are now.
-Because aspen clearcuts mimic the effect of wildfires.

Agency Response:
The revised plans reduce the emphasis on aspen management. Reducing the amount of aspen was identified as part of the 'need for change' in the Notice of Intent. However, aspen belongs on the landscape within most of the Landscape Ecosystems. Since the plan is directing that each vegetation growth stage be represented, aspen will be managed within each LE where it naturally occurred. The effects are disclosed in Chapter 3 of the FEIS.

PC# 4.2.2-15
Public Concern: The Chippewa and Superior NF should manage using biophysical information and proven silvicultural practices to produce high quality (wildlife) habitat and scenery.

Agency Response:
Biophysical information is used as are proven silvicultural practices. The Plans propose a wider array of harvest methods and utilize these methods in a more forest types than the 1986 Plans did. Monitoring and evaluation will occur to determine if these harvest methods are accomplishing the objectives for which they were developed. Timber harvesting to provide wood for mills is of interest to the Forests and having a broader array of silvicultural tools allows the Forests to provide conditions of mature forests to meet habitat and scenery objectives while still providing wood fiber to local communities. Also see responses to PCs 2.7.7 through 2.7.12 for more information on within stand diversity.

PC# 2.7.1-19
Public Concern: The Forest Plans should consider alternative ways to regenerate forests that do not limit within-stand diversity because wildlife habitat requirements occur at a sub-stand level.

Agency Response:
Alternative ways of regenerating forests are considered that do not limit within-stand diversity. The effects mentioned in Chapter 3 of the FEIS are in relative comparison to other alternatives. Alternative E will do more to create and maintain within-stand diversity than has been done in the past, but not as much as some of the other alternatives when the measuring element used is the amount of even-aged management. In the past it was common to only plant one species during reforestation efforts. Today, it is more common to have two or more species planted and some other species featured in the stand that regenerate without planting.

Natural Resource Management – Alternatives (4.2.3)

PC# 4.2.3-1
Public Concern: The Regional Forester should not select Alternative E because it would allow too much timber harvest.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered

all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. As stated in the ROD; According to the economic analysis displayed in the Final EIS, Alternative C maximizes Present Net Value (PNV) due to the higher level of timber harvest predicted and the revenue generated as a result. The Revised Plan, Modified Alternative E has a ranked 3rd in PNV among all alternatives. While Alternative C has a higher PNV, the Revised Plan provides the highest net public benefit. Many benefits associated with the Revised Plan are not captured in fees or revenues nor are they necessarily quantifiable. For this reason, the alternative that maximizes PNV is not the alternative that has the highest net public benefit".

PC#4.2.3-2
Public Concern: The Regional Forester should not select an alternative that takes land out of active timber management.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. Forest inventory data was used to eliminate forestlands with low site index values or regeneration problems from the timber suitable lands. In addition some of the Management Areas, such as candidate RNAs or Unique Biological Areas, were identified as having direction that would preclude managing for timber products. The lands identified as suitable for timber management varied by alternative. Only the benchmark runs identified all timberlands as available for harvesting. Approximately 73% of the forested lands on the Chippewa and 70% of the forested lands outside of the BWACAW on the Superior are currently in the suitable base. The Multiple Use Sustained Yield Act (MUSYA) does not contemplate that every acre of National Forest be managed for every multiple use. Congress has recognized "that some land will be used for less than all of the resources" (16 U.S.C. Sec. 531 (1988)).

PC# 4.2.3-3
Public Concern: The Regional Forester should select an alternative other than E because Alternative E was erroneously positioned in the middle in terms of the amount of logging.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative. NEPA requires analysis of a "reasonable range of alternatives". While seven alternatives were analyzed in detail, twenty-one alternatives were considered during initial analysis. Some aspects of the initial 21 alternatives were rolled into alternatives that were ultimately carried forward for in the EIS, others were dropped from further analysis because they did not fall within a reasonable range for consideration. Among those alternatives that were dropped were alternatives with very high timber yield and those with no timber harvest and represented extreme ends of the range that were considered unsustainable or to not meet the multiple use mandate of the National Forest System. All alternatives that carried forward for detailed analysis were legal and viable alternatives.

PC# 4.2.3-4
Public Concern: The Regional Forester should select Alternative A to actively manage timber.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The lands identified as suitable for timber management varied by alternative. Only the benchmark runs identified all timberlands as available for harvesting. Approximately 73% of the forested lands on the Chippewa and 70% of the forested lands outside of the BWACAW on the Superior are currently in the suitable base. The Multiple Use Sustained Yield Act (MUSYA) does not contemplate that every acre of National Forest be managed for every multiple use. Congress has recognized "that some land will be used for less than all of the resources" (16 U.S.C. Sec. 531 (1988)).

PC#4.2.3-5
Public Concern: The Regional Forester should select Alternative C

-To improve forest health, reduce the risk of fire, and increase productivity.
-To not emphasize conversion to conifers.
--To harvest adequate timber volume.
-Because impacts from harvesting could be mitigated with Best Management Practices and the Minnesota Voluntary Site-level Guidelines.
-To decrease rotation ages.

AND

PC#4.2.3-6
Public Concern: The Regional Forester should not select Alternative C because timber harvest would be the only management tool used.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues including forest disturbance patterns and insect and disease. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative. Through the Healthy Forest Initiative and the Healthy Forest Restoration Act, Congress believes that it has provided the Forest Service with the appropriate guidance and tools for maintaining and forest health. The role of fire and the subsequent effects of utilizing fire as a management tool are discussed in the EIS. Fire will be used to increase forest health, restore ecosystem processes and for site preparation. Timber harvest will be the tool used to meet vegetation objectives, often in conjunction with prescribed fire.

PC#4.2.3-7
Public Concern: The Regional Forester should select Alternative D to stop clearcutting.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative. The National Forest Management Act allows clearcutting when it is determined to be the optimal method for regenerating a stand.

PC#4.2.3-8
Public Concern: The Chippewa and Superior NFs should modify Alternative D by addressing fire danger.

Agency Response:
Addressing the fire danger in Alternative D would require more harvesting than is called for in this Alternative to reduce fuels, which would change the theme of the alternative. In the long term under Alternative D, forests would be dominated by spruce-fire type and require fuel treatment to reduce the fire risk. Because prescribed fire is so expensive, it would not be practical to expect that all the fuels treatment that would be need under Alternative D could be done using prescribed fire.

The EIS includes seven alternatives with different approaches to managing fire, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for fire management. Therefore, it is not necessary to modify Alternative D to address this interest.

PC#4.2.3-9
Public Concern: The Regional Forester should not select Alternative E.

-Because it would create unhealthy and unproductive forests.
-Because it would not protect neighboring properties.
-Because it would only harvest 28% of annual growth
-Because the portion of the National Forest outside of the BWCAW should be managed for forest health and to benefit local economies because the Wilderness currently provides the old growth needed at the forest level.
-Because it would waste timber by burning it.
-Because it is not consistent with the Healthy Forest Initiative.
-Because it is not consistent with the Healthy Forest Initiative.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. Based on concerns raised during the comment period, the Regional

Forester has decided to eliminate management ignited stand replacement fire as a management tool. Timber harvest often in conjunction with prescribed fire will be the primary tool for meeting vegetation composition and age class objectives. The revised Forest Plan contains management direction in the form of desired conditions and objectives to increase the amount of forest restored to or maintained in healthy condition to reduce risk and damage from fire. The Revised Plan also focuses on treating vegetation in high hazard areas within the wildland/urban interface areas to reduce risk from wildland fire. The Regional Forester states in his ROD; "I find that Revised Plan is consistent with HFRA in that it provides for the protection of old growth when conducting HFRA covered projects, provides for public involvement in assessing and conducting hazardous fuels reductions projects and prioritizes areas for hazardous fuels reduction based on condition class and fire regime. The Revised Plan also emphasizes protection and enhancement of riparian areas and watershed health as directed under HFRA".

PC#4.2.3-10
Public Concern: The Chippewa and Superior NFs should modify Alternative E to include Management Areas dedicated to intensive forest management to increase timber harvest levels.

Agency Response:
The EIS includes seven alternatives with different approaches to managing timber, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for timber management.

The Forest Plans do not allocate management areas that are exclusively for intensive forest management because we are required to address multiple uses and multiple resources. However, Modified Alternative E has roughly 550,000 acres on the Chippewa NF and approximately 1,000,000 acres on the Superior NF allocated to the General Forest and Longer Rotation Management Areas (MAs). Timber harvesting is one of the primary activities in these MAs.

PC#4.2.3-11
Public Concern: The Regional Forester should modify Alternative E or select Alternative B or F to protect mature and older forest and avoid a glut of mature timber in the 50-99 year age class in the next two decades.

Agency Response:
The EIS includes seven alternatives with different approaches to managing older forest, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for managing older forest. Modifications to Alternative E were made between the Draft and Final EIS and Proposed and Final Forest Plans. These modifications included additional objectives, standards and guidelines to protect forest health and older forests. On the Chippewa National Forest the percentage of even-aged harvesting was reduced to better meet the vegetation composition, age class distributions and spatial pattern objectives of the alternatives. The selected alternative provides for a non-declining even flow of products and long-term sustatined yields that would preclude "market gluts" .

The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative.

PC#4.2.3-12
Public Concern: The Chippewa and Superior NFs should modify Alternative E to reduce prescribed fire use because the Forest Service cannot afford it and cannot do it safely.

Agency Response:
The EIS includes seven alternatives with different approaches to managing fire, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for fire management. Therefore, it is not necessary to modify Alternative E to address this interest. The FEIS describes the Proposed Maximum Acres available for fire management. This indicator addresses the maximum acres of forest, based on condition class, fire regime, and risk that could benefit from prescribed fire. The EIS also recognizes that there are limitations (including weather patterns, risk to urban areas, current forest conditions, etc) that will ultimately determine where and when fire is the appropriate management tool to use. The Forest Plan include management direction to provide for the safety of fire fighters, other resources, and the public when using management ignited fire.

PC#4.2.3-13
Public Concern: The Chippewa and Superior NFs should modify Alternative E to reduce the amount of pine restoration because pine restoration is inefficient and pine is susceptible to browse and disease.

Agency Response:
The EIS includes seven alternatives with different approaches to managing white pine, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for white pine management. Therefore, it is not necessary to modify Alternative E to address this interest.

White pine is a species of high public interest because of its many social, economic, and ecological values. White pine restoration is important to wildlife habitat features, timber value, scenic quality, and role in maintaining ecologically healthy forest composition and structure. It is considered to be a keystone species, in that its overall effects on critical ecological processes and biodiversity are greater than would be predicted by its abundance. Additionally, the National Forests in Minnesota play a significant role in its management. (Draft EIS page 3.3.6-13)

The EIS acknowledges that until recently, very few acres of white pine have been planted on the Chippewa and Superior National Forests due to problems associated with establishing white pine and that these practices are expensive, thus have not been widely used. Plantations losses have usually been attributed to animal browsing (deer is most common) and blister rust. Site selection, protection methods such as pruning and bud capping reduce these losses. Promoting white pine as a component of other forest types also reduces these losses.

PC#4.2.3-14
Public Concern: The Chippewa and Superior NFs should develop and analyze a new alternative that would not constrain the allowable sale quantity with non-declining even flow.

Agency Response:

The EIS includes seven alternatives with different approaches to timber volume, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for timber volume. Therefore, it is not necessary to develop an additional alternative to address this interest. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing timber volume.

The Benchmark runs are shown in Appendix B both with and without the 'nondeclining, even-flow constraint' to assess the impact of having the constraint. During the development of alternatives, Alternative C and Alternative D were considered to depart from the 'nondeclining, even-flow constraint'. It is permissible for the Forest Service to select an alternative that departs from the 'nondeclining, even-flow constraint' as long as it is consistent with the multiple use management objectives (see NFMA and FSH 2409.13). Thus, we have considered alternatives that depart from this constraint and assessed the effects in Chapter 3.

PC#4.2.3-15
Public Concern: The Chippewa and Superior NFs should develop and implement an alternative that addresses the serious forest health problem, specifically mortality.

Agency Response:
The EIS includes seven alternatives with different approaches to managing forest health, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for managing forest health. Alternative C did analyze a departure from non-declining even flow in that it proposed higher harvest levels in the first two decades than in subsequent decades in order to capture loss from mortality particularly in older aspen stands. The Regional Forester considers this alternative and the effects of implementing Alternative C and stated in his ROD; “I have decided against a departure [from non-declining even-flow] because of the difficulty of maintaining key wildlife habitats in the first two decades.”

In Forest Plan revision, we considered forest health to include vegetation age, composition, spatial arrangement, habitat provided, fire, insects, diseases, non-native invasive species, forest growth, forest productivity, and sustainability. These aspects of forest health are addressed throughout the analysis of the EIS, therefore we did not develop an alternative to emphasize forest health specifically. Section 3.4.2.a discusses average annual growth, mortality, and removals. This section compares removals on NFS land to removals state-wide, showing that removals as a percent of total growth is higher on NFS land than state-wide.

PC#1.8-8
Public Concern: The Chippewa and Superior NFs should not have applied the non-declining even flow constraint to all alternatives because it drastically reduced the allowable sale quantity.

Agency Response:
The Benchmark runs are shown in Appendix B of the EIS both with and without the nondeclining, even-flow constraint to assess the impact of having the constraint. During the development of alternatives, Alternative C and Alternative D were considered to depart from the nondeclining, even-flow constraint. It is permissible for the Forest Service to select an alternative that departs from the nondeclining, even-flow constraint as long as it is consistent with the multiple use management objectives (see NFMA and FSH 2409.13). Thus, we have considered alternatives that depart from this constraint and assessed the effects in Chapter 3. The Regional

Forester states in his ROD; "Several people commenting on the Draft EIS requested a departure from non-declining even flow (selling more timber in the first two decades and then less in subsequent decades). There are several justifiable reasons for doing so, and in fact, the Final EIS evaluates two alternatives that have a departure from non-declining even flow of timber. However, I have decided against a departure because of the difficulty of maintaining key wildlife habitats in the first two decades."

Special Forest Products (4.3)

PC# 4.3-1
Public Concern: The Plans should include management direction on bough gathering.

Agency Response:
The National Forests are managed for multiple use so as with many other uses, we have provided guidance on bough gathering rather than prohibit this practice. Our approach to managing bough gathering includes issuing permits, providing information pamphlets on how to harvest bough material and monitoring. G VG-3, G VG-4 and G VG-5 CNF aqnd G-VG- 4 and 5 for the SNF in the draft Forest Plan apply to bough gathering. The Leech Lake Band of Ojibwe currently issues permits for balsam bough collection on their land within the National Forest. We do have examples of inappropriate bough gathering, however as with all activities and uses of the Forests, law enforcement attempts to enforce the laws, rules, and permit direction.

PC# 4.3-2
Public Concern: The Chippewa NF should eliminate the harvest of birch bark.

Agency Response:
Guidelines G VG-2 through G VG-5 for the CNF and G-VG- 2, 4 and 5 for the SNF in the Draft Forest Plan provide direction on harvesting birch bark. Birch bark can be harvested in a manner that does little damage to the tree, except for its appearance. The National Forests are managed for multiple use so as with many other uses, we have provided guidance on birch bark gathering rather than prohibit this practice. The Final Forest Plans O-TR-3 also addresses collection of plant species by tribal members by stating: "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". Specifics of any potential requirements are best left to be developed outside of the framework of the strategically directed forest plan, as indicated in O-TR-3 and O-TR-4.

Fire Management (4.4)

PC# 4.4-1
Public Concern: The Final EIS and Plans need to identify how fuel reduction in the wildland interface will be measured.

Agency Response:
Fire Regime Condition Class (FRCC) will be used as a monitoring tool. FRCC involves tracking Condition Class (CC) "change". Each CC represents a percentage of departure from natural conditions. CC1, CC2, and CC3 represent departure of structure, composition, and disturbance characteristics from natural conditions with 0-33%, 34-66%, and 67-100%, respectively. Not all treatments intended to affect CC will successfully move landscape

characteristics a full class, i.e. from CC3 to CC2, or from CC2 to CC1. In many situations, it may require more than one treatment to effectively "change" the CC. Consequently, our focus is on contributions to "improving" condition, i.e., trends which result in the current condition moving towards CC1. Landscape and stand scale FRCC protocols allow for an indexed CC value between 0 and 100. For example, at the landscape scale pre- and post-treatment condition may be 90 and 70, respectively, both within CC3. While the treatment did not achieve a condition class "change", it did result in condition improvement. A subsequent treatment may move the condition to a value of 50 (CC2), for example. At that point, a condition class change did occur, but more important is the continued contribution of management activities towards improved condition.

PC# 4.4-2
Public Concern: The Final EIS and Plans should address the higher fire risk in the Management Areas with older vegetation.

AND

PC# 2.8.5-2
Public Concern: The Chippewa and Superior NFs should not manage for more mature and older forests outside the BWCAW because it could lead to uncharacteristic wildfire.

Agency Response:
Fire risk is addressed in Section 3.5 of the FEIS. Fire risk is based on a combination of factors including, among other things, ignition source, species composition, age, fuel characteristics, and spatial distribution. Older Forest do not necessarily have a higher fire risk than current condition, it is the condition of the stand and its placement in the landscape that determine risk. The Forests today are the product of the logging, fire suppression and fire exclusion that have occurred since the time of European settlement. The Healthy Forest Initiative, the Healthy Forest Restoration Act, and at the local level, the new Forest Plans and Fire Management Plans identify priority areas for fuels treatment, include provisions for treating old growth and older forests to reduce the risk of uncharacteristic wildland fire and increase the re-introduction of fire in fire dependant landscapes to create healthy, resilient landscapes that are less prone to uncharacteristic wildland fire. Other than the BWCAW on the Superior NF, the only Management Area that would not allow harvesting and/or fuels reduction would be MA 8.2 (proposed RNA's) and these RNA'a do not represent substantial amounts of either Forest.

PC# 4.4-3
Public Concern: The Chippewa and Superior NFs should assess the benefits of prescribed fire as opposed to the risk of air quality impacts from wildfire.

Agency Response:
The benefits of prescribed fire and the effects to air quality are both addressed in the FEIS (Chap3, Section 5).

PC# 4.4-4
Public Concern: The Final EIS should analyze the effects of urbanization on the potential use of prescribed fire.

AND

PC# 4.4-5
Public Concern: The Final EIS should estimate the frequency of conditions when safe prescribed fires can be ignited.

AND

PC# 4.4-12
Public Concern: The Chippewa and Superior NFs should use fire as a management tool when it is safe.

Agency Response:
Under the selected alternative management ignited (prescribed fire) would be utilized on a small scale. Urbanization and the potential for use of prescribed fire are both fully considered (See FEIS 3.5 and 3.9). The Fire Management Plan for each Forest provides more specific information to implement Forest Plan management direction for both wildland and prescribed fire. Additionally, individual burn plans for each project set conditions under which prescribed fire can safely be used. Burn plans consider, among other things, air quality and the effects of the fire on the health and safety of the fire fighters and the public as well as public and private facilities. Wildland Urban Interface areas are identified as priority areas for fuels reduction projects because of the increased risk to both health and safety of the public as well as fire fighters. The acres identified for as potential for management-ignited fire are a maximum and are used as a relative indicator between alternatives. Actual acres burned per year are dependent on site-specific resource needs, funding and burning conditions.

PC# 4.4-6
Public Concern: The Final EIS should disclose the costs of prescribed fire.

Agency Response:
Under the selected alternative management ignited (prescribed fire) would be utilized on a small scale. There are three specific objectives for using prescribed fire as a management tool. Fuel reduction in stands that have unnaturally high fuel loads due to past forest management and fire suppression/exclusion will reduce the risk and severity of wildland fire. The costs of prescribed fire are generally much less than the costs of wildland fire suppression. Fuel reduction also helps protect wildlife and rare habitat from uncharacteristically severe wildfire. Fire will also be used for site preparation to prepare stands for planting, reduce brush, and release the seed source. Ecosystem burning will re-introduce fire back into fire dependant landscapes to create healthier, more resilient landscapes that withstand disease, are less fire prone, and support an array of plant and animal communities. The costs of prescribed fire are included in IMPLAN/Feast models and contribute to the Net Present Value figures calculated for each alternative (FEIS 3.9).

PC# 4.4-7
Public Concern: The Final EIS should consider logged sites as a higher risk for fire than unlogged areas.

Agency Response:
Fire risk is addressed in Section 3.5 of the FEIS. Fire risk is based on based on a combination of factors including, among other things, ignition source, species composition, age, fuel characteristics, and spatial distribution. Slash is treated by burning, crushing, chopping, etc in key areas that have been harvested. Fire statistics for both forests show that the most common causes of unwanted wildland fire is debris burning and arson along the wetland areas.

PC# 4.4-8
Public Concern: The Final EIS should make Tables FIR-1, FIR-2, FIR-5 and FIR-6 more clear.

Agency Response:
Clarification has been added to the narrative and to the Tables you refer to – See FEIS 3.5).

PC# 4.4-9
Public Concern: The Final EIS should do a more in-depth analysis of fire risk.

Agency Response:
Fire risk is addressed in Section 3.5 of the FEIS. Fire risk is based on based on a combination of factors including, among other things, ignition source, species composition, age, fuel characteristics, and spatial distribution. Ongoing efforts with the State of Minnesota are further defining Fire Regime and Condition Class. As this information is finalized, it will be utilized in project planning and for setting priority areas for fuels reduction. Each Forest also has a Fire Management Plan that provides more specific direction for implementing the Forest Plan. Table FIR-3 displays information on historical fires from 1980 – 2002 for both Forests.

PC# 4.4-10
Public Concern: The Chippewa and Superior NFs should allow natural ignited fires to burn when it is safe.

AND

PC# 4.4-14
Public Concern: The Plans should limit the suppression of fire.

AND

PC# 4.4-20
Public Concern: The Plans should include Management Areas (other than Wilderness) that allow for naturally ignited fires to burn within prescribed conditions.

Agency Response:
The Record of Decision for Boundary Waters Canoe Area Wilderness Fuels Reduction EIS was signed in 2001. We also have an approved fire management plan and an approved wildland fire use plan that allow naturally ignited fire to burn within the wilderness under certain conditions. The Forest Plan does not address fire management within the BWCA. Outside of the BWCA, mixed ownership patterns, concentrations of public and private facilities, extensive urban interface areas and existing forest conditions cause significant health and safety concerns necessitate wildland fire suppression.

PC# 4.4-11
Public Concern: The Chippewa and Superior NFs should retain the direction in the draft plans on fire.

Agency Response:
We appreciate your support of fire management direction in the Draft Plans. It has been largely maintained in the final Plans.

PC# 4.4-13
Public Concern: The Plans should include direction to protect archaeological resources.

Agency Response:
Heritage resource protection is integrated into all resource management levels and is guided by numerous laws and regulations (FEIS 3.9, 3.10). Numerous Standard and Guidelines for the protection of heritage resources and Tribal rights and interests are also included in the Plans (S TR-1-7, G TR 1-3, S – HR 1-11, G HR 1-2).

PC# 4.4-15
Public Concern: The Plans should allow chipping, hogging of slash and using this as fuel in a biomass facility.

Agency Response:
The Plan does not preclude this method of brush reduction and the utilization of biomass is included under the Healthy Forest Restoration Act. Brush reduction, site preparation, and product utilization is covered under decisions at the project level.

PC# 2.7.4-6
Public Concern: The Forest Plans should use other methods than commercial logging to treat risk to wildfire.

Agency Response: Timber harvest is an appropriate tool for fuel reduction on NFS lands (Multiple-Use Sustained-Yield Act, 16 U.S.C. 528). However, fuels reduction will be accomplished using a variety of techniques including timber harvest, prescribed fire, biomass utilization, and others.

PC# 4.4-16
Public Concern: The Plans should manage to prevent uncharacteristic wildfire to avoid adverse effects to soil and water.

AND

PC# 4.4-28
Public Concern: The Chippewa and Superior NFs should use controlled burns and mechanical treatments to reduce fire risk.

Agency Response:
Fire risk is addressed in Section 3.5 of the FEIS. Fire risk is based on based on a combination of factors including, among other things, ignition source, species composition, age, fuel characteristics, and spatial distribution. Older Forests do not necessarily have a higher fire risk than current condition, it is the condition of the stand and its placement in the landscape that determine risk. The Forests today are the product of the logging, fire suppression and fire exclusion that have occurred since the time of European settlement. We agree that uncharacteristic wildland fire poses a threat to soil and water as well as other resources across the landscape. The new Forest Plans increase direction for reducing unnaturally high fuel loads to reduce the risk of uncharacteristic wildand fire. A variety of tools including timber harvest and fire will be used to accomplish this. The Healthy Forest Initiative, the Healthy Forest Restoration Act, and at the local level, the new Forest Plans and existing Fire Management Plans identify priority areas for fuels treatment, include provisions for treating old growth and older forests to reduce the risk of severe wildland fire and increase the re-introduction of fire in fire dependant landscapes to create healthy, resilient landscapes that are less prone to uncharacteristic wildland fire.

PC# 4.4-17
Public Concern: The Plans should give careful consideration to protection of soil when using prescribed fire.

Agency Response:
Additional direction and clarification (including standards and guidelines) have been added for the protection of soils when using prescribed fire (Forest Plan Chapter 2 Standards and Guidelines, Physical and Biological Resources)

PC# 4.4-18
Public Concern: The Plans should address how to deal with fire.

Agency Response:
See FEIS (3.5, 3.9), Forest Plan (Objectives O-ID-1 - 6 and Appendix A), the Healthy Forest Restoration Act, the Healthy Forest Initiative, and CNF/SNF Fire Management Plans

PC# 4.4-19
Public Concern: The Plans should include on page A-12 that fires will burn under dry, hot conditions regardless of treatment.

Agency Response:
Treatments to vegetation are designed to moderate fire behavior, reduce the severity of the fire effects to the vegetation, and slow fire growth. There are times when conditions are present that would enable a wildfire to occur no matter what management activities had been implemented prior to the fire. In that case, additional assessment, public involvement, and environmental analysis would be completed to determine management actions in the fire aftermath. Wording has been added to the narrative (FEIS 3.5) for clarification.

PC# 4.4-21
Public Concern: The Chippewa and Superior NFs should utilize timber harvest instead of prescribed fire to accomplish desired conditions.
Agency Response:
Stand replacement fire has been dropped as a management tool in the Forest Plans. Timber harvest will be used to regenerate stands to meet Landscape Ecosystem age-class objectives for vegetation. Fire will continue to be used for fuel reduction, site preparation, and restoring ecosystem function. The effects of using fire are disclosed in the FEIS (3.5, 3.9, Forest Plan Appendix A)

PC# 4.4-22
Public Concern: The Chippewa and Superior NFs should increase the use of prescribed fire.

AND

PC# 4.4-23
Public Concern: The Final EIS and Plans should include a more detailed discussion of how the Plans meet the need for change related to fire management.

Agency Response:
Under the selected alternative management ignited (prescribed fire) would be utilized on a relatively small scale when compared to the other alternatives. However, the use of management ignited fire as a tool and fire as essential component of ecosystem health has greatly increased over the 1986 Plan (See Forest Plan Append A). The FEIS displays the maximum acreage available for management-ignited fire (FEIS Tables FIR – 1 and 2). The actual acreage burned each year will depend on project level analysis, available funding, and burning and resource conditions. Forest Plan, Appendix A describes the need for increasing the use of fire beyond what was addressed in the 1986 Forest Plans. Clarification and detail has been added to the FEIS (3.5) and to the Forest Plan.

PC# 4.4-24
Public Concern: The Chippewa and Superior NFs should identify a contingency plan for accomplishing objectives related to ecological burns.

Agency Response:
The FEIS (table FIR-1 and FIR-2) displays the maximum acres available for the use of management ignited fire. Actual acres burned per year is dependant on project level analysis, available funding and resource conditions. The Plans propose management activities through the planning period (typically about 15years). The use of management ignited fire as a tool for restoration is likely to evolve and expand throughout the planning period. Fire is one tool available for use. Timber harvest will also be used to move the Forest toward landscape ecosystem objectives. Timber harvest can mimic, some but not all, of the functions of fire on the landscape. Other tools available include mechanical site preparation, planting and seeding, and habitat enhancement projects using allocated or KV funding.

PC# 4.4-25
Public Concern: The Plans should include direction to prevent prescribed fires from escaping control.

Agency Response:
The Forest Plan is strategic in nature and describes the objectives and goals for fire management as well as describes ecosystems and conditions that can benefit from the utilization fire as a management tool. Forest Fire Management Plans include more specific direction on how to implement the fire management direction on the Plan. A detailed burn plan is developed prior to initiating each prescribed burning project. The burn plans prescribed specific conditions under which the burn can be safely accomplished.

PC# 4.4-26
Public Concern: The Plans should adopt the prescribed fire program for Alternative D.

Agency Response:
The Regional Forested as examined the analysis of effects for all alternatives and feels that the selected alternative provides for the best balance of management activities to meet the needs of local communities and manage forest resources.

PC# 4.4-27
Public Concern: The Plans should allow the use of prescribed fire for site preparation after logging.

Agency Response:
Fire will be utilized as a method of site preparation. (FEIS 3.5, Indicator 4)

PC# 4.4-28
Public Concern: The Chippewa and Superior NFs should educate the public about the role of fire in ecosystems.

Agency Response:

The Forests participate in many informative programs to educate the public on the role of fire in ecosystems. Both Forests are active participants in the Minnesota Forest Resources Council, which promotes the re-introduction of fire in fire dependant landscapes. The Forests are partners along with many other state and federal agencies in the Minnesota Interagency Fire Center, which provides information and training on the both wildand and prescribed fire. Numerous interpretive programs are presented each year at schools and visitor centers.

Minerals (4.5)

PC# 4.5-1
Public Concern: The Plans should include direction that restricts the number and sizes of gravel pits.

Agency Response:
Most of the gravel used for road projects comes from existing pits, but occasionally it is advantageous to open new pits. The decision about the most appropriate source of gravel is best made at the project level; therefore we see no need for blanket forest-wide direction that limits the number or size of gravel pits and have not included these proposed restrictions as direction in the final Plans of either Forest. In the final Plans of both Forests, for removal of more than 5,000 cubic yards of federally-owned gravel, a development and reclamation plan is required under forest-wide standard S-MN-2. This provides reasonable means to limit environmental impacts of gravel extraction.

Gravel pits are not permitted in the Research Natural Area MA, in Potential Candidate Wild River segments, or in the BWCAW.

We have no or very limited legal authority to control the utilization of gravel that is owned privately or by local governments, however, standards S-MN-3 through 6 (CNF) and S-MN-10 through 13 (SNF) and guideline G-MN-1 in the final Plans of both Forests, provide clear direction for how to protect resources associated with federally owned surface without infringing on the rights of those who own non-federal mineral rights.

Utilities (4.6)

PC# 4.6-1
Public Concern: The Chippewa NF should modify proposed Plan objective O-SU-1 to assure that utility corridors and communication sites do not involve surface damage and scraping at Native American stone placement areas and destinations.

Agency Response:
The respondent requests that the Chippewa Plan's objective of generally providing for utility transmission corridors and communication sites be reworded to specifically assure that critical Native American cultural resource sites are not damaged as result of such projects. We have decided to make no changes to wording of this objective in the Plan of either Forest, because the protections to cultural resource values sought by the respondent are already a standard and routine feature of project level analysis and decision-making under the National Environmental Policy Act. Sites of proposed utility corridors or communication facilities are subject to inventory and analysis for cultural resource values and significance as part of pre-project analyses required under

Section 106 of the National Historic Preservation Act. Utility corridors or communication sites will either be relocated, mitigated or dropped from consideration, as needed on a project-specific basis to assure that cultural resources are protected.

PC# 4.6-2
Public Concern: The Chippewa and Superior NFs should further analyze proposed guidelines G SC-8 and G SU-1 to determine if they're implementable.

Agency Response:
One respondent is concerned that there is no way to assure that guideline G-SC-8 (which directs that utility lines generally be buried) can be followed and another respondent requests a specific wording change to guideline G-SU-1 to recognize specifically, that high voltage (>13kV) lines cannot be buried. We have decided to make a slight change to the final wording of guideline G-SC-8, but make no changes to guideline G-SU-1. The word "should" in the final version of G-SC-8 and the words "whenever feasible" in G-SU-1 were purposely chosen in recognition that, although our first choice in all situations will be for utility lines to be buried, we recognize there are a limited number of site- and project- specific factors (e.g. presence of surface bedrock, voltage of the line to be installed, etc.) that may warrant above-ground installations. Our direction is intended to clearly communicate a preference for buried installations, yet retain project-level flexibility to allow limited above-ground installations, without producing an exhaustive list of every possible site- or project-specific factor that might preclude line burial. Project level flexibility is further provided for in G-SC-8 and G-SU-1 because both are developed as guidelines rather than as standards, thus allowing for exceptions (to burying) based on documented site- or project-specific need, but without necessitating a revision to the Forest Plan.

PC# 4.6-3
Public Comment: The Chippewa Plan should contain direction which accommodates the transmission line corridor planned to support the Northome Biomass Facility

Agency Response:
The Forest Plan does not address individual special uses including specific utility corridors. Project level decisions signed prior to Record of Decision for the Forest Plan will generally be allowed to proceed. The decision notice to allow for expansion of the existing transmission corridor was signed in August, 2001. To date, no application to amend the existing special use permit has been received. FSH 1909.15, Environmental Policy and Procedures Handbook, Section 18- Correction, Supplementation, or Revision of Environmental Documents and Reconsideration of Decisions to Take Action states "Review the environmental documentation of actions that are awaiting implementation and those of ongoing programs or projects at least every 3 to 5 years to determine if the environmental analysis and documentation should be corrected, supplemented, or revised. After a decision to implement a proposed action has been made and when the consideration of new information leads to the supplementation or revision of environmental documents, a new decision based on the supplemented or revised environmental documents must be consistent with the scope of the new environmental analysis." If at the time the permit application is received, it is determined that the NEPA needs review, a new environmental analysis would need to be completed and would need to address compliance with the standards and guidelines in the revised Plan.

Social Values

Social Values –General (5.1.0)

PC#5.1.0-1
Public Concern: The final EIS should adequately analyze the social and economic benefits of wildlife-dependant recreation.

Agency Response:
The Final EIS, (Chapter 3), and Plans, (Chapter 3), have been revised to address more specifically wildlife dependant recreation and some associated wildlife populations.

PC#5.1.0-2
Public Concern: The final EIS should include a cumulative social impact section.

Agency Response:
The Final EIS includes a Cumulative Effects of All Social Sustainability Indicator section in Chapter 3, Social and Economic Sustainability.

PC#5.1.0-3
Public Concern: The Final Plans should define terminology.

Agency Response:
Definitions of spiritual, aesthetics and social communities have been added to the Final EIS.

PC#5.1.0-4
Public Concern: The Final Plans should emphasize intrinsic values.

-To include non-motorized activities and economic values.
-To protect the Chippewa and Superior NFs for future generations.

Agency Response:
Please see the Public Concern Response to: PC#5.2-3: The Final EIS should analyze non-market values such as existence values, and market values such as timber and recreation values.

Quality of Life (5.1.2)

PC#5.1.2-1
Public Concern: The Forest Service should actively manage the forest to maintain the social and economic quality of life.

Agency Response:
The USDA Forest Service is responsible to the people of the United States to follow the many laws, treaties, regulations and policies that address the social and economic quality of life associated with the National Forests. (Chapter 1, Final Forest Plans). The Forest Service Strategic Plan also provides context emphasis for managing national forests in terms of the following long term goals: promoting ecosystem health; provide multiple benefits to people, deliver scientific and technical assistance, and ensure effective public service. (Final EIS, Chapter 1). The Final Forest Plan addresses directly and indirectly the social and economic quality of life related to forest management.

PC#5.1.2-2
Public Concern: The final EIS should include analysis of management effects on non-local recreational participants.

Agency Response:
The Final EIS, Chapter 3, Social and Economic Sustainability and Recreation section displays effects of each alternative on recreational participants. This included the relationship of appropriate recreational activities to management area themes, effects of proposed wilderness study areas, non-motorized recreational pursuit opportunities, recreational motorized vehicles, and water access. No distinction was made between local and non-local users since recreational interests are not segregated by residence location. In other words, local residents are interested in a variety of recreational opportunities, as are non-local residents.

PC#5.1.2-3
Public Concern: The final EIS should include analysis of the social importance of sport hunting.

Agency Response:
The Final EIS, Chapter 3, Social and Economic Sustainability section generally outlines effects of each alternative on the social importance of sport hunting in terms of the habitat provided for associated species.

Social Sustainability (5.1.3)

PC#5.1.3-1
Public Concern: The Final Plans should specify 80 million board feet of timber should be harvested to maintain and/or create manufacturing jobs in the area.

Agency Response:
The Record of Decision outlines the final decision balanced by consideration of resource, social, and economic considerations as outlined in the Final EIS. The decision focuses primarily on the desired condition of the Forests rather than on the outputs or products which will be produced. However, the maximum harvest level, or Allowable Sale Quantity (ASQ), is identified in the decision.

PC#5.1.3-2
Public Concern: The Final EIS social section should contain language specific to Tribes and Treaty rights per the 1854 Ceded Territory.

Agency Response:

Please see responses to public concerns in Appendix F, the Tribal Section including, but not limited to: PC 2.1-3, 2.1-5, 2.1-8, 2.1-9, 2.1-15, 2.1-17, 2.1-20, and 2.1-25.

Public Health and Safety (5.1.4)

PC#5.1.4-1
Public Concern: The Chippewa and Superior NFs should include management direction to address increased roads and related crime.

Agency Response:
The concept about crime and amount of road access has been clarified in the Final EIS, Chapter 3, Social and Economic Sustainability section to address unencumbered road access.

Equity (5.1.5)

PC#5.1.5-1
Public Concern: The Forest Service should consider consequences of national forest management decisions on the United States and worldwide natural resources and quality of life.

Agency Response:
The National Forests are managed under the concept of Ecosystem Management, which is an ecological approach to natural resources management to assure productive, healthy ecosystems by blending social, economic, physical and biological needs and values. We believe that the national forests should be managed for a variety of resources and uses, and the Multiple-Use Sustained Yield Act requires this type of management. The Revised Forest Plans seek to provide a balance of goods, services and uses for all Americans. Admittedly, not all people will agree with the balance that is provided. In addition, management for different resources on the same piece of ground is often possible. Both the Final EIS and the Record of Decision examine and describe how potential actions and decisions would affect a wide variety of resources, economics, people and communities.

PC#5.1.5-2
Public Concern: The information in SSU-4 is missing for the Chippewa.

Agency Response:
Please see Tables 2.1 to 2.7 in Chapter 2 of the EIS for management area acre figures by Alternative within the Chippewa NF.

Economic Values

PC# 5.0-1
Public Concern: The Final EIS should clarify timber values in Appendix B.

Agency Response:
Please see the final EIS Appendix B number for updates. The total financial values are meant to illustrate how the species product mix and volume affects the average revenue per CCF. The figures are a result of different alternatives having different mixes of products and species such as aspen and soft wood pulp.

PC# 5.0-2
Public Concern: The Final EIS should analyze below cost timber sales.

Agency Response:
"Before any national forest timber is sold, it is appraised, and the objective of this appraisal is to estimate the material's fair market value. When a sale is offered, it is offered competitively and the contract is normally awarded to the firm offering the highest bid. These requirements have been imposed to help ensure that the government is justly compensated for any timber it sells. Arguments of a subsidy arise from the fact that the price the government charges for timber is not always sufficient to cover its full costs of sale preparation and administration. A variety of factors contribute to this situation. These include the following: 1) the Forest Service's multiple use mission does not stress maximizing dollar returns; 2) the agency, as a consequence of various process and procedural requirements relating to such things as public involvement, analysis of potential environmental effects, and administrative appeals, tends to be a relatively high cost timber producer; 3) the price the agency can charge for timber is determined in an open market where most purchasers have a choice of buying either public or private stumpage; and 4) the price the agency can charge is dictated by the commercial value of the material being sold, and over time priorities have shifted to favor removing relatively small diameter, low-value material. Given these realities the Forest Service cannot always price its timber high enough to cover its full costs of production, because if it did so, in some instances it would only succeed in driving itself out of the market, which would compromise its ability to use timber sales as a management tool, even for achieving stewardship purpose objectives. Experience indicates that typically this would cause the net cost of national forest management to increase, not decrease. This outcome is traceable to the fact that timber sales, unlike other ways of manipulating vegetation – e.g., prescribed burning, use of chemical herbicides, and mechanical treatments such as cut and leave - generate some revenue to help offset their costs of implementation." (USDA Forest Service Bartuska, Director, Forest and Rangeland Staff, file code 2400, November 6, 2000)

Multiple use and value objectives were incorporated into the analysis of the forest plan. Modeling was done to reflect multiple use objectives, such as assigning recreational opportunity spectrum objectives; spatial allocation of vegetative edge; and threatened and endangered species habitat locations. Available timber volume was not pre-determined; rather it was a result of the best information available for modeling that took into account a number of multiple use factors. The Forest Service provides stewardship of the national forest resources. Timber sales are a tool for helping to achieve various land management objectives that require manipulating the existing vegetation – e.g., improving forest health, reducing forest fuels, and creating desired habitat for wildlife – so both commercial and non-commercial forest users benefit.

Economic Values – General (5.2)

PC# 5.2-1
Public Concern: The Final EIS should analyze protections for planted trees within the IMPLAN analysis.

Agency Response:
The costs associated with successful regeneration are incorporated into the IMPLAN economic model. Please see Final EIS Appendix B for further detailed information on the IMPLAN model.

PC# 5.2-2
Public Concern: The Final EIS should include current forest products industry economic research.

Agency Response:
The Economic section of the Final EIS has been revised from the draft EIS to the Final EIS.

The Multiple-Use Sustained Yield Act of 1960 authorizes the Secretary of Agricultures to address multiple use management of the National Forests. The Chippewa and Superior National Forests chose to utilize the coarse filter approach to ensure there is a representation of vegetation by landscape ecosystem, and alternatives were created that responded to a variety of issues affecting the management of the National Forests. The Final EIS analyzed effects related to implementation of the seven alternatives, including social and environmental impact; wood supply; and benefits and costs of alternative land uses.

New information such as the University of Minnesota, Duluth, report on management toward RNV, published in 2002 and the 2003 Governor's Task Force report will be considered in future forest plan amendments and revisions. We recognize the business cycle was on the rise when basic economic work was done in 1999 and 2000, and that it is currently in a down turn. We believe our estimates of jobs and income, associated with changes in the production of good and services as estimated by alternatives to be sound. In our analysis, we do not draw the conclusion that the incremental change in harvesting associated with the difference between alternatives, will directly result in jobs being added or lost. There are always possibilities of substitution of raw materials from other sources, changes in production efficiency due to modernization, and a myriad of other "possible changes" which affect jobs and income. What we can say is that to the best of our knowledge and using the best science and data available, that at the time of the Draft EIS, our best estimated of jobs and income associated with Forest Service production of goods and services are reflected in the Draft EIS. We can look at business cycles and long term trends in industry, but recognize the highly speculative nature of various predictors of those trends. Additionally, the Final EIS and Revised Plans do increase the ASQ on both forests, how much timber volume will be offered for sale is dependant a careful consideration of all resources values and on the Forest Service allocated budgets.

In terms of managing toward RNV and the potential bottlenecks research has found, it is important to note "That supply does not create demand without proper pricing, there have to be markets for industries to supply in order for the analysis in the report to deliver as expected, and it is important to note that transportation costs play a major role in the "big picture", especially when shipping is not transacted by weight." (Forestry Bottleneck Analysis, 2002) Modified E alternative does not go to RNV, nor is that the alternative's intent. Modified E alternative is somewhere in the range between the bottleneck scenario 2 and 3 and regardless of the sensitivity analysis, aspen will be a bottleneck while all other species are positive (no bottleneck) with the exception of small bottleneck with regard to jack pine. In terms of employment, (interpreting between scenario 2 and 3), it means no decrease and a probable increase (although not as great as scenario 3). It is also interesting to note that this

bottleneck analysis did not look at social or environmental impacts, or benefits from other uses of the forest such as tourism and recreation.

The Dualplan model used to provide vegetative information did not limit timber volume runs based on any assigned demand for the volume. The volume outputs were based on criteria reflecting Alternative management emphasis.

The Governor received and provided comments via an extensive response from the Department of Natural resources.

PC# 5.2-3
Public Concern: The Final EIS should analyze non-market values such as existence values, and market values such as timber and recreation values.

-To include the intrinsic values or ecosystem values of ecosystem services.
-To prioritize non-market values over market values when making management decisions.
-To include the opportunity costs and benefits.
-To better analyze the benefits of Alternative D.

Agency Response:
The Forest Service decision making process as applied in the Record of Decision, does not only count things that can be counted. 36CFR 219.12(f) directs us to formulate alternatives in such a way as "to provide an adequate basis for identifying the alternative that comes nearest to maximizing net public benefits…" NFMA of 1976 refers to the selection of harvesting systems to be used "is not selected primarily because it will give the greatest dollar return or the greatest unit output of timber." While this deals with project decision, we can interpret the intent of the authors that we must consider something more than just the numbers in describing those effects upon which we will base our decisions. Those non-numeric effects are the "intangibles". Ann Bartuska in her November 6, 2000 letter to John Talberth refers to the Congressional Research Service paper "Below Cost Timber Sales: Overview; CSRS Report to Congress; 95-15 ENR; p. 9 in the conclusion "net public benefits cannot be calculated, and are assumed to be determined through public participation in national forest planning."

36 CFR 219.12(e)(1)(iii) requires us to do benchmarks for significant individual goods and services having an established market value or an assigned value. The expectation is to then use these maxima to compare tradeoffs and opportunity costs of alternatives. To this end we use the Resource Pricing and Valuation Procedures recommended for the 1990 RPA Program. We attempt to use this approach to estimate prices for all resource outputs that are commensurate with one another, including those outputs such as recreation experienced values, which are not normally marketed. Estimates used are research-based "market-clearing prices" for which these things would sell for on the open market.

Methodologies to estimate "standing value" of trees and "existence value" of forests are at times controversial and questionable to some points of view. Further, reliable independent information on these values was not available in Minnesota at the timber of the analysis. Key information needed, for example, is a quantified tradeoff between timber harvesting and effects on such decisions as a retiree's choice to move to private land near the Chippewa or Superior National Forest, given that harvesting may take place miles away from the parcels of private land in question. We also must recognize that people are indeed making the decision to move to the area while, at the same time, current levels of timber harvesting are taking place. The Forest Service has chosen to consider these values through the public participation on the National Forest planning process and without assigning specific numbers.

The Final EIS considers the long-term values associated with both using and protecting forests in the legal contexts of laws, regulations, treaties and policies directing the management of the National Forests. The values considered are both economic (market or assigned values) and non-priced (social and ecological). Economic efficiency, which considers forest program costs, market-based values (revenues received directly), assigned values (activities such as hiking, fishing, wilderness use), and non-consumptive wildlife uses (e.g. bird watching), and opportunity costs were analyzed in the Final EIS.

Design and evaluation of alternatives also involved values that are not readily expressed in economic terms. Appendix B in the FEIS documents the 100-year economic analysis of market and non-market activities. The results of this analysis are only part of the values considered in the identification of the Selected Alternative. Chapter 3 of the Final EIS documents broader value considerations, including ecological values such as species viability, and social values such as the experiential opportunities available on the Forests. Additionally, intrinsic values are considered qualitatively within the National Environmental Policy Act framework of assessment and analysis at the site-specific project level.

IMPLAN analyzes the average annual effects of an alternative over the first decade. Estimating intangible recreational benefits and values resulting from word-of-mouth processes, based on all effects of an alternative's implementation were considered to be a monumental task. Rather, the recreation resource professionals of both Forests estimated a no-change value over the first decade, regardless of the Alterative. A gain or loss of recreation opportunities and use was estimated to be non-significant over the first decade, thus reflecting no change in the IMPLAN results due to recreation use.

Ecosystem services such as clean water and care of wildlife are maintained across all alternatives. The Forest Service recognizes this value. Acceptable quantitative models of the tradeoffs between harvesting and ecosystem services are not available for Minnesota. Keep in mind there are also positive ecosystem service values from harvesting such as providing early successional habitat and reducing risk of insect, disease, or fire.

It has been recognized that there are external costs associated with not harvesting timber. "Instances where failure to maintain healthy conditions on national forest lands may be contributing to increased insect, disease, or fire risks on adjacent private lands, suggest that such externalities are a distinct possibility." (USDA Forest Service Bartuska, Director, Forest and Rangeland Staff, file code 2400, November 6, 2000) There is a suggestion that harvesting decreases other benefits related to recreation and tourism. However trends indicate that such use is not decreasing, rather it is forcasted to increase. (Draft EIS, Chapter 3) "The Forest Service estimates that the economic value of recreation on national forests was $6.8 billion in 1993, and will grow to almost $12.7 billion by 2045. … The key point is that non-timber benefits were realized at the same time and often in the same watersheds that were being used to provide timber. … Clearly not all benefits are simultaneously realizable from the same acres, but the resources of the national forests are such that, with proper management, at any given point in time they can provide multiple benefits – including timber." (USDA FS Bartuska)

PC# 5.2-6

Public Concern: The Forest Service should analyze all economic information by assigning Alternative A as the no action alternative, (fully funded) vs. defining it as the current existing condition (not fully funded).

Agency Response:

The Draft EIS, Chapter 3, Economic Section did display Alternative A as the no action alternative and there were also data displayed in the same section for the current existing condition (not fully funded). The Final EIS Chapter 3 continues to display information about all alternatives, including the no action alternative and the existing economic condition of national forest management.

PC# 5.2-8
Public Concern: The Final EIS should clarify points in the economic analysis.

-To address why counties were assigned to the impact analysis area and to the affected environment area.
-To address the origin of National Forest timber harvest information.
-To address the accuracy of the job and income multipliers.
-To clarify employment and wage information and to eliminate bias.
-To disclose the age of the data used in IMPLAN.
-To provide definitions.
-To provide the source of employment figures.
-To ensure the number of jobs reported represents the total employment and accurate information.
-To clarify employment data for the economic Impact Analysis area and the state of Minnesota
-To clarify what components of the economic sector are within the agricultural sector.
-To clarify employment related to timber harvest volume information of the existing condition/Alternative A.
-To clarify Figure ENC-3, Volume of Timber sold by Ownership.
-To clarify Tables ECN and ECN-2 and ECN-3.
-To clarify Figure ECN-1.

Agency Response:
The Draft EIS was revised and clarified to better explain how data was used and also IMPLAN was re-run based on Dualplan outputs and new information for employment. Please see Final EIS, Chapter 3 and Appendix B on existing and additional details on timber supply, impact analysis area, and IMPLAN.

Information used in IMPLAN was specific to Minnesota. This information was much more useful in analysis than possible information from a national study that would have used a different set of assumptions and subsequently, different job and income multipliers. Employment and income data was derived from US Department of Commerce, Bureau of Economic Analysis (BEA) Regional Economic Projections from 2000 to 2018, obtained from the University of Virginia Fisher Library web site. Cross tabulations of personal income by major source of earnings by industry, and total full time and part timber employment by industry projections were included. Please note that the BEA no longer provides these projections and the Fisher Library no longer serves this information.

Sector data are organized by the US Department of Labor, Office of Safety and Health Administration (OSHA), Standard Industry Classification (SIC) codes, often referred to as sectors. IMPLAN data has been organized by IMPLAN sectors described in the IMPLAN Professional Version 2.0 Manual Appendix F. This standard system, also used by the State of Minnesota, uses a hierarchy that starts with Agriculture and in the agriculture sector you will find crops, livestock, agricultural services, forestry, fishing, hunting and trapping.

The comment regarding clarification of unemployment and wage information to eliminate bias is directed towards the total values of income in the impact area, which include both earned income such as wages and direct purchase, and unearned income such as pensions and investment returns from stocks and mutual funds. The Forest Service impact analysis is directed at estimating the difference between alternatives resulting from land management decisions. We do not presently have acceptable scientific models which can predict changes in unearned income resulting from land management decision. Considerations for these intrinsic values of forested land have been made within non-quantitative evaluations.

Douglas County, Wisconsin and Carlton County, Minnesota were included in the analysis impact areas because northern Minnesota wood is processed in mills there.

National Forest timber harvest information and it's percentage of MN timber harvest was derived from the National Forest timber volume average of the 1992 to 2002 decade and the amount of timber harvested in Minnesota. The current definition is based on the harvest decadal average of what was offered, (vs. sold and cut) and was used in FEAST. (FEAST is merely an Excel Spreadsheet which imports response coefficients from IMPLAN and links that data with resource output estimates and other financial data to give a total impact in dollars and jobs for each resource or activity.) The information in FEAST included also the volume of cut vs. sold to provide a more accurate representation of the amount of NF timber harvested.

IMPLAN data used in the DEIS is 2000 data. 2001 data became available too late in the analysis process to be used. IMPLAN output says only that there are "x" jobs needed to process an associated "y" amount of resources as derived from the Chippewa and Superior National Forests. The model does not take into account demand or substitution of supply. The IMPLAN model as maintained by the Minnesota IMPLAN Group, supplies the information on employment numbers and income based on the best science available.

Value-added associated with various industries is reflected directly in the IMPLAN data base and resulting models. Manufacturing will, in most cases, show a relatively high value-added while recreation may show a much lower value-added. This is based on information collected directly from those industries. In other words, the model will accurately reflect productivity of workers in the forest industry sector. This bears directly on gross regional product differences, even though we don't present gross relative contribution to the macro-economic base sector. . Impacts by industrial sector are expressed separately in the Draft EIS tables ECN-6 through 9, and accurately model both increases and reduction in service sector employment/income when base sector jobs are added or lost. This is not to say gross regional product as a measure is not important or that jobs and income as a measure is interchangeable with gross regional product.

The Draft and Final EIS addresses the contribution of timber industry to local communities in the economic impact analysis Tables ECN 6 through ECN 9. Present Net Value (PNV) is used for the purpose of evaluating the financial efficiency of Forest Service activities in achieving desired future conditions expressed in a particular alternative. The Forest Service is not required to and does not normally use PNV to evaluate economic benefits of alternatives.

Please see PC 5.2-3 for responses to the concept of earned and unearned income to timber harvesting and effects on other National Forest resources and opportunities.

Definitions of terms used within the IMPLAN model followed those provided by Bureau of Economic Analysis and are standards in economic reporting. These definitions are consistently used within economic Draft and Final EIS.

PC# 5.2-9

Public Concern: The Final EIS should consider the cost counties incur while providing services to Federal land users.

Agency Response:

The Chippewa and Superior National Forests recognize that some costs associated with federal land visitors are incurred by others outside the federal agency. However, the administrative decisions necessary to address this issue of cost sharing are outside the scope of the Forest Plan revision process.

PC# 5.2-10
Public Concern: The Final EIS should analyze the value of timber supply to show that the value under Alternative F may approach the value of Alternative E.

Agency Response:
The purpose of the indicators is to display the value of timber supply and how it is reflected in jobs and income impacts in the DEIS. Please see the Final EIS, Chapter 3, Economic Section for these values and accompanying discussion. The higher value of sawtimber is indeed factored in as the product mix associated with each alternative.

PC# 5.2-11
Public Concern: The Forest Service should re-evaluate the effects of alternatives in the recreation-related economic analysis.

Agency Response:
The IMPLAN model was used to analyze and display the outcomes related to employment and income. The information used within the IMPLAN model is that derived from published analysis and adequate data provided by resource professionals. Timber values were not inflated, but were based on real data assimilated over the 1992 -2002 decade by the National Forests. The information displayed in tables associated with employment and income (Final EIS, Chapter 3) are most valuable to use as a relative comparison between Alternatives as provided by the market priced resources of the National Forest. Actual employment and income will most likely be somewhat different as local, regional, national and global market effects influence outcomes.

Please refer to Appendix B of the Final EIS for additional information on IMPLAN and fisheries, recreation, tourism, and timber harvesting and also see responses to other economic PC statements (PC5.2-12, 5.2-13, 5.3-4, 5.3-8, 5.3-12, 5.3-17). Timber harvesting is not emphasized as an output from the revised Forest Plan; rather it is one of the multiple benefits of managing the forests for the many forest-wide, management area, and/or landscape ecosystem goals.

PC# 5.2-12
Public Concern: The Final EIS should incorporate economic analysis that includes costs of forest management.

Agency Response:
The Draft EIS was clarified to provide information on opportunity costs and data components of IMPLAN. The background information of IMPLAN is available from the MN IMPLAN Group and is considered state of the art. This information is included in the analysis of the selected range of alternatives, and meets identified indicators to adequately analyze the alternatives, based on budget and time constraints inherent in revising forest plans. Specifics of site conversion costs, changes in revenue due to rotation length and harvest method are analyzed in the alternatives, but not broken out as individual line items in the tables provided.

PC# 5.2-13
Public Concern: The Final EIS should analyze all costs and benefits.

Agency Response:
Both priced and non-priced market effects are treated in the present net value analysis of economic efficiency in the DEIS. There is nothing in 16 U.S.C 529, 1602, 1604; 42 U.S.C 4332 that indicates the USDA FS must analyze existence values, nor is there any case indicating so. There is no firm policy that indicates how ecosystem

services should be analyzed by the USDA FS. Methodologies to estimate "standing value" of trees and "existence value" of forests are at times controversial and questionable to some points of view. Further, reliable independent information on these values was not available in Minnesota at the timber of the analysis. Key information needed, for example, is a quantified tradeoff between timber harvesting and effects on such decisions as a retiree's choice to move to private land near the Chippewa or Superior National Forest, given that harvesting may take place miles away from the parcels of private land in question. We also must recognize that people are indeed making the decision to move to the area while, at the same time, current levels of timber harvesting are taking place. The Forest Service has chosen to consider these values through the public participation on the National Forest planning process and without assigning specific numbers.

PC# 1.0.1-33
Public Concern: The Chippewa and Superior NFs should be managed for sustainable management of forest resources and for the economic activity of the forest products sector.

Agency Response:
The factors mentioned such as sustainable management of the forest resources, and the economic activity of the forest product sector in the comment are important and are incorporated in the Draft and Final EIS and Forest Plans. National Forests are managed to reflect a number of laws including the Multiple-Use Sustained Yield Act of 1960, regulations, treaties, and policies. In general, the Chippewa and Superior National Forests are managed for sustained multiple use, providing a wide variety of tangible and intangible benefits, opportunities, and values.

PC# 1.4.1-4
Public Concern: The Final EIS should consider using a survey that would describe the economic benefit of the non-timber aspects of the Forests.

Agency Response:
The Forest Service is using the best information available at this time to analyze the indicators within the Final EIS. If the Sierra Club member would like to follow through with discussions about the survey and how it may be appropriately used within the context of the National Forest's mission and mandates, please contact the USDA FS Eastern Region Office, 626 East Wisconsin Avenue, Milwaukee, Wisconsin, 53202. New information from use of such a survey would be considered in future forest plan amendments and revisions.

PC# 5.2-14
Public Concern: The Regional Forester should select Alternative C

-To provide economic activity in local communities by providing jobs
-To provide economic activity in local communities by playing an active role in supporting the economy
-Because it would provide the most revenue to the Forests.
-Because it would result in the best present net value.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving

sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

The Forest Service has long had an interest in the condition and vibrancy of local economies, especially as they relate to the use of public lands. This is based upon both the agency's congressionally mandated interests in healthy communities generally as well as its local concern as a partner with vested interests in the life of particular communities. Well-managed public lands and vibrant local communities are not mutually exclusive. The Draft and Final EIS explored implications of various land management alternatives upon local communities. The purpose of these analyses was to not promote economic development at the cost of a healthy forest, but to disclose the inevitable trade-offs that come with differing courses of action. Some alternatives enhance some social and economic aspects of local communities; some alternatives are neutral. Various parties may view the effects differently.

The Forest Service manages the natural resources of the forests within a multiple use framework as provided for in the National Forest Management Act of 1976 and the Multiple-Use Sustained Yield Act of 1960. Within that framework, the Forest Service recognizes that the National Forests contribute to the timber volume supply of local and regional mills. Supplying natural resources for those industries is one goal of the Final Forest Plan. There are also other goals as outlined within the Chippewa and Superior National Forests final Forest Plan. These include, but are not limited to, promoting ecosystem health and conservation using a collaborative approach to sustain the nation's forests and wetlands, and providing forest settings and natural resources that enhance social and economic benefits at local, regional, and national levels.

In the final EIS economic analysis, we do not draw the conclusion that the incremental change in harvesting associated with the difference between alternatives, will directly result in jobs being added or lost. There are always possibilities of substitution of raw materials from other sources, changes in production efficiency due to modernization, and a myriad of other "possible changes" which affect jobs and income. What we can say is that to the best of our knowledge and using the best science and data available, that at the time of the Draft EIS, our best estimate of jobs and income associated with Forest Service production of goods and services are reflected in the Draft EIS. We can look at business cycles and long term trends in industry, but recognize the highly speculative nature of various predictors of those trends. Additionally, the Final EIS and Revised Plans do increase the ASQ on both forests, how much timber volume can be offered for sale is dependent on a careful consideration of all resources values and the Forest Service allocated budgets.

The Forest Service decision making process as applied in the Record of Decision, does not only count things that can be counted. 36CFR 219.12(f) directs us to formulate alternatives in such a way as "to provide an adequate basis for identifying the alternative that comes nearest to maximizing net public benefits…" NFMA of 1976 refers to the selection of harvesting systems to be used "is not selected primarily because it will give the greatest dollar return or the greatest unit output of timber." While this deals with project decision, we can interpret the intent of the authors that we must consider something more than just the numbers in describing those effects upon which we will base our decisions. Those non-numeric effects are the "intangibles". Ann Bartuska in her November 6, 2000 letter to John Talberth refers to the Congressional Research Service paper "Below Cost Timber Sales: Overview; CSRS Report to Congress; 95-15 ENR; p. 9 in the conclusion "net public benefits cannot be calculated, and are assumed to be determined through public participation in national forest planning."

The Final EIS considers the long-term values associated with both using and protecting forests in the legal contexts of laws, regulations, treaties and policies directing the management of the National Forests. The values considered are both economic (market or assigned values) and non-priced (social and ecological). Economic efficiency, which considers forest program costs, market-based values (revenues received directly), assigned values (activities such as hiking, fishing, wilderness use), and non-consumptive wildlife uses (e.g. bird watching), and opportunity costs were analyzed in the Final EIS.

Design and evaluation of alternatives also involved values that are not readily expressed in economic terms. Appendix B in the FEIS documents the 100-year economic analysis of market and non-market activities. The results of this analysis are only part of the values considered in the identification of the Selected Alternative. Chapter 3 of the Final EIS documents broader value considerations, including ecological values such as species viability, and social values such as the experiential opportunities available on the Forests. Additionally, intrinsic values are considered qualitatively within the National Environmental Policy Act framework of assessment and analysis at the site-specific project level.

The Draft and Final EIS addresses the contribution of timber industry to local communities in the economic impact analysis Tables ECN 6 through ECN 9. Present Net Value (PNV) is used for the purpose of evaluating the financial efficiency of Forest Service activities in achieving desired future conditions expressed in a particular alternative. The Forest Service is not required to and does not normally use PNV to evaluate economic benefits of alternatives.

Benefits to local communities are not intended to be addressed within the Net Present Value (NPV) analysis. This was done in the IMPLAN analysis, with the best information available used. NPV is an efficiency analysis; it is a relative measure of the cost effectiveness of proposed combinations of management activities and opportunities. Please see the Final EIS, Chapter 3 and Appendix B for additional information.

The analysis of the Minnesota forest products industry's future trends and subsequent economic modeling across the state is best addressed at the state level. (Governor's Advisory Task Force Report on the Competitiveness of Minnesota's Primary Forest Products Industry) IMPLAN provides output in incremental change as related to the Final EIS alternative management analysis and does not address the business decisions of industry. To do otherwise would be out of the scope of the current forest plan revision.

The selection of an alternative is dependant on many tangible and intangible indicators. Sustainability of the ecosystem, providing for a variety of forested settings and opportunities, providing for treaty rights, and contributing to the economic stability of communities are all some of the few considerations in the preferred alternative selection. An Alternative is not selected as the preferred alternative based only on economic efficiency. Rational for a preferred Alternative selection is contained within the Record of Decision.

PC# 5.2-15
Public Concern: The Regional Forester should select Alternative D.

> **-To encourage an economy that does not rely on harvesting.**
> **-To enhance social sustainability in local communities by shifting skills to recreation, retirement homes, and knowledge exporting businesses.**
> **-To enhance social sustainability in local communities by not focusing on extractive resources.**
> **-To allow timber producers to certify their wood and make more money.**
> **-Because increased conifer production will benefit localized economy for harvesting of quality dimension lumber.**

Agency Response:
The Forest Service decision making process as applied in the Record of Decision, does not only count things that can be counted. 36CFR 219.12(f) directs us to formulate alternatives in such a way as "to provide an adequate basis for identifying the alternative that comes nearest to maximizing net public benefits…" NFMA of 1976 refers to the selection of harvesting systems to be used "is not selected primarily because it will give the greatest dollar return or the greatest unit output of timber." While this deals with project decision, we can interpret the intent of the authors that we must consider something more than just the numbers in describing those effects upon

which we will base our decisions. Those non-numeric effects are the "intangibles". Ann Bartuska in her November 6, 2000 letter to John Talberth refers to the Congressional Research Service paper "Below Cost Timber Sales: Overview; CSRS Report to Congress; 95-15 ENR; p. 9 in the conclusion "net public benefits cannot be calculated, and are assumed to be determined through public participation in national forest planning."

The Forest Service has long had an interest in the condition and vibrancy of local economies, especially as they relate to the use of public lands. This is based upon both the agency's congressionally mandated interests in healthy communities generally as well as its local concern as a partner with vested interests in the life of particular communities. Well-managed public lands and vibrant local communities are not mutually exclusive. The Draft EIS explored implications of various land management alternatives upon local communities. The purpose of these analyses was to not promote economic development at the cost of a healthy forest, but to disclose the inevitable trade-offs that come with differing courses of action. Some alternatives enhance some social and economic aspects of local communities; some alternatives are neutral. Various parties may view the effects differently.

The Final EIS considers the long-term values associated with both using and protecting forests in the legal contexts of laws, regulations, treaties and policies directing the management of the National Forests. The values considered are both economic (market or assigned values) and non-priced (social and ecological). Economic efficiency, which considers forest program costs, market-based values (revenues received directly), assigned values (activities such as hiking, fishing, wilderness use), and non-consumptive wildlife uses (e.g. bird watching), and opportunity costs were analyzed in the Final EIS.

Design and evaluation of alternatives also involved values that are not readily expressed in economic terms. Appendix B in the FEIS documents the 100-year economic analysis of market and non-market activities. The results of this analysis are only part of the values considered in the identification of the Selected Alternative. Chapter 3 of the Final EIS documents broader value considerations, including ecological values such as species viability, and social values such as the experiential opportunities available on the Forests. Additionally, intrinsic values are considered qualitatively within the National Environmental Policy Act framework of assessment and analysis at the site-specific project level.

Diversity of economic opportunities, as discussed in our interpretation of the Shannon-Weaver Index (in the Final EIS, Chapter 3), is important as an indicator of the economic vitality of a county. Providing opportunities for tourism is a part of the economic picture of the local, regional and national roles National Forests contribute to, along with but not limited to, providing timber volume, sustainable ecosystems, and habitat for threatened and endangered species.

Many of the Final Forest Plan goals are to "Contribute to local, regional and national economies by providing natural resources in a socially and environmentally acceptable manor." (Forest-wide Goal, Final Forest Plan, Chapter 3) Other desired conditions and objectives are D-SE-2, O-SE-1, and O-SE-2. The Forest Service does not have the research or quantitative models that would allow us to predict the tradeoffs in numbers of jobs from functional areas if timber harvesting were to cease. The Final EIS, Chapter 3, Social Sustainability, has addressed the concept of changes in management direction by alternative on opportunities in a qualitative way.

The Forest Service does not have the models or research to quantify changes in travel patterns or tourism based on the effects of timber harvesting. The professional judgment of Forest Service recreation staff working in the Superior and Chippewa National Forests indicated that that over the first decade of plan implementation, that there would likely be no significant changes in the quantity recreation-related activities.

The model, IMPLAN was used to analyze job and income changes by alternative over the next decade in the Final EIS, Chapter 3 and as described in Appendix B. The model is under proprietary ownership of the MN IMPLAN Group and is continually enhanced and maintained. There is no indication that the data used within IMPLAN or

the contributing FEAST spreadsheet is biased. Recreation visitation was expected to increase in keeping with regional trends. It was not held constant, but rather there were no estimated differences in visitation between alternatives as a result of extensive analysis and consideration for the importance of recreation in Northern Minnesota. Jobs and income based on recreation did not change, however, changes did occur in jobs and income based on timber volume available for harvest within a sustainable ecosystem and changes in fire prevention. There are assigned values for hunting and snowmobiling in the FEAST analysis that contributes to IMPLAN calculations. The Present Net Value (NPV) calculations did estimate an increase in the amount of recreational visitor days, based on the 100 year planning horizon when such developments such as expanded trail systems would be complete and people would learn about them and utilize them.

IMPLAN analyzes the average annual effects of an alternative over the first decade. Estimating intangible recreational benefits and values resulting from word-of-mouth processes, based on all effects of an alternative's implementation were considered to be a monumental task. Rather, the recreation resource professionals of both Forests estimated a no-change value over the first decade, regardless of the Alterative. A gain or loss of recreation opportunities and use was estimated to be non-significant over the first decade, thus reflecting no change in the IMPLAN results due to recreation use.

Ecosystem services such as clean water and care of wildlife are maintained across all alternatives. The Forest Service recognizes this value. Acceptable quantitative models of the tradeoffs between harvesting and ecosystem services are not available for Minnesota. Keep in mind there are also positive ecosystem service values from harvesting such as providing early successional habitat and reducing risk of insect, disease, or fire.

The selection of an alternative is dependant on many tangible and intangible indicators. Sustainability of the ecosystem, providing for a variety of forested settings and opportunities, providing for treaty rights, and contributing to the economic stability of communities are all some of the few considerations in the preferred alternative selection. An Alternative is not selected as the preferred alternative based only on economic efficiency. Rational for a preferred Alternative selection is contained within the Record of Decision.

It has been recognized that there are external costs associated with not harvesting timber. "Instances where failure to maintain healthy conditions on national forest lands may be contributing to increased insect, disease, or fire risks on adjacent private lands, suggest that such externalities are a distinct possibility." (USDA Forest Service Bartuska, Director, Forest and Rangeland Staff, file code 2400, November 6, 2000) There is a suggestion that harvesting decreases other benefits related to recreation and tourism. However trends indicate that such use is not decreasing, rather it is forcasted to increase. (Draft EIS, Chapter 3) "The Forest Service estimates that the economic value of recreation on national forests was $6.8 billion in 1993, and will grow to almost $12.7 billion by 2045. … The key point is that non-timber benefits were realized at the same time and often in the same watersheds that were being used to provide timber. … Clearly not all benefits are simultaneously realizable from the same acres, but the resources of the national forests are such that, with proper management, at any given point in time they can provide multiple benefits – including timber." (USDA FS Bartuska)

The Forest Service impact analysis is directed at estimating the difference between alternatives resulting from land management decisions. We do not presently have acceptable scientific models which can predict changes in unearned income resulting from land management decision. Considerations for these intrinsic values of forested land have been made within non-quantitative evaluations.

Please refer to Appendix B of the Final EIS to additional information on IMPLAN and fisheries, recreation, tourism, and timber harvesting and also see responses to other economic PC statements (PC5.2-12, 5.2-13, 5.3-4, 5.3-8, 5.3-12, 5.3-17). Timber harvesting is not emphasized as an output from the revised Forest Plan; rather it is one of the multiple benefits of managing the forests for the many forest-wide, management area, and/or landscape ecosystem goals.

Basic assumptions of IMPLAN (the model used to estimate jobs and income) do not include restructuring the economy, nor does it predict the specific future of industry related to the opening or closing of businesses. IMPLAN estimates jobs and income related only to National Forest resources and subsequent changes in proposed management of those resources. The effects of the amount of timber volume available to be sold on National Forest land on the amount of jobs available at one mill in a community is not a linear analysis and is not an estimate the Draft or Final EIS expects to provide.

PC# 5.2-16
Public Concern: The Regional Forester should not select Alternative E.

> **-Because low timber harvest levels would negatively affect wood and fiber availability and therefore jobs**
> **-Because low timber harvest levels would negatively affect the economy and jobs and National Forests should do their fair share**
> **-Because it would be devastating to the recreation and tourism industries**
> **-Because it over emphasizes economic issues and does not emphasize the ecological purpose of national forests.**
> **-Because low timber harvest levels would negatively affect the economy and jobs and fully using a renewable resource would not**
> **-Because low timber harvest levels would negatively affect local and regional jobs and economy**

Agency Response:
The analysis of the Minnesota forest products industry's future trends and subsequent economic modeling across the state is best addressed at the state level. (Governor's Advisory Task Force Report on the Competitiveness of Minnesota's Primary Forest Products Industry) IMPLAN provides output in incremental change as related to the Final EIS alternative management analysis and does not address the business decisions of industry. To do otherwise would be out of the scope of the current forest plan revision.

The Forest Service has long had an interest in the condition and vibrancy of local economies, especially as they relate to the use of public lands. This is based upon both the agency's congressionally mandated interests in healthy communities generally as well as its local concern as a partner with vested interests in the life of particular communities. Well-managed public lands and vibrant local communities are not mutually exclusive. The Draft EIS explored implications of various land management alternatives upon local communities. The purpose of these analyses was to not promote economic development at the cost of a healthy forest, but to disclose the inevitable trade-offs that come with differing courses of action. Some alternatives enhance some social and economic aspects of local communities; some alternatives are neutral. Various parties may view the effects differently.

Economic impact analysis used in the Chippewa and Superior National Forest Plan Revision Draft and Final EIS was conducted with the assumption that no plan alternative would propose a change in harvesting so extreme as to result in the closing of existing industry or the establishment of new industry in the impact area. This assumption is necessary in order to make use of the Minnesota IMPLAN Group impact model which is standard Forest Service methodology. Prediction of industry restructuring requires expensive and presently unavailable research. Any possible restructuring of industry would have to be considered, in addition to the impacts on jobs and income presented in the Draft EIS.

The selection of an alternative is dependant on many tangible and intangible indicators. Sustainability of the ecosystem, providing for a variety of forested settings and opportunities, providing for treaty rights, and contributing to the economic stability of communities are all some of the few considerations in the preferred

alternative selection. An Alternative is not selected as the preferred alternative based only on economic efficiency. Rational for a preferred Alternative selection is contained within the Record of Decision.

Please refer to Appendix B of the Final EIS to additional information on IMPLAN and fisheries, recreation, tourism, and timber harvesting and also see responses to other economic PC statements (PC5.2-12, 5.2-13, 5.3-4, 5.3-8, 5.3-12, 5.3-17). Timber harvesting is not emphasized as an output from the revised Forest Plan; rather it is one of the multiple benefits of managing the forests for the many forest-wide, management area, and/or landscape ecosystem goals.

Factors such as sustainable management of the forest resources, and the economic activity of the forest product sector, are important and are incorporated in the Draft and Final EIS and Forest Plans. National Forests are managed to reflect a number of laws including the Multiple-Use Sustained Yield Act of 1960, regulations, treaties, and policies. In general, the Chippewa and Superior National Forests are managed for sustained multiple use, providing a wide variety of tangible and intangible benefits, opportunities, and values.

Diversity of economic opportunities, as discussed in our interpretation of the Shannon-Weaver Index (in the Final EIS, Chapter 3), is important as an indicator of the economic vitality of a county. Providing opportunities for tourism is a part of the economic picture of the local, regional and national roles National Forests contribute to, along with but not limited to, providing timber volume, sustainable ecosystems, and habitat for threatened and endangered species.

PC# 5.2-17
Public Concern: The Regional Forester should select Alternative G.

> **-Because it would not rely on tourism for enhancing local communities.**
> **-To promote community sustainability.**

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

The Forest Service has long had an interest in the condition and vibrancy of local economies, especially as they relate to the use of public lands. This is based upon both the agency's congressionally mandated interests in healthy communities generally as well as its local concern as a partner with vested interests in the life of particular communities. Well-managed public lands and vibrant local communities are not mutually exclusive. The Draft EIS explored implications of various land management alternatives upon local communities. The purpose of these analyses was to not promote economic development at the cost of a healthy forest, but to disclose the inevitable trade-offs that come with differing courses of action. Some alternatives enhance some social and economic aspects of local communities; some alternatives are neutral. Various parties may view the effects differently.

Factors mentioned such as sustainable management of the forest resources and the economic activity of the forest product sector are important and are incorporated in the Draft and Final EIS and Forest Plans. National Forests

are managed to reflect a number of laws including the Multiple-Use Sustained Yield Act of 1960, regulations, treaties, and policies. In general, the Chippewa and Superior National Forests are managed for sustained multiple use, providing a wide variety of tangible and intangible benefits, opportunities, and values.

Diversity of economic opportunities, as discussed in our interpretation of the Shannon-Weaver Index (in the Final EIS, Chapter 3), is important as an indicator of the economic vitality of a county. Providing opportunities for tourism is a part of the economic picture of the local, regional and national roles National Forests contribute to, along with but not limited to, providing timber volume, sustainable ecosystems, and habitat for threatened and endangered species.

Many of the Final Forest Plan goals are to "Contribute to local, regional and national economies by providing natural resources in a socially and environmentally acceptable manor." (Forest-wide Goal, Final Forest Plan, Chapter 3) Other desired conditions and objectives are D-SE-2, O-SE-1, and O-SE-2. The Forest Service does not have the research or quantitative models that would allow us to predict the tradeoffs in numbers of jobs from functional areas if timber harvesting were to cease. The Final EIS, Chapter 3, Social Sustainability, has addressed the concept of changes in management direction by alternative on opportunities in a qualitative way.

The selection of an alternative is dependant on many tangible and intangible indicators. Sustainability of the ecosystem, providing for a variety of forested settings and opportunities, providing for treaty rights, and contributing to the economic stability of communities are all some of the few considerations in the preferred alternative selection. An Alternative is not selected as the preferred alternative based only on economic efficiency. Rational for a preferred Alternative selection is contained within the Record of Decision.

Basic assumptions of IMPLAN (the model used to estimate jobs and income) do not include restructuring the economy, nor does it predict the specific future of industry related to the opening or closing of businesses. IMPLAN estimates jobs and income related only to National Forest resources and subsequent changes in proposed management of those resources. The effects of the amount of timber volume available to be sold on National Forest land on the amount of jobs available at one mill in a community is not a linear analysis and is not an estimate the Draft or Final EIS expects to provide.

PC# 5.2-18

Public Concern: The Chippewa and Superior NFs should develop a new alternative similar to Alternative B in terms of harvest levels because the information used is inaccurate and it does not meet the Forest Service's treaty obligations.

Agency Response:

General trust responsibility obligations are in large part met by National Forests through compliance with laws and regulations relevant to federal land management. Examples of such laws include the National Forest Management Act, the National Environmental Policy Act, the Endangered species Act, the Clean Water Act, and the National Heritage Preservation Act. All of these laws are intended to protect important natural and cultural resources upon which the nation and all of its citizens depend.

Treaty and trust responsibilities will be fulfilled as the Forest Plan is implemented under existing treaties, laws, regulations; by coordination of management activities with the appropriate local, State, or tribal governments, as well as with other federal agencies; by actively collaborating with interested tribal governments, organizations, groups, and individuals, manage the Forests for multiple uses; implementing also the desired conditions, goals, objectives, standards and guidelines of the Final EIS and Forest Plans.

Additional standards and guidelines to direct management of tribal areas of concern are not specified since existing standards and guidelines provide adequate direction for managing these areas. In addition, enacting consultation requirements prior to project development should identify new issues and concerns in specific areas.

Preparing and rerunning the model for forest plan revision was done with the best information available. However, the model was only one part of the planning and decision process. A full compliment of specialists reviewed a full range of information to determine the level of acres to be treated. In the modeling and analysis for Forest Plan revision, the numbers for things such as management areas, road miles, and acres of timber harvest are all best estimates based on the latest available information. In general, when a gap in information was identified, the interdisciplinary team concluded that the missing information may have added precision to estimates or better specified a relationship; however, the basic data and central relationships are already sufficiently well established in science so that additional information was considered unlikely to reverse or nullify understood relationships. In the Final EIS, modified Alternative E was modeled with data from 2004."

PC# 5.2-19
Public Concern: The Forest Service should analyze additional alternatives that generate economic growth.

Agency Response:
EIS Analysis indicates that most alternatives would result in an increase in employment and labor income from the current condition (EIS section 3.9.1.b). The theme of Alternative E is to emphasize a diverse economic base in local communities. Compared to other alternatives, the Forests would be managed in a way that provides a variety of economic opportunities. Alternative E would provide a broad range of recreational opportunities and emphasize timber and other commodity products (EIS section 2.4.5).

The EIS includes seven alternatives with different approaches to economic growth, each reflecting the theme of an alternative. The alternatives were built around a range of themes, and the components of each alternative were constructed around those themes. The Regional Forester has determined that the range of seven alternatives analyzed in the EIS provides for a reasonable number of examples covering the full options for economic growth. Therefore, it is not necessary to develop an additional alternative to address this interest. In addition, the Regional Forester can modify the alternative he selects for implementation in his decision, including changing the approach to generating economic growth.

PC# 5.2-20
Public Concern: The Regional Forester should select Alternative B, F, or G because they would better addresses the changing trends in Minnesota's timber industry than Alternative E.

Agency Response:
The EIS analyzed a wide variety of alternatives with different outcomes and with varying management area allocations, addressing the plan revision issues. Each alternative meets the intent of relevant laws, including the Multiple Use Management Act, under which the National Forests are managed. The Regional Forester considered all of the alternatives, and the Record of Decision (ROD) describes his rationale for the Selected Alternative. The Selected Alternative represents what Forest managers believe to be the best balance of outcomes in achieving sustainable ecosystems and meeting the intent of relevant laws, as well as addressing the issues and concerns specific to the Chippewa and Superior NFs. The ROD also discusses how the alternatives address the issues, including the Selected Alternative.

The analysis of the Minnesota forest products industry's future trends and subsequent economic modeling across the state is best addressed at the state level. (Governor's Advisory Task Force Report on the Competitiveness of

Minnesota's Primary Forest Products Industry) IMPLAN provides output in incremental change as related to the Final EIS alternative management analysis and does not address the business decisions of industry. To do otherwise would be out of the scope of the current forest plan revision.

New information such as the University of Minnesota, Duluth, report on management toward RNV, published in 2002 and the 2003 Governor's Task Force report will be considered in future forest plan amendments and revisions. We recognize the business cycle was on the rise when basic economic work was done in 1999 and 2000, and that it is currently in a down turn. We believe our estimates of jobs and income, associated with changes in the production of good and services as estimated by alternatives to be sound.

Timber harvesting is not emphasized as an output from the revised Forest Plan; rather it is one of the multiple benefits of managing the forests for the many forest-wide, management area, and/or landscape ecosystem goals. Please refer to Appendix B of the Final EIS to additional information on IMPLAN and fisheries, recreation, tourism, and timber harvesting and also see responses to other economic PC statements (PC5.2-12, 5.2-13, 5.3-4, 5.3-8, 5.3-12, 5.3-17).

Basic assumptions of IMPLAN (the model used to estimate jobs and income) do not include restructuring the economy, nor does it predict the specific future of industry related to the opening or closing of businesses. IMPLAN estimates jobs and income related only to National Forest resources and subsequent changes in proposed management of those resources. The effects of the amount of timber volume available to be sold on National Forest land on the amount of jobs available at one mill in a community is not a linear analysis and is not an estimate the Draft or Final EIS expects to provide.

Contribution/Role of Agency-administered Lands and Resources to Economy (5.3)

PC# 5.3-1
Public Concern: The Final EIS/Plans should emphasize timber production to provide jobs within local communities.

Agency Response:
The National Forest management mandates, as derived from a variety of laws including the Multiple-Use Sustained Yield Act of 1960 and the National Forest Management Act of 1976, regulations, treaties, and policies provide and expect multiple use management – tangible and intangible values, goods and services within the forests.

Basic assumptions of IMPLAN (the model used to estimate jobs and income) do not include restructuring the economy, nor does it predict the specific future of industry related to the opening or closing of businesses. IMPLAN estimates jobs and income related only to National Forest resources and subsequent changes in proposed management of those resources. The effects of the amount of timber volume available to be sold on National Forest land on the amount of jobs available at one mill in a community is not a linear analysis and is not an estimate the Draft or Final EIS expects to provide.

IMPLAN analysis does analyze direct, indirect, and induced effects by sector based on timber volume by product, and specific measurable recreation, wildlife, fisheries and mineral related resource values. Please see the Final

EIS, Chapter 3 and Appendix B for additional information on IMPLAN and also the results as calculated for jobs and income as derived by the model.

PC# 5.3-2
Public Concern: The Final EIS should analyze the dependence of local communities on the National Forest timber harvested.

-On direct and indirect impacts.
-On induced impacts.
-On value added impacts.
-On the area's over-all economy.
-On the net present value (NPV) calculations.

Agency Response:
The Forest Service manages the natural resources of the forests within a multiple use framework as provided for in the National Forest Management Act of 1976 and the Multiple-Use Sustained Yield Act of 1960. Within that framework, the Forest Service recognizes that the National Forests contribute to the timber volume supply of local and regional mills. Supplying those industries is a goal of the Final Forest Plan. There are also other goals as outlined within the Chippewa and Superior National Forests final Forest Plan. These include, but are not limited to, promoting ecosystem health and conservation using a collaborative approach to sustain the nation's forests and wetlands, and providing forest settings and natural resources that enhance social and economic benefits at local, regional, and national levels.

The National Forests support a vital regional economy with a variety of multiple uses that provide opportunities to meet multiple demands, resulting in more diverse local economies. Interpretation of the Shannon-Weaver Diversity Index displayed in the Final EIS, Chapter 3 reflects the importance of diversity within a county and the subsequent ability to absorb changes within its' economic system.

Basic assumptions of IMPLAN (the model used to estimate jobs and income) do not include restructuring the economy, nor does it predict the specific future of industry related to the opening or closing of businesses. IMPLAN estimates jobs and income related only to National Forest resources and subsequent changes in proposed management of those resources. The effects of the amount of timber volume available to be sold on National Forest land on the amount of jobs available at one mill in a community is not a linear analysis and is not an estimate the Draft or Final EIS expects to provide, based on available research, time, and budget constraints.

IMPLAN analysis does analyze direct, indirect, and induced effects by sector based on timber volume by product, and specific measurable recreation, wildlife, fisheries and mineral related resource values. Please see the Final EIS, Chapter 3 and Appendix B for additional information on IMPLAN and also the results as calculated for jobs and income as derived by the model.

Benefits to local communities are not intended to be addressed of the Net Present Value (NPV) analysis. This was done in the IMPLAN analysis, which the best information available was used. NPV is an efficiency analysis; it is a relative measure of the cost effectiveness of proposed combinations of management activities and opportunities. Please see the Final EIS, Chapter 3 and Appendix B for additional information.

Value-added associated with various industries is reflected directly in the IMPLAN data base and resulting models. Manufacturing will, in most cases, show a relatively high value-added while recreation may show a much lower value-added. This is based on information collected directly from those industries. In other words, the model will accurately reflect productivity of workers in the forest industry sector. . . Impacts by industrial sector are expressed separately in the Draft EIS tables ECN-6 through 9, and accurately model both increases and

reduction in service sector employment/income when base sector jobs are added or lost. This is not to say gross regional product as a measure is not important or that jobs and income as a measure is interchangeable with gross regional product.

PC# 5.3-4
Public Concern: The final Plan should support economic stability through enhancing tourism.

Agency Response:
Diversity of economic opportunities, as discussed in our interpretation of the Shannon-Weaver Index, (in the Final EIS, Chapter 3), is important for the economic vitality of a county. Providing opportunities for tourism is a part of the economic picture of the local, regional and national roles National Forests contribute to, along with but not limited to, providing timber volume, sustainable ecosystems, and habitat for threatened and endangered species.

Access on higher standard roads travelable by passenger vehicles within the National Forests is not predicted to decrease over the next decade or during the planning horizon. Some low standard roads will be decommissioned, and some low standard roads will be closed to motorized travel. Maintenance of existing will be done. Trails are available for motorized and/or non-motorized use also.

There are no figures available for "eco-tourism" participation or monetary value within the northern Minnesota region so that specific activity was not factored into the IMPLAN model. Specific recreation activities were included in IMPLAN calculations and other recreation and general tourism are discussed within the Final EIS Chapter 3 and Appendix B as providing benefits within the multiple use framework of national forest management. The Forest Service recognizes the importance of eco-tourism activities such as bird watching in Northern Minnesota. When research provides published peer reviewed quantitative models for the tradeoffs between timber harvesting and eco-tourism visitation and consumer spending in Northern Minnesota, they will be considered as "new information" in future forest plan amendments and revisions.

National Forests are managed for long term, sustained yields of renewable natural resources. Areas of national forest where trees have been harvested are required by laws to be regenerated as soon as silviculturally and managerially appropriate.

PC# 5.3-5
Public Concern: The Final EIS should forecast the future of MN timber industry and analyze economic information within that context.

Agency Response:
The analysis of the Minnesota forest products industry's future trends and subsequent economic modeling across the state is best addressed at the state level. (Governor's Advisory Task Force Report on the Competitiveness of Minnesota's Primary Forest Products Industry) IMPLAN provides output in incremental change as related to the Final EIS alternative management analysis and does not address the business decisions of industry. To do otherwise would be out of the scope of the current forest plan revision.

PC# 5.3-6
Public Concern: The Forest Service should maintain the regional area's economic stability.

Agency Response:
Many of the Final Forest Plan goals are to "Contribute to local, regional and national economies by providing natural resources in a socially and environmentally acceptable manor." (Forest-wide Goal, Final Forest Plan,

Chapter 3) Other desired conditions and objectives are D-SE-2, O-SE-1, and O-SE-2. The Forest Service does not have the research or quantitative models that would allow us to predict the tradeoffs in numbers of jobs from functional areas if timber harvesting were to cease. The Final EIS, Chapter 3, Social Sustainability, has addressed the concept of changes in management direction by alternative on opportunities in a qualitative way.

PC# 5.3-7
Public Concern: The Forest Service should offer alternative economic supplements to offset economic losses if a "preservation" alternative is selected.

Agency Response:
National Forests are required to follow a number of laws, treaties, regulations, and policies that pertain to NF management. Included within that is a multiple-use mandate as described in the National Forest Management Act of 1976 and the Multiple-Use Sustained Yield Act of 1960. To change these mandates is outside the scope of the Forest Plan revision process.

An Alternative is not selected as the preferred alternative based only on economic efficiency. There are a number of other factors that are a part of that decision, including but not limited to, threatened and endangered species viability, providing for a variety of recreational opportunities, and providing for traditional and cultural gathering opportunities.

PC# 5.3-8
Public Concern: The Final EIS economic analysis should recognize the compatibility and combined positive impacts of timber harvesting on recreation opportunities.

Agency Response:
While the Forest Service recognizes that a diverse economy that includes industry and tourism is a more stable economy, there is no way of quantifying that synergy of timber management and tourism. The Chapelle paper does not suggest that in an area with existing timber harvesting and associated industry, that increasing timber harvesting would mean an increase in tourism. It only says, as the commenter references also, that: "The most important finding was that forest industry development centers are characterized by higher unemployment rates than general urban regions, but lower than tourism and relatively undeveloped regions and are generally more stable and less influenced by seasonality. For most months, regions that have an economic base in both the forest products industry and travel tourism have lower unemployment rates than regions relying primarily on one or the other. And regions that are one or the other are characteristically better off than those that are neither, in the sense of being relatively undeveloped." (Lake States Regional Forest Resources Assessment, Technical Papers, Lake States Forestry Alliance 1995; Interaction of Tourism and Forest Products Sectors on Community Employment/Unemployment in the Lake States Region)

PC# 5.3-9
Public Concern: The Final EIS should analyze the effects of timber harvesting on tourism revenue.

Agency Response:
The Forest Service does not have the models or research to quantify changes in travel patterns or tourism based on the effects of timber harvesting. The professional judgment of Forest Service recreation staff working in the Superior and Chippewa National Forests indicated that over the first decade of plan implementation, that there would likely be no significant changes in the quantity of recreation-related activities.

PC# 5.3-10
Public Concern: The Final EIS should recognize the effect of timber related jobs at the macro-economic level.

Agency Response:
The Draft and Final EIS have disclosed estimates of impacts known to us about the possible implementation of each of the seven alternatives. This includes IMPLAN estimates of jobs that have been recognized to be associated with different Alternatives and based only on the changes in resources associated with each alternative. IMPLAN estimates do not reflect any market or industry management changes as a result of the change in National Forest delivery of goods and services. Consequences of local job losses or gains are reflected differently at the local, regional or national level. A job loss seriously affects individuals, and if the person lives in a small community, likewise, the community is affected also. Effects of a single job loss on larger populations of people and economies of the region and nation is further reduced as the geographic area widens.

Please also refer to the response for PC 5.2-8 for additional information related to the above PC and response.

IMPLAN impact analysis reflects the Economic Base Theory cited in the preceding comments. A percentage of timber is estimated to be exported out of the impact area and the only primary jobs associated with it are in harvesting. Recreation spending is only counted if is done by visitors from outside the impact area. Jobs and productivity information is specific to each industry. These jobs are not interchangeable in our analysis, as the comment suggests. Further, income by industry is accounted-for. More indirect and induced spending and jobs are associated with a higher paying job, such as might be found in manufacturing, than in a lower paying job that might be found in the service sector supporting recreation. Effects on the larger economy, in terms of both jobs and retail spending, will be appropriately more for a higher paying job.

PC# 5.3-12
Public Concern: The Final EIS analysis should analyze the economic benefits of recreation activities.

Agency Response:
The model, IMPLAN was used to analyze job and income changes by alternative over the next decade in the Final EIS, Chapter 3 and as described in Appendix B. The model is under proprietary ownership of the MN IMPLAN Group and is continually enhanced and maintained. There is no indication that the data used within IMPLAN or the contributing FEAST spreadsheet is biased. Recreation visitation was expected to increase in keeping with regional trends. It was not held constant, but rather there were no estimated differences in visitation between alternatives as a result of extensive analysis and consideration for the importance of recreation in Northern Minnesota. Jobs and income based on recreation did not change, however, changes did occur in jobs and income based on timber volume available for harvest within a sustainable ecosystem and changes in fire prevention. There are assigned values for hunting and snowmobiling in the FEAST analysis that contributes to IMPLAN calculations. The Present Net Value (NPV) calculations did estimate an increase in the amount of recreational visitor days, based on the 100 year planning horizon when such developments such as expanded trail systems would be complete and people would learn about them and utilize them.

PC# 5.3-13
The Final EIS should address the contribution of National Forest timber harvest on the local, state, and regional areas and the Environmental Impact Area (s).

-To analyze the economic contribution of National Forest timber harvesting.
-To address Federal payments to state and county governments.

Agency Response:
The Forest Service has long had an interest in the condition and vibrancy of local economies, especially as they relate to the use of public lands. This is based upon both the agency's congressionally mandated interests in healthy communities generally as well as its local concern as a partner with vested interests in the life of particular communities. Well-managed public lands and vibrant local communities are not mutually exclusive. The Draft EIS explored implications of various land management alternatives upon local communities. The purpose of these analyses was to not promote economic development at the cost of a healthy forest, but to disclose the inevitable trade-offs that come with differing courses of action. Some alternatives enhance some social and economic aspects of local communities; some alternatives are neutral. Various parties may view the effects differently.

The Draft and Final EIS analyzed, using the best information available, the economic contribution of National Forest timber harvesting, minerals and recreation expenditures/revenue at the economic impact area level, for each of the seven alternatives. Please see the Final EIS, Chapter 3 (section 3.9.1) and Appendix B for further information. State and Regional level analysis is conducted by the USDA Forest Service and presented in such documents as "An Analysis of the Timber Situation in the United States: 1952 to – 2050" by Richard W. Haynes, PNW-GTR-560, February 2003; Outdoor recreation in American life: A National Assessment of Demand and Supply Trends. Cordell, H. Ken; Betz, Carter; Bowker, J.M.; and others. Champaign, IL: Sagamore Publishing and all parts of the USDA Forest Service ROA Assessment. Information from these sources is in the Draft and Final EIS. The Chippewa and Superior plan revision Draft and Final EIS also made use of analyses available from the Minnesota Department of Natural Resources and the Minnesota Trade and Economic Development Business Tracking System.

The reduction in services as indicated by the commenter is only a possibility. Counties have an option to decide their 25% Fund payments, based on a yearly sale values of timber or based on averages of sale prices over a specific time period. These choices should and are made by the county representative and always are made with the best interest of the county in mind. Please see the Final EIS, Chapter 3(section 3.9.1) for further information on Payments to Counties. There are also many multiple use values provided by each alternative that are not incorporated into the 25% Fund, the PILT payments or the Thye-Blatnik payments, but are still recognized as contributing to the overall economies of the county. These include intangible and qualitative values such as providing habitat for wildlife, and the subsequent recreation associated with wildlife viewing and providing water access for people looking to recreate on area lakes. These are discussed in the Draft and Final EIS, Chapter 3, Social Sustainability section.

PC# 5.3-15
Public Concern: The Final EIS should analyze the economic impact of hunting and less game production.

Agency Response:
The FEAST spreadsheet that is in support of the IMPLAN model did assign values to hunting and these were reflected in the IMPLAN derived jobs and income in the Final EIS, Chapter 3(section 3.9.1) with additional information in Appendix B.

PC# 5.3-16
Public Concern: The Forest Service should manage the water levels to an even high water mark so the market value of the lake-side residence does not decline.

Agency Response:

Managing the water levels of lakes associated with Forest Service managed dams is not a Forest Plan level decision, however, we do appreciate your comments. Water levels are managed according to the "Dam Operations Schedule", available at the Chippewa National Forest Supervisors Office, 200 Ash Avenue, Cass Lake, MN. Phone: 218-335-8600. In addition, the Army Corp of Engineers, in partnership with the USDA Forest Service, is currently analyzing reservoir operations including water level management in a study named Reservoir Operations Plan Evaluation (ROPE).

Also, the Forest Service actively solicits public participation within the analysis of site-specific project proposals. At times these projects may involve areas of interest to you and your comments on the fuel reduction of the dead trees, road safety, and shoreline concerns would be appreciated. If you have additional items you would like to share with the Forest Service, please call or write to the same phone number and/or address in the preceding paragraph.

PC# 5.3-17
Public Concern: The Final EIS should increase the financial benefit values used in the analysis for the tourism industry.

Agency Response:
Impacts of the management options for each of the seven alternatives were objectively analyzed in the Final EIS, Chapter 3 (section 3.9.1). Jobs and income were derived using the IMPLAN model that uses the best available figures of values per recreational visitor day. See also PC 5.3-4 and 5.3-12 for additional perspective. The results are displayed in the Final EIS, Chapter 3 -Economic section and further explained in Appendix B.

PC# 5.3-18
Public Concern: The Final EIS should adequately analyze the effects of reduced harvest on local communities.

Agency Response:
Economic impact analysis used in the Chippewa and Superior National Forest Plan Revision Draft and Final EIS was conducted with the assumption that no plan alternative would propose a change in harvesting so extreme as to result in the closing of existing industry or the establishment of new industry in the impact area. This assumption is necessary in order to make use of the Minnesota IMPLAN Group impact model which is standard Forest Service methodology. Prediction of industry restructuring requires expensive and presently unavailable research. Any possible restructuring of industry would have to be considered, in addition to the impacts on jobs and income presented in the Draft EIS.

The Forest Service does not have information relating to where an increase in cost might be borne or attributed to by the forest industries. Assumptions were not made about absorbing any change in transportation costs by the forest industries. Harvesting is a tool used to address and meet (in part) vegetation objectives

PC# 1.0.1-22
Public Concern: The Forest Plans should not be managed for "emphasizing a diverse economic base in local communities" because it is not a requirement of NFMA and not appropriate for federal lands.

Agency Response:
The National Forest Management Act (NFMA) of 1976, Section 6 (e) states that: "In developing, maintaining, and revising plans for units of the National Forest System pursuant to this section, the Secretary shall assure that

such plans (1) provide for multiple use and sustained yield of the products and services obtained there from in accordance with the Multiple-Use Sustained – Yield Act of 1960, and, in particular, include coordination of outdoor recreation, range, timber, watershed, wildlife, and fish, and wilderness; and (2) determine forest management systems, harvesting levels, and procedures in the light of all of the uses set forth in subsection (c) (1), the definition of the terms "multiple use" and "sustained yield" as provided in the Multiple-Use Sustained-Yield Act of 1960, and the availability of lands and their suitability for resource management."

The National Forests have interpreted NFMA to mean that Sections 6 (e) supports providing for and emphasizing a diverse economic base in local communities as a result of managing the forest natural resources.

PC# 1.1.1-9
Public Concern: The Chippewa and Superior NFs should become more efficient in order to reduce the severe economic constraints resulting from past and current management of the Forests.

Agency Response:
The efficiency of National Forest management pertains to the implementation of the Final Forest Plans. In the context of the above comment, efficiency is out of the scope of forest plan revision. However, monitoring is a tool used during implementation of the Forest Plan to address the effectiveness of the management strategies at the appropriate level, including forest-wide and site specific indicators.

Typically, only a fraction of timber sale receipts are returned to the General Fund – most are deposited in various congressionally authorized accounts (e.g., the Knutson-Vanderberg – and Salvage Sale Funds) where the balances are reinvested in management of the national forests, or are received in the form of purchaser road credits as opposed to cash. Some receipts are directed to counties as payments in the form of PILT and the 25% Fund and are a source of revenue for counties and local school districts as a means to offset the loss of potential land, goods, and services related tax revenue. Some receipts are also allocated to the forest of origin from the national Knutson-Vanderberg Fund to be used only to compensate the National Forest for items directly related to the timber sale, such as funding post-implementation projects such as the successful regeneration of a forest stand.

The market determines the final sale value of timber volume offered by National Forests. Please see PC# 5.0–2 for additional information.

PC# 1.10-4
Public Concern: The Regional Forester should select an alternative that accommodates the economic well being of local communities.

Agency Response:
The Forest Service has long had an interest in the condition and vibrancy of local economies, especially as they relate to the use of public lands. This is based upon both the agency's congressionally mandated interests in healthy communities generally as well as its local concern as a partner with vested interests in the life of particular communities. Well-managed public lands and vibrant local communities are not mutually exclusive. The Draft and Final EIS explored implications of various land management alternatives upon local communities. The purpose of these analyses was to not promote economic development at the cost of a healthy forest, but to disclose the inevitable trade-offs that come with differing courses of action. Some alternatives enhance some social and economic aspects of local communities; some alternatives are neutral. Various parties may view the effects differently.

The selection of an alternative is dependant on many tangible and intangible indicators. Sustainability of the ecosystem, providing for a variety of forested settings and opportunities, providing for treaty rights, and

contributing to the economic stability of communities are all some of the few considerations in the preferred alternative selection. Rationale for an Alternative selection is contained within the Record of Decision.

Net Public Benefit and Agency Accounting (5.5)

PC# 5.5-1
Public Concern: The Final EIS should clarify the NPV comparison between alternatives.

Agency Response:
The Net Present Value (NPV) was calculated with projected resource product estimates, some uses of the forest that can be assigned values or have market values, costs of resource management, minerals and range opportunities. The NPV analysis results reflect high costs for prescribed fire along with other variables by alternative. Contributing to a large variation of NPV is the volume of timber associated with the product mix that each alternative provides. The assigned values used in the NPV analysis are not sample-based and therefore do not allow for statistical analysis such as variance.

The Draft and Final EIS addresses the contribution of timber industry to local communities in the economic impact analysis Tables ECN 6 through ECN 9. Net present value or present net value (PNV) is used for the different purpose of evaluating the financial efficiency of Forest Service activities in achieving desired future conditions expressed in a particular alternative. Further, PNV, including assigned values for recreational experience, is used to evaluate economic efficiency of alternatives. The Forest Service is not required to and does not normally use PNV to evaluate economic benefits of alternatives.

PC# 5.5-3
Public Concern: The Final EIS should analyze the net present value to include the economic benefits of timber harvesting to local communities.

Agency Response:
The model the National Forests used to determine the Net Present Value does not allow us to identify effects on local communities such as where people live, the jobs they have and very localized effects of changes by alternative. The NPV does look at the economic efficiency of managing the natural resources as described by the Alternative goals, objectives and desired conditions. NPV is not a mechanism for describing economic benefits of a particular program on local communities.

Heritage Resource Management (5.6)

PC# 5.6-1
Public Concern: The Final EIS should adequately analyze the cumulative effects of forest management activities on heritage resource sites.

Agency Response:
The reason there should be little difference in cumulative affects to heritage resources due to sanctioned management activities under the various alternatives is that project activities under each must conform to provisions of the National Historic Preservation Act and other laws designed to protect heritage resources. Under

both the existing forest plan and all alternatives analyzed, every proposed management activity (including timber harvest) that has the potential to affect heritage sites is subject to heritage resource inventory surveys. The purpose of these surveys is to identify heritage sites within the proposed project areas that may be eligible to the National Register of Historic Places. Once identified, all inventoried sites are protected until such time as evaluation studies can be completed to determine National Register eligibility. Eligible properties continue to be protected through avoidance or some form of mitigation planned in accordance with 36 CFR 800, the regulations that implement Section 106 of the National Historic Preservation Act. No protection is required for ineligible historic properties.

PC# 1.4.2-7
Public Concern: The Chippewa and Superior NFs should be able to: distinguish between type, value, and rarity of heritage sites; and conduct vista and sightline analysis.

Agency Response:
The criteria that federal agencies must use to assess the significance (importance) of heritage sites are established in law (National Historic Preservation Act) and regulation (36 CFR 60) pertaining to the National Register of Historic Places. The process of determining National Register significance involves consideration of site type, value and rarity among many other factors. The Chippewa and Superior National Forest conduct heritage resource inventory surveys that document and record many heritage site attributes pertaining to the question of significance. The Forests also undertake formal determinations of National Register significance that usually involve a more intensive examination of these attributes than is possible at the level of inventory survey. The objective of the inventory and evaluation work under both the existing and revised forest plans is to identify and protect significant heritage sites whether they be habitations, quarries, earthworks or petroforms.

Consideration of the past uses of certain topographic features including prominences and overlooks is, and will continue to be, standard practice among heritage resource professionals qualified to conduct archaeological work on National Forest lands. A variety of archaeological methods and analytical techniques are applied to the review of forest management activities. As required by law, these reviews must be done in consultation with the appropriate state or tribal historic preservation offices. The specific methods will vary depending upon the nature and setting of the project, relevant culture history, and the type of information being sought. Decisions regarding project-specific applications are outside the scope of the Forest Plan.

Monitoring (6.0)

PC# 6.0-1
Public Concern: The Plans' monitoring and evaluation direction (Chapter 4) should be expanded to include needed information missing from the draft Plans.

Agency Response:
We acknowledge the shortcomings of how Chapter 4 of the DEIS depicted what's to be monitored under the revised Plans, specifically that it addressed only items required to be monitored under the 1982 Planning Rule. Chapter 4 of the final Plans retains the
strategic focus discussed in the draft Plans, but its direction on what's to be monitored has been expanded to provide, where appropriate, for measuring progress toward desired conditions and objectives stated in the Plans. It's also been expanded to provide for monitoring, as needed, the implementation and effectiveness of standards

and guidelines directly associated with the 1982 Planning Rule. This expanded direction is provided in the form of a monitoring question and is presented in Table MON-4 (the Monitoring Matrix) in the Final Plans.

Readers are encouraged to consult Chapter 4 of the Final Plans for a description of the overall framework for monitoring under the revised Plans and for a description of the role served by each of four major parts of the framework. Those four major parts are:

(a) the strategic direction in **Chapter 4 of the Forest Plans**
(b) tactical direction documented in a **Monitoring Guide**
(c) An **Annual Monitoring Schedule,** and.
(d) An **Annual Monitoring Evaluation Review**

The Monitoring Guide will be linked to, but not a formal part of, the Forest Plans, and the rationale for handling the Guide that way is explained in Chapter 4 of the Plans.

Items a through dd below present a number of reasons for monitoring, or specific items that need to be monitored, as suggested by respondents to the draft Forest Plans. A separate Agency Response: has been developed for each item or group of suggested items. Each response explains how the suggested item is dealt with in the monitoring framework of the revised Plans.

a. To ensure uncertainties associated with Plan standards and guidelines are adequately addressed

Agency Response:
Chapter 4 of the Final Plans (see Table MON-4) has been expanded to include a strategic monitoring question that addresses implementation and effectiveness of standards and guidelines directly associated with the 1982 Planning Rule. The Monitoring Guide will provide a “menu” of tactical techniques and procedures that can be used to address these and any other specific standards and guidelines stated in the Plans.

b. To provide accountability

AND

c. To include an outline of monitoring report and review processes

Agency Response:
Chapter 4 of the final Forest Plans has been modified and expanded to better explain the framework for monitoring and include strategic direction (see Table MON-4) for tracking progress toward desired conditions and objectives. Accountability is partially addressed by columns in Table MON-4 that give a general indication of measurement frequency and reporting frequency. The Monitoring Guide will consist of a menu of monitoring items that can be used to address the strategic monitoring questions in Table MON-4. Each monitoring item in the Monitoring Guide will further contribute to accountability by clearly presenting the details of exactly what, when and how that item will be monitored; and how/how often results will be reported. We also plan to enhance accountability by providing purposeful opportunities for the public and other agencies to help plan and execute monitoring and help evaluate monitoring results. As discussed in Chapter 4, what can actually be accomplished in any given year will be limited by available funding and guided by the priorities established in the Monitoring Guide.

d. To include sufficient detail on how progress toward Plan goals and objectives, and protecting key resources, will be tracked

Agency Response:
These concerns are addressed in the general response immediately below PC# 6.0-1 at the beginning of this (monitoring) section, and in the responses to sub-concerns a, b, and c, immediately above.

e. To include detail on how long term monitoring efforts will be provided for

Agency Response:
The Monitoring Guide will clearly identify monitoring items that require long-term efforts. For each of those items, the Guide will also identify the frequency of measurement and reporting that's needed to keep the effort on-track.

f. To include information on the expected precision and reliability of monitoring measurements

Agency Response:
Table MON-4 in Chapter 4 of the Final Plans provides a general indication of precision/reliability associated with each strategic monitoring question. The Monitoring Guide will include more detailed estimates of expected precision and reliability associated with each tactical monitoring item.

g. To provide for monitoring of road decommissioning
"Persistent monitoring is also necessary to assure these roads are truly taken out of commission. As our

Agency Response:
Monitoring of progress in road decommissioning is provided for in Chapter 4, Table MON-4, in the form off a monitoring question which addresses Forest Plan objectives O-TS-7 and O-TS-8. The Monitoring Guide will provide a menu of specific monitoring items and associated process details for use in tracking progress and success in road decommissioning.

h. To provide sufficient monitoring related to ORVs

Agency Response:
Monitoring related to the use and impacts of recreational motor vehicles is provided for in Chapter 4, Table MON-4, in the form off a monitoring question which is responsive to the 1982 Planning Rule monitoring requirement in 36 CFR 219.21 and Forest Plan desired condition D-RMV-1. The monitoring question has been changed from the one that appeared in the draft Plans—it's been broadened to address "the effects of RMVs on the physical and social environment". Thus, as requested by one respondent, this revised wording forms the basis for monitoring impacts of RMV use on species or habitats.

The Monitoring Guide will provide a menu of specific monitoring items and associated process details, including the most effective measurement frequencies, for tracking use and impacts of RMVs in both Forests. Subject to the availability of effective processes, items addressed in the Monitoring Guide will include conditions on trails and roads where RMVs are used, techniques for assessing RMV impacts over broad areas of the Forests, and techniques for monitoring RMV noise levels and associated impacts.

i. To include an adequate and effective means of monitoring the condition of ecological communities

AND

v. To **provide necessary surveys and inventories of species and their habitats.**

Agency Response:

Chapter 4 of both Forest Plans provides for monitoring not just indicator species, but also a number of other measures usable in assessing the overall condition of ecological communities. Table MON-4 in Chapter 4 includes multiple monitoring questions that address both vegetation (composition and structure, spatial patterns, and ecological processes) and wildlife (viability of native and desired non-native species, threatened and endangered species, sensitive species, management indicator species, species associated with management indicator habitats, and non-native invasive species). These monitoring questions encompass all the desired conditions and objectives for vegetation (VG) and wildlife (WL) spelled out in the Plans of both Forests.

j. To provide for monitoring of progress in restoration

Agency Response:
Monitoring of progress in restoration is provided for in Chapter 4, Table MON-4, in multiple ways. It's provided in the form of a specific monitoring question which addresses attainment of forest type and age goals (see the response to subconcern k. below). Table MON-4 also addresses other aspects of restoration by including monitoring questions designed to evaluate progress in meeting specific Forest Plan objectives which have a restoration focus. Examples of these objectives include O-WS-1, 2, and 6 (for watershed health); O-WS-9 and 10 (for soils); O-ID-1 (for fire); and O-VG-6 (SNF), O-VG-7, O-VG-8, and O-VG-9 (CNF) (for vegetation).

The Monitoring Guide will provide a menu of specific monitoring techniques and associated process details for use in tracking progress in restoration. We plan to provide the public and other agencies the opportunity to help develop and review the Monitoring Guide, which will spell out the specific measurable attributes that will be used to assess achievement of restoration objectives. Additionally, we plan to enhance accountability by providing purposeful opportunities for the public and other agencies to help not only in developing the Guide, but also in actually conducting monitoring and evaluating results.

k. To provide for monitoring attainment of forest type and age goals

Agency Response:
Monitoring of progress in moving toward forest type and age composition goals is provided for in Chapter 4, Table MON-4, in the form of a specific monitoring question which addresses this need. The Monitoring Guide will provide a menu of specific monitoring techniques and associated process details for use in tracking progress toward the forestwide and landscape ecosystem (LE) goals. The Guide will spell out how and how often monitoring results will be displayed. Unless replaced with a better technology, GIS map products are likely to be a key tool for displaying and analyzing results.

l. To provide for adequate monitoring of soils

Agency Response:
Monitoring of soil conditions is provided for in Chapter 4, Table MON-4,
in the form of a monitoring question which is responsive to the forest plan monitoring requirement in 36 CFR 219.12(k)(2) and Forest Plan desired conditions D-WS-3 and D-WS-12 and objectives O-WS-9 and O-WS-10. The Monitoring Guide will provide a menu of specific monitoring items and associated process details for use in answering the soils monitoring question.

m. To provide for tracking the earthworm invasion on the Chippewa NF

AND

o. To provide for monitoring of invasive exotic species

Agency Response:

Monitoring the spread of earthworms and other non-native invasive species on both Forests, is provided for in Chapter 4, Table MON-4, in the form of a monitoring question which addresses Forest Plan desired condition D-WL-9 and objectives O-WL-37 (SNF), O-WL-38 (SNF), O-WL-38 (CNF) and O-WL-39 (CNF). The Monitoring Guide will provide a menu of specific monitoring items and associated process details for use in tracking spread, and success in control, of non-native invasive species.

n. To provide for monitoring of deer populations

Agency Response:
Monitoring of deer populations on both Forests is not specifically identified in Chapter 4, Table MON-4. However, to monitor threatened species, it will be important to continue to coordinate with MN DNR to monitor deer populations, since deer are the primary prey for wolf. The Monitoring Guide will provide the details associated with deer monitoring.

p. To provide for tracking the accomplishment and success of tree planting

Agency Response:
Acreage figures for vegetative types and age classes over time were established for each planning alternative in relation to existing conditions and to RNV for each landscape ecosystem for decade 10 (see Appendix G, FEIS). While moving to within RNV was not the goal for each alternative, this range serves as a useful reference for progress towards conditions thought to be more representative of historic conditions, patterns, or processes. Acreage values for vegetation and age class for decades 1 and 2 are products of the DualPlan harvest model that was used to predict timber commodity outputs in relation to achieving the long-term decade 10 vegetative objectives. While we recognize that we will not be able to implement the model predictions exactly on the ground, we believe that it represents a reasonable scenario of the alternatives including the selected one. Past planting success may be addressed in monitoring and evaluation reports published since beginning implementation of the 1986 Forest Plans. Monitoring of the accomplishments for the new Plans for forest type restoration to achieve age class objectives and success in tree planting is provided for in Chapter 4, Table MON-4, in the form of monitoring questions which are responsive to the forest plan monitoring requirement in 36 CFR 219.12(k)(5)(i) and to other objectives in the revised Plans. The Monitoring Guide will provide a menu of specific monitoring items and associated process details for use in tracking tree planting. Procedural details in the Guide should include information such as a clear definition of what constitutes adequate stocking, a process for tracking tree species actually being regenerated on planted sites and a process for determining how well planted areas are contributing to vegetation type and age goals. Additionally, standards and guidelines for timber management set requirements for the adequate stocking of regenerating forest stands (see table S TM-4 in the final Plans of both Forests). Corporate data bases are used for tracking treated stands for continued monitoring. This information is available to the public.

q. To provide for a public role in monitoring scenic quality at timber harvest areas

Agency Response:
Monitoring of scenic quality at timber harvest areas is provided for both Forests in Chapter 4, Table MON-4, in the form off a monitoring question which addresses Forest Plan desired conditions D-SC-1, D-SC-2 and D-SC-3 and objective O-SC-1. The Monitoring Guide will provide a menu of specific monitoring items and associated process details for use in tracking and evaluating scenic quality at timber harvest sites. The Guide will specifically address opportunities, if any, for the public to have a role in this type of monitoring.

r. To provide for routine monitoring of insect and disease conditions in stands in the Longer Rotation Management Area

Agency Response:

Monitoring of the insect and disease conditions is provided for in Chapter 4, Table MON-4, in the form of a monitoring question which is responsive to the forest plan monitoring requirement in 36 CFR 219.12(k)(5)(iv) and Forest Plan desired conditions D-ID-1 and D-ID-2, and objective O-ID-1. This will provide for monitoring of insect and disease conditions in the Longer Rotation Management Area, as well as other Management Areas. The Monitoring Guide will provide a menu of specific monitoring items and associated process details for use in tracking insect and disease conditions. Procedural details in the Guide should provide for collection of insect and disease information frequently enough so that if epidemic levels of insects or diseases are found, salvage treatments will remain a viable option.

s. To provide for monitoring the accuracy of Plan revision model-based projections of timber volume and related revenue

Agency Response:
Monitoring to estimate performance by comparing outputs and services with those projected by the Forest Plans is provided for in Chapter 4, Table MON-4, in the form of a monitoring question which is responsive to the forest plan monitoring requirement in 36 CFR 219.12(k)(1). The Monitoring Guide will provide a menu of specific monitoring items and associated process details for use in tracking timber harvest acres, volumes and revenues; and making comparisons to Plan projections. Procedural details in the Guide will be selected to assure the accuracy of Plan projections can be adequately assessed.

t. To provide for monitoring to address specific concerns related to the use of prescribed fire

Agency Response:
Monitoring of conditions related to the use of fire as a management tool is provided for in Chapter 4, Table MON-4, in the form of a monitoring question which is responsive to Forest Plan desired conditions D-ID-4 and D-ID-5 and objectives O-ID-2, O-ID-3, and O-ID-4. The Monitoring Guide will provide a menu of specific monitoring items and associated process details for use in tracking fire related effects. Specific process details for monitoring project-level compliance with the Minnesota Smoke Management Plan, for tracking acres treated for fuels reduction, and for monitoring post-fire ecosystem conditions will be included in the Guide. The Guide will also address analysis scale, re-measurement frequencies, precision and reliability as appropriate to each monitoring item.

u. To provide for monitoring the economic effects of plan implementation

Agency Response:
Monitoring of the economic effects of implementing the Forest Plans is provided for in Chapter 4, Table MON-4, in the form of one or more monitoring questions which are responsive to the 1982 Planning Rule monitoring requirement in 36 CFR 219.7(f), and Forest Plan desired condition D-SE-1 and objective O-SE-1. The Monitoring Guide will provide a menu of specific monitoring items and associated process details for use in tracking the economic effects Plan implementation.

w. To provide for monitoring every threatened, endangered and sensitive species

Agency Response:
Monitoring of threatened, endangered and sensitive species is provided for in Chapter 4, Table MON-4, in the form of monitoring questions which address Forest Plan desired conditions D-WL-1 through D-WL-9 on both Forests, and objectives O-WL-4 through O-WL-17 on the Superior NF and objectives O-WL-4 through O-WL-16 on the Chippewa NF. The Monitoring Guide will provide a menu of specific monitoring items and associated process details for use in tracking the status of threatened, endangered and sensitive species on both Forests. Populations of one or more sensitive plant species are likely to be identified as monitoring items in the Guide.

Process details spelled out in the Guide will include the exact monitoring methods and frequency appropriate to each monitoring item.

Monitoring of lynx provides a specific example of how the monitoring framework would be used to address a threatened or endangered species under the revised Plans. Two broad strategic monitoring questions in Chapter 4 (Table MON-4) of the Forest Plans relevant to lynx are:

- To what extent is Forest management contributing to the conservation of threatened and endangered species and moving toward short term (10-15 years) and long-term (100 years) objectives for their habitat conditions and population trends?

- To what extent is Forest management moving toward short term (10-15 years) and long-term (100 years) objectives for habitat conditions for management indicator species and species associated with management indicator habitats?

Monitoring and reporting frequency for lynx populations would be at least once every five years for the life of the Plan, with a low to moderate degree of precision and reliability.

In the case of lynx, Chapter 4 also provides more specific monitoring guidance because of the crucial importance of conserving lynx and other threatened species on the National Forests. This guidance includes monitoring the:

- implementation and effectiveness of standard S-WL-2. The monitoring questions associated with this item is: "To what extent is the Forest maintaining no net increase in groomed or designated over-the-snow trail routes unless the designation effectively consolidates use and improves lynx habitat through a net reduction of compacted snow areas?"
- implementation, effectiveness, and validity of Wildlife, Recreation and Transportation System standards and guidelines for road and trail closures. Chapter 4 provides specific guidance to monitor objectives, standards and guidelines that address effective closure of roads: G-WL-7, G-RMV-4, O-TS-3, O-TS-7, S-TS-3, S-TS-4, and G-TS-12, and G-TS-16. The monitoring question associated with this item is: "To what extent are road and trail closures effective in prohibiting unauthorized motor vehicle use?"

Monitoring frequency for both the effectiveness of road and trail closures and "no net increase in groomed or designated over-the-snow trail routes" would be on an annual basis, with a moderate degree of precision and reliability. Reporting frequency would be at least once every five years for the life of the Plan. However, since monitoring information would be used by the National Forests in project level planning and analysis, it is likely that monitoring results would be available to the public on an annual basis. More specific technical guidance will be provided in the Monitoring Guide. Collaboration with other agencies and government entities including the USDI-Fish and Wildlife Service and Minnesota DNR, and the public, is anticipated to assure the appropriateness of lynx-related monitoring planned in the Annual Monitoring Schedule.

We also anticipate continued collaboration with the Minnesota Cooperative Fish and Wildlife Research Unit, Natural Resources Research Institute, and other agencies in the ongoing Canada lynx project. This project is described and current information is provided on the website: http://www.nrri.umn.edu/lynx/lynx_3.html

The study is designed to understand the factors affecting the apparent reappearance, current distribution, and long-term persistence of Canada lynx in Minnesota and the Great Lakes Geographic Area (GLGA) This requires a combination of basic and applied research. Research needs that will most effectively contribute to the recovery and conservation of Canada lynx in Minnesota and other states in the GLGA include:

- Determining current distribution,
- Determining the abundance,
- Determining habitat use and required habitats, and

- Monitoring the long-term persistence

The technical information on monitoring lynx and lynx populations and individuals will be found in the Annual Reports of this Canada Lynx study.

x. To provide an approach to survey that focuses more on the overall distribution of species than on their locations relative to specific project areas

Agency Response:
Table MON-4 in Chapter 4 of both Forest Plans provides for monitoring species and other biodiversity related elements including vegetation composition and structure, spatial patterns and ecological processes. The Monitoring Guide will provide a menu of specific monitoring items and associated process details for use in determining if species population levels are being sustained. Process details spelled out in the Guide are likely to include both project and landscape scale species monitoring efforts, with an increasing emphasis on landscape scale inventory. The Guide will also specify the aspect of species populations the monitoring is designed to assess (e.g. factors such as distributions relative to forest heterogeneity, fluctuations in time, or resilience to disturbances).

y. To provide for using measures other than forest survey cover types as a basis for monitoring adequacy of the coarse filter for species

Agency Response:
Table MON-4 in Chapter 4 of both Forest Plans provides for monitoring both vegetation and species populations. We plan to use both types of monitoring to assess how well the coarse filter approach is working. The Monitoring Guide will provide a menu of specific monitoring items and associated process details to support both types of monitoring. Monitoring items in the Guide are likely to include tracking of forest survey cover types as well as other more encompassing measures of habitat diversity, populations and individuals, and amounts as needed to assess conditions across the Forests for all species.

The Biological Evaluation and planning record provide and analyzed more detailed, and less generalized, habitat requirement information than management indicator habitats, and that more detailed information will be used to develop appropriate methods for monitoring, where needed.

z. To provide for monitoring of use and impacts on wetland trails

Agency Response:
Monitoring related to the use and impacts of recreational motor vehicles on trails is provided for in Chapter 4, Table MON-4, in the form off a monitoring question which is responsive to the 1982 Planning Rule monitoring requirement in 36 CFR 219.21 and Forest Plan desired condition D-RMV-1. The Monitoring Guide will provide a menu of specific monitoring items and associated process details for tracking use and impacts on trails in both Forests. Monitoring of trails that cross wetlands will be addressed in the Guide. Monitoring results will be used as a basis for decisions on trail closures or rerouting.

Refer to the Agency Response: to PC# 6.0-1(w) above, which discusses a couple of specific trail-related monitoring items related to lynx that are directly addressed in Chapter 4 of the final Plans.

aa. To provide inventory of aquatic life, especially related to impacts of erosion.

Agency Response:
Monitoring the status of aquatic species is provided for in Chapter 4, Table MON-4, in the form off a monitoring question which is responsive to Forest Plan desired conditions D-WS-1, D-WS-5, D-WS-8 and D-WS-9. The Monitoring Guide will provide a menu of specific monitoring items and associated process details for use in

tracking progress and success of various aquatic species. Because sediment is often a critical factor limiting habitat quality for aquatic species, effects on these species caused by soil erosion will be inherent in the items in the Monitoring Guide.

bb. To provide for monitoring the effect of mercury levels on aquatic species

Agency Response:
Monitoring mercury levels and their effects is provided for in Chapter 4, Table MON-4, in the form off a monitoring question which addresses Forest Plan desired conditions D-AQ-1, D-AQ-2, D-WS-4, and D-WS-5; and objective O-AQ-1. The Monitoring Guide will provide a menu of specific monitoring items and associated process details for use in tracking the impacts of mercury on Forest resources. Effects of mercury on aquatic species will be represented by one or more items in the Monitoring Guide.

cc. To provide for monitoring all known goshawk nests in northern Minnesota.

Agency Response:
Monitoring related to goshawks is provided for in Chapter 4, Table MON-4, in the form off a monitoring question which is responsive to the 1982 Planning Rule monitoring requirement in 36 CFR 219.19(a)(6), and Forest Plan objectives O-WL-1, O-WL-17 (CNF), O-WL-18 (SNF), O-WL-31 (SNF) and O-WL-32 (CNF). The Monitoring Guide will provide a menu of specific monitoring items and associated process details for use in tracking goshawk status on the both Forests, since goshawk is a management indicator species. Monitoring of known nest sites will be considered for inclusion as an item in the Monitoring Guide.

dd. To provide for careful inventory of plants that are not trees.

Agency Response:
Chapter 4, Table MON-4, provides for inventory or monitoring of plants other than trees. This is provided in the form of multiple monitoring questions which address sensitive species and non-native invasive species. The Monitoring Guide will provide a menu of specific monitoring items and associated process details for use in tracking the abundance of plants other than trees.

PC# 6.0-3
Public Concern: The Plan's proposed "Monitoring and Evaluation Implementation Guide" should be subject to public review.

-By developing a mailing list to facilitate future public review of the Guide
-By incorporating the Guide into the Forest Plans

Agency Response:
We have decided to create and maintain the Monitoring Guide as a reference that's linked to, but not a formal part of, the revised Forest Plans. We believe this approach complies with requirements of NFMA, the 1982 Planning Rule, and other relevant directives. The primary reason for using this approach is to enable monitoring direction to be readily amendable, so it can be maintained as a "living" reference, helpful to management throughout the life of the Plans. By "keeping current" we mean the direction at any point in time should reflect factors such as changing priorities, lessons learned about improved monitoring techniques or measures, and new opportunities for monitoring in cooperation with others. Handling the Monitoring Guide this way means that future updates can be done as needed, without having to meet the extended timeline requirements of formal Plan amendment or revision.

We plan to provide opportunities for the public and other agencies to help both develop and review the Monitoring Guide. Additionally, we plan to enhance accountability by providing purposeful opportunities for the

public and other agencies to help not only in developing the Guide, but also in actually conducting monitoring and evaluating results.

PC# 6.0-4
Public Concern: The Chippewa and Superior NFs should emphasize observation and de-emphasize management activities.

Agency Response:
As described in Chapter 1 of the Forest Plans, a number of federal laws confirm the authority of the Forest Service to manage the National Forests for purposes of outdoor recreation, range, timber, watershed, wildlife, fish, and other resources. Chapter 4 (Monitoring and Evaluation) explains how implementation of projects to achieve these purposes, and follow-up monitoring, (observation) are separate but essential parts of the adaptive management process. The direction provided in Chapter 4, together with the detailed monitoring information in the Monitoring Guide, describe the type and intensity of monitoring we believe is needed to evaluate project success in terms of the desired conditions and objectives stated in the Plan. Based on requirements of law and other factors, we believe we have provided for a level of monitoring that is in proper balance with the projected level of management activities to be conducted under the revised Plans.

PC# 6.0-6
Public Concern: The Chippewa and Superior NFs should not conduct wildlife studies.

Agency Response:
A number of federal laws and regulations require the Forest Service to understand the status of wildlife species on the National Forests or potentially affected by Forest management actions. Two noteworthy directives are the Endangered Species Act and the monitoring requirements of the 1982 Planning Rule (Federal Regulation 36CFR219). The 1982 Planning Rule is one example of a directive that specifically requires monitoring of population trends of management indicator species and the relationships of those trends to habitat changes. While casual observation can effectively contribute to our required knowledge of some species, more rigorous and formal studies are often needed to adequately assess population distributions and trends.

With specific regard to lynx, the final Forest Plans do not propose a new study of this species. Studies of lynx are already underway and findings are beneficial to the Forest Service in helping to meet requirements of the Endangered Species Act (see FEIS section 3.4.4.1.c. and the Agency Response: to PC# 6.0-1(w)).

PC# 6.0-7
Public Concern: The Chippewa and Superior NFs should develop monitoring plans cooperatively with State and other agencies.

Agency Response:
Please see the response to PC# 6.0-1, which summarizes changes that have been made to Chapter 4 (Monitoring and Evaluation) in the Final Plans of both Forests. We strongly agree that cooperative monitoring of many ecological, social, and economic factors associated with the Chippewa and Superior National Forests is justified. For some factors, such as tracking vegetation changes at the Landscape Ecosystem scale, or populations of many terrestrial and aquatic species, effective monitoring is totally dependant on cooperation between land managers. Opportunities and/or the necessity for cooperation between the Forests, the State(s), other agencies, private groups and others will be clearly identified in the Monitoring Guide. Updates of the Monitoring Guide will provide a formal way for the identification of these opportunities to be kept current throughout the 10-15 year life of these Forest Plans. As stated earlier in the responses to PC# s 6.0-1(j) and 6.0-3, this identification will be facilitated by

inviting the State and other agencies to participate in all phases of monitoring including the development and updating of the Monitoring Guide.

PC# 6.0-8
Public Concern: The Plans should include assurances that planned monitoring actually gets accomplished.

Agency Response:
Please see the response to PC# 6.0-1, which summarizes changes that have been made to Chapter 4 (Monitoring and Evaluation) in the Final Plans of both Forests. We'd like to be able to monitor a wide range of key factors associated with managing all the Forests' ecological, social and economic resources, but the reality is that monitoring will always be limited by available funding. Given this reality, we are challenged to maximize benefits derived from the monitoring we are able to fund. One way we're doing that is by assigning a priority ranking to each of our monitoring items. Highest priority will always be given to monitoring items which are clearly specified in law or regulation, which currently are represented by items spelled out in the 1982 Planning Rule (e.g. the items in Chapter 4, Table MON-4, in the final Plans of both Forests). Other ways of "stretching" our monitoring funds include continually seeking out the most effective measures for outcomes or outputs we need to track, or by doing monitoring in partnership with other agencies or groups.

We think it's important that monitoring direction be kept current throughout the life of the Plan to reflect these changing priorities, lessons learned about improved monitoring techniques or measures, and new opportunities for cooperative monitoring. That's a primary reason why we are developing a Monitoring Guide that's linked to, but is not a formal part of, the Forest Plan Changes to the Monitoring Guide of each Forest can be readily made as needed, outside extended timeline requirements associated with formal Plan amendment or revision.

Comments from Agencies and Elected Officials

Comments received from federal, State, local agencies and elected officials are represented in the public concern statements. This section presents the comments from these agencies and officials in their entirety (FSH 1909.15.24.1.3).

Name	Organization
Tribal	
P. White	Leech Lake Band of Ojibwe
R. Peacock	Fond du Lac Reservation
M. Myers	1854 Authority – Bois Fort & Grand Portage
Federal	
M. Chezik	US Department of the Interior
Rep. Oberstar	US House of Representatives
D. Dagnan	US Department of Defense
K. Westlake	US Environmental Protection Agency
Rep. G. Gutnecht	US House of Representatives

Name	Organization
State	
Sen. Ruud	Minnesota Senate
Office of the Commissioner	Minnesota Department of Natural Resources
County	
D. Epperly	St. Louis County
R. Yochum	Cass County
M. Mandich	Itasca County
L. Larson	Lake County
R. Milne	Beltrami County
R. Fenwick	Cook County
J. Mianowski	Cook County School Board
City	
Mayor R. Rissanen	City of Big Falls
Mayor R. Lehman	City of Bemidji