

Response to Comments

On Draft Beltrami Island Land Utilization Project Comprehensive Conservation Management Plan

Minnesota Department of Natural Resources
(LUP Leadership Team)

and

U.S. Fish and Wildlife Service
(Agassiz NWR)

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Introduction

The Department of Natural Resources and U.S. Fish and Wildlife Service jointly released the Draft Beltrami Island Land Utilization Project Comprehensive Conservation Management Plan for public review and comment from June 11 through July 26, 2012. We received a total of 20 comments from 16 entities. This document contains our responses to the comments we received. We paraphrased comments and combined similar comments where appropriate, and present them below in bold block type; our responses are presented in italics. Each comment letter was broken down into what we considered to be the different topics contained in the comment letter. For example, Comment 11.3 would represent the third topical item from Commenter 11.

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Minnesota Department of Natural Resources
U.S. Fish and Wildlife Service



Alternatives

Comment #4.1

I have taken a good deal of time to read through the draft management plan. There is simply a huge amount of information to digest. The proposed management plan that the DNR has brought forth seems quite reasonable in most respects. To cohesively manage 84,000 acres of dispersed land is no small task. One of the things that I am still struggling with reconciling is how the DNR intends to manage the remaining 619,000 acres of Beltrami Island State Forest that encompass these LUP lands. I have looked but been unable to find documentation of any kind of general management plan for BISF. How does the management of these LUP lands fit in with the management of BISF as a whole. Certainly the DNR cannot manage this large group of dispersed lands without consideration of the management of BISF as a whole.

There are many interested parties each with specific interests in the lands and how they are managed. I am sure the DNR can never hope to please them all. That is fine. We should not manage our public lands in a fashion to please individuals or certain groups. The LUP lands are in trust to our state from the USFWS. Everyone should realize that. The management of those lands should continue to promote the overall mission to conserve, manage, and where appropriate, restore fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. As an archery hunter who cherishes our public lands I realize that my opinion is likely in the minority. I prefer walk-in trails. I prefer trees left standing. However, I realize that the majority of hunters are firearms hunters and that logging can be beneficial for habitat and wildlife. No one group's desires or opinions should drive the management goals for the LUP lands.

The "manage the landscape" approach is on the face what appears to be a very solid management plan. However, some questions immediately come to my mind. Is this a model for how the whole of BISF is to be managed?

Response: Thank you for your support of Alternative B.

There is not a management plan specific to the Beltrami Island State Forest (BISF). Timber harvest objectives in the BISF are driven by the Agassiz Lowlands Subsection Forest Resource Management Plan, as well as forest certification requirements. Recreational access objectives in the BISF were addressed in the OHV plan prepared for the BISF. Numerous other laws also guide management of the BISF, including the Minnesota Wetland Conservation Act. The LUP lands are a subset of lands covered by the SFRMP, and some subsets will be managed differently. The LUP plan will not direct any management decisions in the remainder of the BISF, although it will certainly influence management decisions under a landscape approach through existing departmental interdisciplinary processes.

We acknowledge that the draft plan is long, and there are some sections that can be removed or shortened in the final plan to shorten its length. These include summaries of comments received during Scoping, synopses of other plans, Objective 3.10 which has been accomplished, and the suite of land exchange alternatives considered, which is appropriate since the draft plan fully documents these elements.

Comment #9.1

We support Alternative B: Manage the Landscape. We feel this best reflects a “big picture” view with the best long term benefits for wildlife, flood control, and land use.

Response: Thank you for your support of Alternative B.

Comment #11.1

For the most part I support Alternative B: Manage the Landscape with some exceptions, concerns and/or suggestions. My primary concern with this plan is that it offers up as a possibility constructing flood damage reduction projects that are proposed by watershed districts (Objective 3.7, pg 165).

Response: Thank you for your support of Alternative B. Your comments about flood damage reduction projects are presented and addressed in entirety in a following topical heading.

Comment #18.1 and 19.1

Three alternatives were developed during the planning process. Essentially these alternatives continued with the status quo (A), and two alternatives that provided for less timber management (B and C). No alternative was developed that looked at increasing timber management. It appears that the plan developers assumed that additional timber management above the status quo would have significant impacts. This would suggest a bias in the development of the alternatives for LUP lands. We recommend that an alternative be developed that would increase timber management. Again, this alternative should be accompanied with an economic analysis.

Response: We disagree. Subsection timber harvest levels are driven by the Agassiz Lowlands Subsection Forest Resource Management Plan (SFRMP). The SFRMP includes LUP lands and the LUP plan incorporates the SFRMP. The LUP plan does not alter the SFRMP. The LUP plan only provides a vision statement that the older forest elements provided for in the SFRMP will be more proportionally contained on LUP land than on state land where they provide wildlife benefits for species dependent on older, mature forests. The primary purpose of LUP lands is clearly spelled out in the Executive Order establishing the Beltrami Wildlife Management Area and in the 2009 Lease amendment as being a breeding ground for native birds and other wildlife. If, in our assessment of wildlife species in greatest conservation need in the LUP planning area, we had identified a priority for early successional forest species, we would have developed an alternative for creating and managing early successional forests accordingly. However, our assessment of species in greatest conservation need in the planning area identifies late successional forest species and early successional wetland species as needing special consideration.

Access Issues**Comment #3. 1**

First of all thank you for your part in the presentation and taking questions at the Beltrami Island Land Utilization Project meeting in Warroad. My main concerns were referencing the access and trails (OHV and OHM). I voiced my concerns and to be honest I received very satisfactory answers from Gretchen, Scott and others. I feel in the recent years we have come to a consensus on the subject of access and

trails and we all seem to be relatively on the same page. I am very pleased about that and offer my help in any way I can.

Response: Your comment is very much appreciated.

Comment #4.2

The biggest reason we see for trail closures is because they have become “wet” in spots. This is very concerning. No net loss does not mean no loss. Offering up a trail in exchange for another is less than satisfactory at best. If someone came to take your home and offered you what they deemed to be an acceptable replacement I suspect most of us would be less than interested. Our continued access to the spaces we have enjoyed for years requires thoughtful consideration, good planning, and cooperation on all sides. Again I wanted to thank you for taking the time to present your plan and hear our input. I hope that moving forward we can continue to work together to manage and utilize our public lands in a balanced way that maintains them for the future.

Response: We understand. The existence of a trail indicates that somebody has an interest in using it to access some location. We have not identified any specific trails that we feel should be rerouted, but we need a contingency to deal with future issues. Contingencies could include closures in conjunction with reroutes in order to attain the goal of no net loss of trails, some form of improvements related to hardening or drainage, or even land exchanges in extreme situations. As a result of other comments, we propose to establish a Citizen’s Input Panel; access issues in general would be a topic matter that would be brought up at the Citizen’s Input Panel meeting, although some temporary closures may need to be acted upon immediately (see response to Comment 6.4 below).

Comment #5.2

I would still like to see more resources directed towards walking-only trails for bird watching, bird hunting, etc.

Response: We will look for opportunities to create additional walking trails out of timber access routes when new timber harvests are let.

Comment #8.1

Increase ATV and snowmobile access by increasing the number of miles of trails by 50% from current number of miles.

Response: The 2009 Lease Amendment prohibits the construction of new permanent minimum maintenance roads, new snowmobile trails, and trails for exclusive use of ATV’s/OHV’s on LUP lands.

The BISF is a “managed” forest, and the hunting and trapping exemption applies to LUP lands (see Beltrami Island State Forest Motor Vehicle Use Classification, Forest Road and Trail Designation Plan, 2007).

Comment #10.1

Roads can be very detrimental to fragile aquatic ecosystems. Roads cause erosion and sedimentation and can disrupt hydrologic functions, the higher the road density, the greater the potential for impacts to aquatic resources. When roads cross streams the structures placed there can interfere with aquatic migration and can cause erosion and sedimentation. It is important to monitor all

drainage crossings to ensure that they are not in need of repair. Roads are very detrimental to the overall health of the forest. It is important to stay committed to working to reduce road miles on our public lands. Roads negatively impact lynx, wolves, moose and other sensitive species. Roads increase fragmentation of the forest, contribute to the spread of non-native invasive species and harm soil and water resources. Increases in off highway vehicle (OHV) use are increasing damage to precious natural resources. OHV's cause damage to water and soil resources, erosion, sedimentation, damage to wetlands, spread of non-native invasive species, air and noise pollution, disruption to other forest users, increases in motorized traffic and destruction and disturbance of rare sensitive species habitat. Exasperating this damage to the forest is illegal OHV trespass. Some motorized recreation riders do not stay on sanctioned trails. It is important to strategize ways to control illegally created trails and stop illegal trespassing.

Response: Comment noted. See response to comment #8.1 above.

Flood Damage Reduction Issues

Comment #2.1 and 6.1

Warroad Watershed needs to be included in Objective 3.7. Reduce flooding downstream of Beltrami Island State Forest into the Warroad River Watershed District.

Response: This was our oversight. Joint Watershed District scoping comments came to us on Roseau River Watershed District letterhead, but at the time of plan writing we forgot that it was also signed by Warroad Watershed District officials. We will include the Warroad River watershed in any pertinent goals, objectives, and strategies that pertain to the Roseau River watershed. We will also summarize the Overall Plan of the Warroad Watershed District (2007) in Chapter 1.

The mission of the Warroad River Watershed District is to "take a proactive role in managing resources by providing leadership for water management and working in partnership with local, state, and federal partners to focus water flow management, address issues related to surface water run-off, educate the public, and model good stewardship of the environment."

The WRWD has identified the following issue that we believe is pertinent to LUP lands:

- *Road washouts at Clausner Creek intersection with Tangnes Trail, with a possible long term solution being to retain water in BISF. [p. 31]*

The WRWD has also adopted the following goal and strategies that may be pertinent to LUP lands:

- *Goal: Focus on water flow management and water quality. [p. 39]*
- *Strategies:*
 - *A culvert inventory will be done over the entire watershed.*
 - *Adopt and implement a beaver control program. Because beaver dams impede the flow in various ditches, coulees, and other waterways, it is necessary to remove and control beavers. This will aid in drainage and flood control.*
 - *Inventory log jams and blockages on rivers and creeks, then begin a clearing and snagging program.*

We note, however, that the last two strategies, if implemented in the BISF, could be at cross purposes to retaining more water in the BISF. The Warroad River Watershed District concurs with us on the latter

strategy, but is concerned that a beaver dam creates a pond that is essentially an impervious surface (Loren Horner, personal communication, Sept. 7, 2012). In response to this, we found only one research paper that quantified the hydrological impacts of a beaver dam in an analogous setting to the BISF, i.e., a topographically flat boreal peatland ecosystem. That paper (Woo and Waddington 1990) supports in part the RRWD's contention. Woo and Waddington looked at beaver dams in various states of repair and decay. They found that active beaver dams have less water storage available than some abandoned dams, and no storage at all if the dam is already experiencing overflow or gapflow discharge; thus, if a storm event is substantial enough, it will quickly fill the basin and overflow. A dam at the latter stages of disrepair has throughflow discharge, and has virtually no influence on discharge or retention. An abandoned dam in the early or middle stages of disrepair experiences underflow discharge, thus it has the greatest amount of storage potential and more slowly meters out runoff. In other words, it functions like a down-sized culvert or a beaver dam with a Clemson leveler. However, Woo and Waddington also found that dammed basins capture more runoff than they release downstream, whereas undammed basins do not. This is largely due to beaver dams creating surfaces where evapotranspiration results in a net water loss, and in their study evapotranspiration in one beaver pond exceeded that in a control basin by 39%.

We will expand the text in the report on the role of beavers as ecological keystone species to reflect the work of Woo and Waddington (1990) and others (Naiman et al. 1986, 1988, Verry 2007, and Host and Meysembourg 2010). Naiman et al. (1986, 1988) in particular document the role of beavers in modifying boreal landscapes, and Host and Meysembourg (2010) document how changing riparian margins from aspen-domination to spruce-fir-domination results in reducing beaver populations.

We also note that a hydrologic monitoring study of the Winter Road Peatland SNA was expanded in 2012 by installing additional piezometers. The collected data will be used to examine the functional relationship of ditches to their associated drainage systems.

Comment #16.2

Within the Acknowledgements and Guiding Documents paragraphs certain watershed documents are acknowledged, however, the overall watershed and basin FDR goals and objectives in those documents are largely ignored. For example, in the conclusion on page 33 of your plan it appears the RRWD's Natural Resource Enhancement (NRE) goals are construed as mitigation for spring flood events. The plan should be amended to work in concert with Subwatershed Implementation Plans listed in Section VI of the RRWD Overall Plan. These Subwatershed Implementation Plans specifically list implementation actions to occur within the Beltrami Island State Forest (BISF).

Response: The goals and objectives of the Roseau River Watershed Plan are extensive, and not all of them are deemed pertinent to the management of LUP lands. The CCMP highlights those elements that we deemed were pertinent; the same is true for all the other plans we discuss in Chapter 1. We do not interpret our summary of the RRWD's NRE goals as mitigation for spring flood events, but rather as components of an overall strategy for reducing spring flood events.

We acknowledge pertinent Watershed District-identified opportunities presented on pages 104-107 of the RRWD's Overall Plan. However, we reiterate that the CCMP is a plan for the management of LUP lands, not the entire Beltrami Island State Forest. See also response to comments 7.1, 15.2 and 16.4 (below).

Comment #16.3

The basin goals from the Red River Basin Commission (Long Term Flood Solution Plan), Red River Watershed Management Board and Red River Retention Authority should also be included in this plan for the BISF. The County Comprehensive Local Water Plan (CLWP) is not mentioned or cited.

Response: During our data collection phase, we found the County Comprehensive Local Water Plan (2002) only in Appendix 13 of the RRWD's Overall Plan (2004). Thus, it is incorporated by reference. However, we will specifically cite the County Comprehensive Local Water Plan in the final CCMP. Although unclear, the text on page 33 of the draft CCMP that states, "The Roseau River watershed plan identifies specific opportunities for impounding water in the Beltrami Island State Forest, and at the same time recommends restoring and protecting riparian areas and streams that have altered hydrology. However, a closer review of the plan shows flexibility is built into the plan" is a direct reference to the County Comprehensive Local Water Plan statement on page 7 that "the goal of 30,000-40,000 acre feet of storage would represent construction of 60 to 70% of those, or comparable, sites." This will be clarified in the final CCMP. "Those" in the Water Plan refers to 15 possible gated water impoundment sites upstream from Roseau that have a collective storage potential of 50,000 acre-feet. Of these 15 sites, 5 are on LUP lands (Dam 1, Dam 2, Dam 3, Dam 4, and Winner Dam) with a combined pool area of about 3712 acres (5.8 mi²); plus the Roseau Flowage impoundment is proposed to be augmented to have a pool area of 3776 acres (5.9 mi²); (JOR Engineering 2002). The first 5 sites would have a total of 10,105 acre-feet of gated storage and 13,616.6 acre-feet of total storage; and the Roseau Flowage would have 10,229.4 acre-feet of gated storage and 13,938.3 acre-feet of total storage (JOR Engineering 2002). Most of the impounded areas would be on LUP lands, but some would be on private land and some on State land. Another proposed project at Beaver Twp. would impound 580 acres, of which 15 acres is LUP land.

The Red River Basin Commission's Long Term Flood Solutions Plan was issued in September 2011, well after we completed the primary data collection phase for the CCMP. Plan writers were unaware of its existence. Thank you for bringing it to our attention. We will incorporate it into the Guiding Documents section of Chapter 1 of the CCMP. A major goal of the Long Term Flood Solutions Plan is a 20% reduction in peak flows on the Red River mainstem; basin-wide, this represents an estimated 1.5 million acre-feet of retention in the U.S. portion of the basin.

Key points from this plan on pages 107, 108, and 111 include:

- *Initial assessments of specific storage sites in many of the subbasins show that achieving the goal of a 20% flow reduction of 1997 peak flows along the Red River mainstem is achievable*
- *Achieving the 20% flow reduction would require about 1.5 million acre-feet of appropriately placed storage in the subbasins*
- *Upstream floodwater storage will increase the level of protection at downstream communities and locations*
- *As retention sites are identified and tested with newer and better modeling, it may be possible to achieve more than a 20% reduction*
- *When likely options for adding to basin cities' protection are surveyed, upstream impoundments are identified as first or second most likely options for almost 70% of main stem and tributary cities*

- *When ease of implementation is added to the criteria of need to determine the most likely potential risk reduction strategies for communities, off-channel storage is rated as “high” or “medium” at almost 90% of the basin cities, surpassing all of the other nonstructural and structural options considered for the combined qualities of need and ease of implementation*
- *It was found that floodwater peak reduction on both the Red River main stem and tributary streams can be achieved by a wide variety of flood water retention measures and projects, both structural and nonstructural. Measures can include, among others, on-channel and off-channel impoundments, culvert sizing or waffle storage, wetland restoration, or land use change*
- *The best approach to determining the specific type of retention measures to use in each location would rely on site specific details and will likely result in a mix of measures. The individual watershed districts would determine the approach for their area that can best contribute to the overall basin-wide goal of reducing flood flows at damage sites in tributary areas as well as on the Red River main stem*
- *The goal of a 20% reduction was selected based on the potential impact of that level on the 1997 flood in Grand Forks-East Grand Forks*
- *To achieve the potential 20% flood flow reduction along the Red River to the international boundary, it was estimated that about 1,488,000 acre-feet of storage throughout the basin would be needed*

We will add the following key points to add to Chapter 1:

- *A major goal of the Long Term Flood Solutions Plan is a 20% reduction in peak flows on the Red River mainstem; basin-wide, this represents an estimated 1.5 million acre-feet of retention in the U.S. portion of the basin.*
- *Upstream impoundments are identified as first or second most likely options for protection for almost 70% of main stem and tributary cities. When ease of implementation is added to criteria, off-channel storage is rated as high or medium at almost 90% of basin cities, surpassing all other nonstructural and structural options considered.*
- *MIKE 11 Hydraulic Modeling Tool found that floodwater peak reduction can be achieved by a wide variety of flood water retention measures and projects, including on-channel or off-channel impoundments, culvert sizing or waffle storage, wetland restoration, or land use change. The individual watershed districts should determine the best approach for their area.*

It should also be noted that the Red River Basin Commission has a Natural Resources Framework Plan (2005) that includes the following mission statement, “To develop a Red River Basin integrated natural resources framework plan, to achieve commitment to implement the framework plan; and to work toward a unified voice for the Red River Basin.” Among the goals and objectives of the plan are:

- *Manage natural resources in the RRB by watershed boundaries rather than political boundaries.*
- *Integrate natural resource management.*
- *Increase applied research and data management to support decision-making.*
- *Reduce risk of flood damages for people, property and the environment in the mainstem floodplain and in tributary watersheds.*
 - *Implement flood mitigation strategies in the upper basin (escarpment and beach ridges) that reduce risk locally and downstream.*

- *Conserve, manage and restore diversity and variability of native fish and wildlife populations and their habitats.*
 - *Maintain, enhance and protect aquatic and terrestrial populations.*
 - *Enhance, protect or restore natural systems (natural floodplains, stream functions, riparian areas, wetlands, grasslands and woodlands).*
 - *Identify and protect rare and unique species, habitat types and plant communities.*

We reviewed the Red River Watershed Management Board’s website and did not find any readily available statements of goals or objectives. The website did have several valuable Technical Papers that the Red River Watershed Management Board commissioned through its Technical and Scientific Advisory Committee to address complex issues related to flooding and flood damage reduction in the Red River Basin. The findings of some of those papers are summarized below.

Anderson, C., and A. Kean. 2004. Red River Basin Flood Damage Reduction Framework. Technical Paper No. 11.

This paper seems to be the keynote synthesis of previous technical papers. Key findings include:

- *“Flooding in the glacial lakebed region of the basin is substantially affected by runoff timing and volume from upstream areas. Runoff timing and volume are, in turn, substantially affected by the topography, soils, precipitation and land use within different regions of the basin, as well as by the types and locations of FDR and natural resource enhancement (NRE) measures that may be implemented.” [Exec. Summary]*
- *Authors stress “the importance of using multiple types of FDR measures in a strategic manner to achieve local, watershed, and main stem flood damage reduction.” [Exec. Summary]*
- *“Although flooding has been a natural occurrence in the basin since Glacial Lake Agassiz receded, the potential for damage increased with settlement and subsequent industrial, urban, and agricultural development.” [p. 2]*
- *“There are many alternative measures that can be implemented to reduce flood damages. These include structural measures such as levees, channel modifications, and various types of floodwater impoundments, as well as nonstructural measures such as limiting floodplain development, changing floodplain use, and changing upstream land use to reduce runoff volumes and rates.” [p. 2]*
- *“A basin-wide coordinated approach may utilize a variety of FDR and related NRE measures that, collectively, comprise a basin-wide FDR framework. This variety of measures may include small, dispersed measures, such as wetland restorations, watershed-wide culvert sizing, increased perennial vegetation and agricultural best management practices, as well as local protection/avoidance, increased conveyance capacity, and strategically located larger impoundments.” [p.3]*
- *Normal annual precipitation amounts are greatest in the headwaters area of the Roseau River watershed, and decrease towards downstream areas of the watershed [Fig. 4]. Consequently, average annual runoff rates are marginally higher in the headwaters area [Fig. 5].*

- *“The average annual deficit is about 9 inches in the south and about 4 ½ inches in the north. This may help to explain why, for example, wetlands are considered more useful for flood control in southern areas of the basin than in northern areas.” [p.10]*
- *“A very significant climatic factor that affects spring flooding is the timing of the snowmelt.” [p. 11] Average date of last snow cover is April 5-10 for the Roseau River headwaters area and April 10-15 for the Warroad River headwaters area [Fig. 9].*
- *The headwaters of the Roseau River watershed are in the “Late” timing zone relative to entire Red River Basin [Fig. 23]. Relative to the Roseau River Watershed, the headwaters area also appears to be in the “Late” zone, based on Figure 9 that shows average snowmelt isocline date of April 10 going through the headwaters area of the North Branch, with the April 5 isocline closer to the South Branch.*
- *“The flow contribution from a late subwatershed area to the main stem flood peak comes from the rising limb of the area’s hydrograph. Therefore, activities that result in earlier outflows from that area generally should be avoided.” [p. 19]*
- *“Flood damage reduction measures can be grouped into four major general categories:” 1) reduce flood volume (including “convert land use to forest”; 2) increase conveyance capacity; 3) increase temporary flood storage (including impoundments, culvert sizing, and setting back existing levees); and 4) protection/avoidance. [p. 24]*
- *“Perennial grassland including CRP, hay meadow, and well-managed pasture produce much less rainstorm runoff than cultivated cropland. A typical reduction in storm runoff is estimated to be about 50% compared to row-cropped lands with conventional tillage methods.” [p. 26] [See also Larson, G. 1998. The Effectiveness of Agricultural Best Management Practices for Runoff Management in the Red River Basin of Minnesota. Technical Paper No. 3. Figures 7 and 8]*
- *“Forestland produces much less rainstorm runoff than cultivated cropland. A typical reduction is estimated to be about 55%.” [p. 26]*
- *“Conveyance improvement projects can affect downstream peak flood flows, depending on location and scope. Accelerating early water will reduce downstream flood peaks, whereas accelerating late water will increase downstream flood peaks.” [p. 27]*
- *“In relation to maximizing downstream benefits, impoundments are most effectively located in the middle and late areas of the basin.” [p. 29]*
- *“In general, on-channel impoundments with large, normally open control gates, and with no permanent pool ... will have less adverse environmental impacts than on-stream impoundments with substantial permanent pools. ... On-channel sites on high quality natural streams should be avoided, if possible, in favor of less environmentally sensitive alternatives or sites.” [p. 30]*

- *“Runoff, particularly from well-drained cropland areas, typically accumulates quickly, often developing flows greater than downstream channels can carry. ... The result often is a high rate of runoff from upstream areas and flooding farther downstream.” [p. 31]*
- *“Culvert sizing provides relatively short-term storage. It is most effective in reducing main stem flooding if implemented in middle and late contributing areas of the basin.” [p. 32]*
- *Table 1 shows that the “reduc[ing] flood volume” has greater positive benefits than “increase[ing] temporary flood storage” in “late” areas. All of the measures for reducing flood volume – wetlands, cropland BMP’s, conversion to grassland, and conversion to forest – are recognized as providing the highest amount of positive benefits. Of the measures for increasing temporary flood storage, gated impoundments are recognized as having more positive benefits than ungated impoundment, on par with the measures for reducing flood volume. [p. 36]*
- *“Without a comprehensive basin-wide strategy, it is probable that individual solutions will work against, rather than toward, a basin-wide solution. Solutions to problems in upstream areas, if properly selected, can provide part of the solution for downstream areas as well. The types of upstream local solutions tha have the best potential for also providing watershed and main stem benefits are flood volume reduction and increased temporary storage. ... However, because these types of measures alone cannot achieve the FDR and NRE goals envisioned in the Mediation Agreement, a multi-measure approach is needed.” [p. 37]*
- *Runoff volume reduction measures including land use conversion to grassland or forest, and cropland BMP’s, “apply primarily to summer conditions, because of the uncertainties of the nest effects on snow accumulation and spring runoff.” [p. 42]*

Solstad, J. 1998. *Watershed Modeling of Various Flood Damage Reduction Strategies. Technical Paper No. 6.*

Author conducted iterative modeling of water storage on gated and ungated on-channel impoundment with 2500 acre-feet of storage in subwatershed of the Wild Rice River. Key findings include:

- *An impoundment can decrease peak flows in one watershed, yet still increase peak flows within the larger watershed downstream. [Table 2] Where impoundments store the “early” flow, a gated impoundment proved to be more effective than an ungated impoundment in reducing total flooding downstream. [p. 10]*
- *A gated impoundment can either increase or decrease peak flows within the larger watershed downstream. As little as a 10-hour timing difference in gate closure can determine whether peak flows increase or decrease elsewhere in the system. [Table 2] The timing of the operation of the gated outlet structure during an actual flood event would be very important in the level of downstream flood reduction (or increase) actually achieved. The gate operator, however, would not have the benefit of a trial and error approach as used in the modeling exercise. [p. 10]*
- *The wetland restoration guidelines in Technical Papers 1 and 2 work. The key element of this approach is the design of the outlets of the constructed/restored wetlands to hold runoff fore several days or longer. [p. 10]*

Anderson, C., and L. Lewis. 1998. *Siting and Design of Impoundments for Flood Control in the Red River Basin*. Technical Paper No. 4.

Key findings:

- *Previously disturbed sites may be the most suitable for flood control impoundments. Best sites include drained or poorly drained wetlands and flood prone croplands.* [p. 1]
- *“Sites with significant existing environmental or social values such as stable natural stream channels, virgin native prairie, unaltered natural wetlands or historic preservation areas deserve special consideration when planning a project. Such sites should not be impacted significantly without major justification.”* [p. 1]
- *“In a simple watershed with only one flood damage center, the hydrologically ideal impoundment location would be immediately upstream from the damage center.”* [p. 3]
- *“Areas that consistently pass flows ahead of the flood hydrograph may be poorer locations for an impoundment.”* [p. 3] *“Because storing early water is counterproductive, the safest compromise locations tend to be within the middle to upper areas of the watershed.”* [p. 3]
- *“For remote upstream impoundments to be effective in controlling mainstem flooding, they must be designed and operated accordingly. In general, this means including gate control or very long drawdown times.”* [p. 4]
- *“On-channel impoundments are more traditional and potential sites are relatively easy to identify. Off-channel impoundments may be less disruptive to the stream environment.”* [p. 4]
- *“Off channel impoundments can avoid or minimize the negative impacts to base flows, sediment transport, fish migration and riparian wildlife corridors.”* [p. 4]
- *“Gated outlets provide greater flood control benefits because the timing and amount of storage and release can be adjusted based on existing or predicted conditions downstream in the watershed.”* [p. 5]
- *“Gate control is most beneficial when timing of storage and release are critical. ... If water from an area would precede the downstream flood peak, storage would not be advisable and the gate should be open.”* [p. 5]
- *“The main disadvantages of gate control are the potential for improper or unauthorized operation.”* [p. 5]
- *“Ungated storage is most appropriate for small impoundments in the upper reaches of a watershed. ... Such impoundments should be designed with long drawdown times to ensure that releases do not substantially contribute [to] downstream flooding.”* [p. 6]

- *“The operating plan of a gated impoundment is also very important. It should be linked to current or predicted flood elevations at damage points downstream. ... In every case, the operating plan should be an integral part of the project design and establishment.” [p. 6]*
- *“If the watershed to pool ratio is much greater than 20, the pool may be subjected to high bounce during summer runoff events. Pool bounce may adversely impact nesting wildlife and wetland vegetation. It is desirable to keep bounce to a minimum during frequently occurring summer runoff events. This can best be accomplished by a weir type outlet.” [p. 7]*
- *“The optimum type of outlet depends primarily on the watershed to pool ratio. If the ratio is less than 20, the pool bounce will be relatively minor during frequent floods even with a small piped outlet.” [p. 8]*
- *“Wetland flood control impoundments with ungated outlets should be located in the middle and upper areas of the watershed. Those with gated outlets can be located anywhere if they have an appropriate operating plan.” [p.8]*

Solstad, J, A. Kean, and C. Anderson. 2007. Culvert Sizing for Flood Damage Reduction. Technical Paper No. 15.

Authors modeled two hypothetical watersheds to assess potential benefits of culvert sizing to retain water higher on the landscape. A future phase of this effort is to assist a watershed district to apply culvert sizing guidelines to a proposed pilot project and monitor the results. Key findings include:

- *Culvert sizing has the potential to temporarily store rainfall and reduce runoff to the magnitude of 20-50% depending on retention times, rainfall storm-event (intensity), and drainage area considered. [p. 8]*
- *There are two general approaches to implementation of culvert sizing, the subwatershed approach and the incremental approach. The subwatershed approach is to resize all bridges and culverts within a subwatershed at the same time; this has the least risk and therefore greatest potential benefit. The incremental approach is to resize culverts one at a time as they are need of replacement; this can back water up at downstream culverts if upstream culverts have not already been replaced. [p. 9]*
- *Coarse textured soils have naturally lower runoff rates; controlling these flows more than [what] the recommended culvert sizing methodology [indicates] would be of little consequence. [p. 13]*

We also reviewed the Red River Retention Authority website but did not find any readily available statements of goals or objectives.

Another document that we believe should be added, and will be added, to Chapter 1 is the 1998 Mediation Agreement. This document contains eight broad goals for flood damage reduction in the Basin. It also includes 11 flood damage reduction principles, including:

- *water resource problems should not be passed along to others; a solution for a watershed should not create a problem upstream or downstream;*
- *water should be stored/managed as close to where it falls as is feasible and practical; and*

- *the responsibility for mitigation of negative environmental and cultural impacts rest with the project proponent*

The Mediation Agreement establishes a comprehensive Project Review and Permitting Process, which includes the formation of a Project Team to “work with the project from formation to the conclusion of either build or end.” The Project Team participants “will include the watershed districts, state, federal and tribal agency personnel, local government officials, affected landowners and interested citizens and interest group representatives.” State agency personnel will be assigned participation as part of their position description. The Project Team “meets to evaluate alternatives identified in Step 1, formulate new alternatives as necessary, and identifies their preferred alternative(s), using an evaluation process that is consistent with the [11] flood damage reduction principles identified in Part II. The Project Team “identifies data and information needs for the environmental review associated with the review and permitting process. The use of ‘Information Required to Evaluate Most Impoundment Projects’ and other sources or checklists will be used where appropriate and available.” However, we note that the referenced checklist appears to have been replaced with a worksheet in Technical Science Advisory Committee Technical Paper 13. The Project Team “collaborates with the Responsible Government Unit (RGU) to help prepare an environmental assessment worksheet (EAW) for the preferred alternative. The RGU publishes an EAW for the proposed project which includes the preferred alternative, other alternatives considered, proposed mitigation for any adverse effects, and operating plans, if the project involves on-going operation.”

Comment #7.1, 15.2 and 16.4

This plan should incorporate a goal of 20-30% reduction in peak runoff by retention and other best management practices within the Beltrami Island State Forest including LUP lands. The State (MN DNR) should also address what can be done on all state lands in the Beltrami Island State Forest to incorporate the 20-30% reduction in peak runoff to compliment this LUP plan.

Response: The Red River Basin Plan only calls for a 20% reduction. We are not aware of any evidence that runoff rates exceed normal, historic (pre-settlement) conditions, which is problematic because projects that create unnaturally high retention rates would be contrary to the U.S. Fish and Wildlife Service’s National Wildlife Refuge System Biological Integrity, Diversity and Environmental Health policy. Additional data is necessary to document how current runoff rates from federal lands compare to historic rates. Therefore, a goal of 20-30% reduction in peak runoff by retention and other best management practices is not an appropriate goal for National Wildlife Refuge System lands. A 20% reduction goal could be appropriate for the BISF, however, to be practical or effective, there would almost certainly need to be LUP land trades because the optimum impoundment sites are on LUP lands.

The MNDNR will continue to work with the Watershed Districts within the protocols of the Flood Damage Reduction Working Group and its Project Team handbook to identify and analyze potential water storage projects in the BISF that would assist in achieving the 20% reduction to the peak flows of the Red River and improve flood protection for local communities and critical infrastructure. The MNDNR is a full member of the FDRWG and supports its current efforts to utilize both new data (LIDAR) and the new watershed analysis tool to identify potential storage sites in the BISF. MNDNR will cooperate with the USFWS, Private Landowners and the Red Lake Nation to initiate agreed upon land exchanges to complete the footprint of a project that has been approved through the project team and FDRWG process. It is MNDNR’s role to help draft and/or review the required project operating plan for each site to assure natural systems and associated natural resource elements are protected and enhanced where possible.

Comment #3.2

I believe the biggest threat to closing down access and trails to Beltrami State Forest may be some of the proposals of some of the watershed districts. I would hope the DNR will take under advisement some of what they say but at the same time and foremost the decisions on flooding parts of Beltrami need to be made in the interest of what the Forest is supposed to be for: wildlife, recreation, hunting etc. I believe to use it as a flood zone unless catastrophically necessary is a huge mistake. I also suspect this would also go against many of the federal rules/guidelines for LUP lands.

Response: No specific proposal have not been received from the RRWD or WRWD, but an August 5, 2002 report, "Some Potential Impoundment Sites Upstream from Roseau" contains five areas that include LUP lands, totaling 5.8 mi² of proposed pool area; one site also affects two private parcels. Proposal also includes expanding Roseau Flowage Impoundment to 5.9 mi². The proposals in that report call for gated impoundments that would temporarily store water for up to about 10-14 days. Any proposals reviewed for flood control impoundments on LUP land will also take into consideration impacts to wildlife and recreation, including hunting and existing trail access. Any proposals would have to have clear wildlife benefits and go through the Project Review and Permitting Process outlined in the 1998 Mediation Agreement.

Comment #4.3

I think my biggest concern coming out of the open house meeting was the proposals from the watershed districts. In the proposed plan there are several objectives that involve retaining water or reducing downstream flooding. While these are objectives of the plan they should not be driving factors unless they specifically promote the other goals of habitat and wildlife improvement. More importantly the local watershed districts should have no role in the decision making process or any more direct input than the remaining public. We are all interested parties. Most of us understand the flooding problems of Roseau and the surrounding area. I live beside the east branch of the Warroad River. My property was significantly damaged during the flood of 2002. To start advocating damming projects or other things on the LUP lands that may be detrimental to the habitat and wildlife would be a disservice to all of us. The other major concern with water retention is continued access. The more water we retain in the LUP lands the more likely we are to create "wet" areas where they have typically not existed in a long time. We talk about "no net loss" of trails. However, the biggest reason we see for trail closures is because they have become "wet" in spots.

Response: See response to Comment 3.2.

Comment #8.2

Retain flood waters with constructed impoundments as prescribed by the local watersheds. Repair existing structures above Hayes Lake to increase acre-feet of flood water retention during peak flows.

Response: See response to Comment #7.1, 15.2 and 16.4 above.

Comment #9.2

As for flood control, natural stream channels and drainage patterns should be restored minimizing the "get the water out of my back yard" mentality. Unfortunately, Water Conservation Districts are often short sighted regarding water management so a coordinated effort working with a number of districts affected well down stream will be needed... we would say all those affected down to the Red River.

Response: Any flood damage reduction projects would be coordinated through the Red River Basin Flood Damage Reduction Work Group and the 1998 Mediation Agreement process.

Comment #10.2

It is especially important to protect the unique water resources in this area. Focusing on restoring natural hydrology instead of using impoundments will better improve the condition of the forest and improve the quality of water resources and species habitat. No further drainage of peatlands and wetlands should occur.

Response: We agree, and this is the intent of our plan. However, impoundments may be approved if there are demonstrable Natural Resource Enhancement benefits associated with a proposal.

Comment #10.3

It is important to ensure that all impoundments, dams, dikes and stream crossings are functioning properly and not doing damage to their surrounding environments. They should be regularly checked and if they are not in working order should be fixed or removed.

Response: Comment noted.

Comment #11.2

I am trusting all you resource managers to protect natural stream flow areas and restore more where possible, there are so few left in Northwest Minnesota... do not fold, it is your responsibility.

Response: Comment noted.

Comment #11.3

My primary concern with this plan is that it offers up as a possibility constructing flood damage reduction projects that are proposed by watershed districts (Objective 3.7, page 165). I support proposed projects that involve plugging or abandoning ditches, as is included in the plan. However, under no circumstances should any flood control projects be considered on natural stream channels. Old impoundments on natural water courses that are no longer functioning should not be restored to previous conditions. Existing functioning impoundments on natural water courses should not be maintained but allowed to revert to former natural conditions.

Response: Your concerns match the Natural Resource Management Goals for unaltered (non-channelized) reaches of streams contained in the Red River Basin Flood Damage Reduction Work Group's 1998 Mediation Agreement including : protect these reaches from alteration, restore a more natural annual hydrograph, and maintain connectivity with up- and downstream reaches. Besides demonstrating to the USFWS and DNR under a proactive team approach that the proposed flood damage reduction projects provide Natural Resource Enhancement benefits, the proposed projects will have to go through a comprehensive Project Review and Permitting Process as spelled out in the 1998 Mediation Agreement. Step 1 of the process says, "In all cases, participants must seek solutions consistent with the broad goals for flood damage reduction and natural resource management as defined in the mediation process and in watershed management plans." Step 2 of the process begins with a Project Team established to evaluate alternatives, formulate new alternatives as necessary, and identify preferred alternatives "using an evaluation process that is consistent with flood damage principles" identified earlier in the 1998 Mediation Agreement.

Comment #11.4

On channel flood control projects are diametrically opposed to many aspects of this plan, other plans and policies that guide the plan, and the resource obligations of the MNDNR and USFWS responsible for managing the LUP lands. The following supports my opinion and some provide a legal mandate for the resource agencies: 1) Biological Integrity, Diversity, and Environmental Health Policy, 2001, U.S. Fish and Wildlife Service; 2) LUP Vision Statement (page 13) states that the headwaters of the rivers in the LUP area are to be preserved “in a predominantly pristine condition where hydrologic conditions at the top of the watersheds function naturally”; 3) DNR’s Strategic Conservation Agenda (2009-2013) that has a goal to preserve Minnesota’s water resources and watersheds (page 24); 4) The Wetland Conservation Act (page 30) that cites the state’s policy to “achieve no net loss in the quantity, quality, and biological diversity of Minnesota’s existing wetlands”; 5) Executive Order 11990, Protection of Wetlands that directs federal agencies “to preserve and enhance the natural and beneficial values of wetlands” (page 31); and 6) Roseau River Watershed Plan says that it will “add to, protect, enhance, and maintain existing naturally functioning riparian areas” (page 32).

Response: Comment noted. See response to Comment 11.3. We acknowledge that the National Wildlife Refuge System Biological Integrity, Diversity and Environmental Health policy (601 FW 3) does apply here, as it does to all National Wildlife Refuge Systems. We note that the policy has a “wildlife first” principle, that the concepts can be viewed differently from different landscape perspectives, and that it will “first and foremost, maintain existing levels of biological integrity, diversity, and environmental health at the refuge scale ...” Although a dam occupies just one location on a system, because its costs or benefits can be realized at various locations throughout the system, it must be assessed through a systemwide watershed approach.

Comment #11.5

It is extremely doubtful that flood damage reduction projects in the headwaters area would do much for flood control. The bogs, forests, and wetlands in this pristine area already contribute to flood damage prevention naturally. Any proposed projects should have to go through a detailed statement of need of how much water would be held back from flood prone areas with structures. It would be one thing if thousands of homes were to be saved from flood control projects in the LUP area but that is not the case. The City of Roseau has already accomplished flood protection through a primarily federally funded diversion ditch being constructed around the city.

Response: We agree that the bogs, forests, and wetlands in this area already contribute to flood damage prevention naturally. You are correct that any proposed projects should have to go through a detailed statement of need of how much water would be held back from flood prone areas with structures. According to the 1998 Mediation Agreement, an EAW for a project would need to contain an operating plan for a gated impoundment, and that project proponents would need to prepare a “draft preliminary engineers’ report with enough information and analysis to determine project feasibility.”

Also, the Red River Basin Commission’s Long Term Flood Solutions for the Red River Basin report states on page 111, “It was found that floodwater peak reduction on both the Red River main stem and tributary streams can be achieved by a wide variety of flood water retention measures and projects, both structural and nonstructural. Measures can include, among others, on-channel and off-channel impoundments, culvert sizing or waffle storage, wetland restoration, or land use change,” and “The best approach to determining the specific type of retention measures to use in each location would rely on

site specific details and will likely result in a mix of measures. The individual watershed districts would determine the approach for their area that can best contribute to the overall basin-wide goal of reducing flood flows at damage sites in tributary areas as well as on the Red River main stem.” Implicit in this is that retention sites would be identified and tested with modeling (page 107).

The Roseau River Watershed District notes that the City of Roseau diversion project is only two-thirds complete, that it provides 100-year protection, that it included state funds, and the RRWD Overall Plan relies on a comprehensive watershed retention proposal (Todd Miller, pers. commun., Sept. 7, 2012).

Comment #11.6

We need to protect and or restore all natural waterways within the project area. There are far more ditches than natural waterways in the Roseau Watershed (and likely the Warroad River Watershed as well). The plan cites that in the Roseau River Watershed there are only “about 350 miles of natural riparian areas located in subwatersheds that have not been highly modified, versus about 900 miles of drainage ditches or highly altered stream beds and another 210 miles of meandering stream in highly modified landscapes” (page 144). The plan also cites a number of rare plants and animals that would most likely be negatively affected by flood control projects. These include small white water-lily (page 103), yellow rails (page 104), and *Oxytheria itascae* (page 106).

Response: Comment noted. However, the Roseau River Watershed District disputes our figures. They place the number of ditches at 430 miles. It is possible that small white water-lilies would benefit from shallow impoundments. We anticipate that any sedge meadow habitat that would be lost due to a project would have to be mitigated by providing funds to burn and/or shear additional wetland shrub habitat, provided, however, that a project that results in the loss of sedge meadow habitat can muster passage under the terms of the 1998 Mediation Agreement.

*Regarding the caddisfly, *Oxytheria itascae*: it had been found in Hansen Creek and the Roseau River on July 8, 2000, in undammed reaches of the systems. We believe additional searches in proposed impounded stretches would be appropriate.*

Comment #11.7

Another reason to not allow flood control projects on natural waterways is the negative impact they would have on sedge meadow habitats. The rationale for Objective 2.2 (page 146) cites that sedge meadow habitats are rare statewide and are “indispensible habitat for rare birds and plants”. The plan also states that only 3.3 % of the LUP area is currently classified as lowland grass (page 58), which includes the sedge meadows that have recovered since the failure of several old impoundments on Hansen Creek and the Roseau River. Sedge meadows that were lost to ditching and impoundments in other locations, such as Agassiz National Wildlife Refuge, have proven to be very expensive (in both time and money) and difficult to restore. Years ago, in response to the “Dust Bowl Era”, wildlife managers responded by placing many impoundments in areas where they did not belong to improve duck numbers. This is the case with the impoundments in the Beltrami Island/LUP area. The MNDNR has suggested alternate locations for possible flood control that are not located on stream channels. Let’s keep the natural stream channels flowing.

Response: Comment noted. See also response to Comment 11.6.

Comment #13.1

The information presented in Chapter 4 establishes a management direction for these lands based on the vision statement and information presented in previous chapter. The three proposed alternatives are a reasonable range to consider. References to the public scoping comments help provide some basis for selection of the preferred alternatives. The EA in Appendix A provides an analysis and rationale for selection of Alternative B as the preferred alternative. The goals, objectives, and strategies for LUP parcels are detailed and extensive. Objective 3.7 is: *“Help reduce downstream flooding by not allowing further drainage of peatlands and wetlands ,reducing unnaturally high runoff rates wherever feasible through strategic ditch plug placement, and allowing existing ditches in peatlands (and elsewhere) to disappear through natural sloughing, filling, bog expansion and beaver activity.”* The language presented in this objective, in its rationale, and among listed strategies raises some concerns. The reference to the idea that “... the U.S. Fish and Wildlife Service will review flood damage reduction projects proposed by watershed districts...and determine whether each project has mutual benefits to fish and wildlife habitat as well as flood damage reduction” seems out of place. The basis for any decision regarding proposed activities on the lands should be related to how it meets objective 3.7 and should be consistent with the vision statement presented on page 13. The need to defer to the U.S. Fish and Wildlife service for this decision is not explained but it should be. No other management decisions seem to be deferred outside of DNR in this plan.

Response: The construction of water retention structures would be considered “real property” belonging to the United States, because the U.S. Fish and Wildlife Service is the underlying landowner. They are considered more substantial features than are culverts or signs. That is why their construction needs USFWS approval. We also note that the current ongoing relocation of the Norris Campground by DNR and the recent construction of a picnic shelter by the Beltrami Island Forest Historical Restoration Society adjacent to the Winner Silo on LUP lands were approved in writing by the USFWS.

Also, in order for a flood damage reduction project to proceed on LUP lands, the proposing Watershed District would need to receive either a Letter of Intent from Agassiz NWR, a Flowage Easement from the USFWS’s Realty Division, or a land exchange would have to occur jointly through the USFWS’s and DNR’s real estate management offices. These decisions would be primarily in the USFWS’s purview.

Comment #13.2

Related to this impoundment issue and objective 3.7, it is my understanding that there is an ongoing discussion between the Roseau River Watershed District and the Minnesota DNR related to a proposed set of impoundment for flood damage reduction on lands within the Beltrami Island State Forest including LUP lands. The Roseau River watershed district presented a proposed set of impoundment located within the area. Minnesota DNR has evaluated the proposal and has developed and presented a response to the proposed projects noting the opportunities and difficulties at the project sites as they relate to DNR management objectives.

Response: We believe you are referring to a set of plans proposed by the RRWD in 2002. These were reviewed by the Project Team (established per the Mediation Agreement) for potential impacts (Mehmel 2009). A subset of these were again reviewed by DNR staff in 2011 (Bennett et al. 2011) and through a Project Team field review this summer, following the close of the comment period on the draft CCMP. We are awaiting a feasibility assessment from the RRWD’s engineering firm.

Comment #13.3

Adopting objective 3.7 and the related proposed actions in Chapter 5 will help reduce runoff volumes and will likely decrease flood damages locally downstream; however, without more detailed analysis it is unlikely that additional retention on these lands will substantially reduce downstream flood peaks to meet regional flood related given that most of these lands are in headwater areas. Appendix A does clearly and correctly state that National Environmental Policy Act review would be required for any proposed impoundments on these lands.

Response: Comment noted. See also response to Comment 11.5 above.

Comment #13.4

Any proposed actions in the future which are related to flood damage reduction should be consistent with the stated vision of this plan and its objectives. Placing large on-channel impoundments on LUP lands would be inconsistent with the stated vision and this objective.

Response: Comment noted. Land exchanges may be necessary to remain consistent with the visions of this plan if substantive Natural Resource Enhancement benefits cannot be substantiated.

Comment #14.1

I am writing in regard to proposals to build dams and maintain existing ditches within the Beltrami Island Area, Red Lake WMA and federal LUP lands. As an ecologist who has researched these areas for nearly a decade, I am convinced such drastic impacts to the peatland hydrology would be devastating. Impounding water over fens and bogs would destroy native vegetation and promote weedy plants ubiquitous across disturbed wetlands. Fluctuating water levels in reservoirs create open habitat for non-native grasses and cattail. These species will invade the shallow water and severely alter the ecology of the area. Furthermore, fluctuating water levels associated with flood control dams and ditch would cause serious changes to the peat itself. These changes would transform the peat, causing degradation and compaction that would actually reduce the water storage capacity of the substrate. Peat has unique soil properties that swell to hold more water. In addition, peat accumulates in water-logged areas but degrades in deep standing water or lowered water tables. If you want to hold more water in peatlands, leave it alone and let it naturally happen. Peat is like a sponge that swells to hold water that later to releases slowly in a steady flow eliminating surges from intense rainfall. The Patterned Peatlands north of Red Lake are at the edge of two major climate regimes whose weather patterns create the dry prairie of the Great Plains, or the water-logged portion of the sub-boreal forest in the area formerly inundated by Glacial Lake Agassiz. At this climatic border, the balance of moisture is nearly equal. Within this local area, precipitation barely exceeds loss due to evaporation and transpiration of plants. Where the moisture balance is negative, the water table is relatively lower, peat does not accumulate and is actually endanger of ignition. Currently, the moisture balance in the Red Lake Peatlands is adequate enough to maintain high water tables and accumulate peat as Sphagnum mosses and sedges continuously produce biomass and store carbon. Will it remain this way? It is predicted that in the next 100 years the climate will increase in temperature in a magnitude equal to or possibly greater than historical levels cited in this report. The peatlands within northwest Minnesota are on the edge of a favorable moisture balance for peat development, where evapotranspiration losses just equal precipitation. This is evident by the prevalence of fire-scarred peat, which is common along the edge of the prairie-forest boundary. Peatlands at this boundary are extremely vulnerable to atmospheric changes that would tip the

balance to a warmer-drier climate. Historically this has been shown to lower local water tables and thereby increase the propensity of peat fires. The margins of peatlands are sensitive to the adjustment in height of the water table. These changes are best evident in areas altered by drainage ditches. Future management practices that impede waters from leaving the peatland and promote rainwater infiltration on the uplands will help maintain high water tables and lower the likelihood of peat fires. Preliminary observations indicate that peat in cores closer to the ditch are highly degraded compared to cores collected some 100 meters away and in fen watersheds that have never been ditched. Lower water tables, especially during periods of drought, promote peat degradation with exposure to oxygen. With stable water levels, peat can remain unchanged for thousands of years. Yet when exposed to air, the peat decomposes to the consistency of potting soil with devastating affects to the ecology. This dark, black, powdery (sapric) peat compacts readily and holds far less water in the watershed. Sadly, the unusual vegetation of rich fens becomes lost as increased drainage promotes common plants that are already ubiquitous in Minnesota's highly-disturbed wetlands. Managing the hydrology of peatlands is counter-intuitive to those unfamiliar with these soils. Lowering water tables with the intention of retaining more rain water is false as peat compaction and degradation actually reduces moisture capacity. Furthermore, large dammed reservoirs will destroy the delicate balance of the native vegetation that are uniquely adapted to accumulating more peat, elevating the water table by retaining rainfall and thus continue a natural cycle that has existed since creation. Please do not implement the construction of new dams, but fill the existing ditches that are not necessary to maintain local roads.

Response: Comments noted. We will introduce these comments to the various interagency teams and project teams assembled under this plan and under the 1998 Mediation Agreement for their considerations when evaluating proposals. At this time, we do not have any information on impoundment volumes, depths, retention times, or frequencies of inundation to be able to address this issue further. We also note that a hydrologic monitoring study of the Winter Road Peatland SNA was expanded in 2012 by installing additional piezometers. The data will be used to examine the functional relationship of ditches to their associated drainage systems.

Comment #16.6

The Red Lake Wildlife Master Plan 1980-1989 is cited as providing the general basis for management of LUP lands. This plan addressed the repair/maintenance of flood control structures and the possible construction of additional structures. This seems to have been abandoned without benefit of public input.

Response: The Red Lake Wildlife Master Plan (RLWMP) was originally intended to guide management activities through the year 1989. It has not been revised. The draft plan on page 15 mentions that several aspects of the RLWMP have become outdated, including many related to wetlands management that are in conflict with the Minnesota Wetland Conservation Act (WCA). The purpose of the WCA is to: a) achieve not net loss in the quantity, quality, and biological diversity of Minnesota's existing wetlands; b) increase the quantity, quality, and biological diversity of Minnesota's wetlands by restoring or enhancing diminished or drained wetlands; c) avoid direct or indirect impacts from activities that destroy or diminish the quantity, quality, and biological diversity of wetlands; and d) replace wetland values where avoidance of activity is not feasible and prudent (Minnesota Rules Chapter 8420.0100). WCA supersedes any state plans that are contrary to the Act.

Comment #16.7

Regarding the lease agreement provisions cited in the plan (page 14), we believe the water control structures should have been maintained under the “recreation provision.” We believe the following lease agreement provisions should also apply: 1) Item 1 sentence 7 of the lease agreement conveys to the State the land and all improvements thereon (water control structures); 2) Item 9 paragraph 2 stipulates that the State is obligated to pay for repairs and replacements to said property (water control structures) and how this work will be funded; 3) Item 11 stipulates the State shall not remove or alter said improvement without written consent from the United States. Was written consent every obtained?; 4) We believe these flood control structures existed and were conveyed to the state, provisions for the maintenance and repair were provided and the State cannot remove or alter any major improvements without the written consent of the United States according to the lease. Any changes or alterations to the lease agreement were made without the benefit of public input.

Response: The 2009 Lease Amendment amends the 1940 Lease. According to 1940 aerial photos, the only dam present on LUP lands that was in existence at the time the original lease was signed was the Roseau Flowage structure just east of Dick’s Parkway. The Roseau Flowage structure is still existent and in good operational condition. When the LUP lease was amended in 2009, Dams 1, 2, 3, and 4, and the Winner Dam had been non-functional since at least 2002, with some being non-functional since the 1950’s (U.S. Fish and Wildlife Service, 2011; letter from Agassiz NWR Manager Margaret Anderson to DNR Regional Wildlife Manager Paul Telander dated Nov. 9, 2011; attached at end of this Appendix). If it was the intent of the USFWS to have these structures repaired, the 2009 Lease Amendment would have stipulated that. To the contrary, the DNR has written dissent to repairing these structures and written consent to removing the remnants of the dams (see Margaret Anderson letter dated Nov. 9, 2011).

Also, we note that the minutes of the March 15, 2012 meeting held with the DNR and USFWS, as prepared by the RRWD, state, “...it is not the District’s intent for the State or Federal Agencies to pay for the rehabilitation of the structures. The District will seek funding through the farm bill and state bonding (FDR)...”

Comment #16.8

Regarding page 144, objective 2.1: Specifically the statement of 900 miles of drainage ditches or highly altered streambeds is inaccurate. It was previously brought to your attention that the actually miles of ditch in the RRWD is approximately 430 miles.

Response: We acknowledge there is on-going disagreement over the miles of drainage ditches and/or highly altered streams in the RRWD. Your figure is duly noted and the plan will be amended to note the discrepancy in estimates. Our estimate includes all public and private drainage ditches, which is probably the reason for the discrepancies.

Comment #16.9

Regarding pages 144-145, objective 2.1: The strategies referenced for retaining water on the landscape that may or may not be accomplished, are wholly inadequate for water detention.

Response: We disagree. See Anderson and Kean (2004), Ohmann et al. (1978), Verry (1976), Verry et al. (1983), Stednick (1996), Kravka et al. (1999), Saatchi and Moghaddam (2000) and Cermak et al. (2007) for assessments of the effectiveness of vegetation for intercepting, infiltrating, and retaining water on the landscape, as well as evapotranspiration potentials. Also, the Red River Basin Commission's Long Term Flood Solutions for the Red River Basin report states on page 111, "It was found that floodwater peak reduction on both the Red River main stem and tributary streams can be achieved by a wide variety of flood water retention measures and projects, both structural and nonstructural. Measures can include, among others, on-channel and off-channel impoundments, culvert sizing or waffle storage, wetland restoration, or land use change." We do acknowledge that changes in water retention due to changes in vegetation on the landscape will occur incrementally over time.

Comment #16.10

Regarding page 165, objective 3.7: The statement about the causes of major flooding is unqualified, contradictory and a personal observation. In our opinion it does not belong in the plan.

Response: We agree that the statement about the causes of major flooding is unqualified, but we disagree that it is contradictory or personal observations, and the rationale has been modified accordingly. We agree that certain statements need to be corrected, clarified, and/or better referenced. Appropriate references have been added to the section to support the statement. We agree that it would be more appropriate to state that it is the potential for flood damage that has increased with human settlement and subsequent industrial, urban, and agricultural development, and we will reference Anderson and Kean (2004) and the Red River Basin Commission (2005, p. 9) to support this.

In addition, we will note that flooding in the Red River Basin is primarily related to geology, topography, weather, and land use (Anderson and Kean 2004); thus we will also clarify the statement. Because geology, topography, and weather are beyond the scope of humans to effectively alter or control, change in land use is the primary human-related factor affecting the severity and frequency of floods.

Comment #16.11

Regarding page 165: The strategy of plugging drainage ditches is, as explained by engineers in focus groups, ineffective and would serve no purpose unless used as temporary detention with draw down.

Response: We understand that full waterbodies are essentially "impervious surfaces"; i.e., they do not absorb and hold any additional water except in closed basins. We are open to downsizing culverts in lieu of plugging some ditches, and/or incorporating culverts in some ditch plugs. However, we may still want to abandon and restore some ditches entirely for wetland and natural hydrology restoration purposes at the landscape level.

Culvert down-sizing (Anderson and Kean 2004, Solstad 2007) is also an option for slowing runoff from the landscape, especially in headwater situations. The Division of Forestry inventoried all culverts in the Roseau and Warroad River watersheds about 10 years ago and maintains the inventory in the "Wheels" database in the form of GIS shapefiles and attribute tables. Some potential concerns with the concept are that forest roads are not designed to act as barriers to water, and are susceptible to washouts, and there is not a sufficient road budget to replace the number of culverts involved (156 in the Roseau River watershed and 122 in the Warroad River watershed).

Comment #16.12

Regarding page 165: Although agreed upon language for watershed proposed Flood Damage Reduction (FDR) projects is incorporated into the plan, after-the-fact agency qualifiers: 1) project approval of an internal DNR /US Fish and Wildlife team and 2) posting of a bond, are known by the DNR/USFW to be unacceptable to the Local Governmental Units (LGUs). The strategic incorporation of these qualifiers in effect negates the acceptance of agencies to consider FDR projects.

Response: The draft language that the RRWD submitted for the plan was not incorporated into the plan because the USFWS official who attended the March 15, 2012 meeting stated to us in an email that “the language contained in the attachment ... does not accurately represent what was agreed upon...” In lieu of that, DNR staff and USFWS staff drafted language for the plan that reflected Mr. Leach’s understanding of what was agreed upon, and what we believed to be our responsibility for “due diligence.” We know of no instances in which the U.S. Fish and Wildlife Service has granted a local unit of government or any other entity (e.g., a Project Team) carte blanc to impact National Wildlife Refuge System lands, and to expect that authority here is unrealistic. Requiring a performance bond is a standard procedure where one entity does not wish to be liable for costs associated with another entity’s actions or inactions, especially on construction projects. The DNR and USFWS did not know these provisions are unacceptable to the RRWD or Warroad River Watershed District. However, the USFWS and has indicated they will likely not require a performance bond, so we will delete that as an explicit requirement from the plan; that however does not mean that a performance bond will not be required under all circumstances.

We disagree that these “qualifiers” negate agency acceptance of water control proposals. Nothing prevents any watershed district from proposing a project that meets the minimum conditions.

However, we believe it is necessary here to lay out a review process for flood damage reduction project approvals. For those that do meet initial USFWS/DNR interagency approval, projects will then have to go through the Project Review and Permitting Process contained in the Red River Basin Flood Damage Reduction Work Group’s 1998 Mediation Agreement, including federal and state environmental review. Project proposals that meet that approval will need to obtain a Letter of Intent or a Flowage Easement from the U.S. Fish and Wildlife Service, or there will have to be a land exchange between the USFWS and DNR. These latter steps will be added to the strategies under Objective 3.7. This joint federal/state process has been applied successfully at Hamden SloughNWR. See also response to Comments 11.3 and 16.4.

We note that much of this discussion appears to have stemmed from confusion from the March 15 meeting as to where the first step in the process should occur: i.e., whether the evaluation of NRE benefits should be made first by the Project Team, or first by a joint USFWS/DNR team.

Comment #16.13

The plan should include quantitative goals for the reduction of flows from the BISF that is consistent with the RRWD Overall Plan, Red River Watershed Management 1998 Mediation Agreement, and the Red River Basin Commission- Long Term Flood Solution Plan. We suggest the following language be included for the portions of the BISF that contribute to the RRWD. Similar quantitative goals should be included for areas contributing to the WRWD: The future plans for the BISF area should incorporate a FDR need/goal to reduce flows leaving the BISF by approximately 20-30%. This should

include the re-construction and evaluation of potential enhancements to the 5 dam structures that were previously damaged by flooding on the Roseau River and Hanson Creek. This goal is consistent with the goals in the Roseau River Watershed District Overall Plan, Red River Watershed Management 1998 Mediation Agreement, and the Red River Basin Commission- Long Term Flood Solution Plan. The Roseau River Overall Plan identifies the need to incorporate approximately 30,000 – 40,000 acre-feet of storage above the City of Roseau. Since the BISF makes up approximately 156 square miles of the 432 square miles drainage area above the Roseau area, it should be expected that 10,000 – 15,000 acre feet of temporary flood storage be implemented within the BISF. However, the actual amount needed will vary depending on final location and type of measures implemented.

Response: A major goal of the Long Term Flood Solutions Plan is a 20% reduction in peak flows on the Red River mainstem. A goal of 30% may be too high, especially since we are not aware of any evidence that runoff is artificially high (i.e., above the Range of Natural Variation). The concern for excess runoff seems to originate from CAC meetings which “brought out the opinion that uncontrolled runoff from Beltrami Island State Forest and Lost River State Forest is a major problem” (RRWD Overall Plan 2004, page 101). It is also unclear what methods would be used to measure reductions.

The comment seems to request a continuous reduction of flows by 20-30% but then implies temporary flood storage. Comments from the RRWD from other venues mention a goal of temporary storage; we interpret the intent of RRWD here to be a 20-30% reduction in peak flows (i.e., temporary reductions).

We will not make it a goal to reconstruct 5 dam structures, but we will not create a goal to prevent their reconstruction either. Again, it is important to reiterate that LUP lands are not synonymous with the Beltrami Island State Forest (BISF). GIS analysis shows that there are 24,687.6 acres, or 38.57 mi², of LUP lands in the Roseau River Watershed (RRW). This equates to 24.7% of the 156 square miles of the BISF in the RRW. If temporary flood storage in the BISF is parceled out proportionally (i.e., 25% on LUP) as the comment suggests, this would amount to 2500-3750 acre-feet on LUP land and 11,250-12,500 on state land. The RRWD has identified approximately 9000-10,000 acre-feet that could be stored on LUP lands (actual amounts not digitized to state, federal, or private lands). An equitable distribution of storage among federal and state lands may require land trades or means other than dams (e.g., culvert downsizing). In the Warroad River Watershed (WRD), 60% of the land base (190 mi² out of 312 mi²) is in the BISF. GIS analysis shows that there are 18,552.3 acres, or 29.00 mi², of LUP lands in the Warroad River Watershed (WRW). This equates to 15.257% of the 190 square miles of the BISF in the WRW.

Comment #16.14

Additionally, the same need/goal for a 20-30% reduction in flows should also be implemented for the Hay Creek subwatershed where the BISF makes up approximately 22 square miles of the total 112 square mile drainage area. The HEC-HMS modeling that is currently being updated would be used to evaluate future project benefits.

Response: There is interest in the DNR in consolidating LUP lands in the Bemis Swamp area of the Hay Creek subwatershed in order to create a SNA. However, there are differing Divisional visions or priorities for managing the Bemis area. If an SNA is created in the Bemis Swamp area, vegetation would be protected from human alteration in a portion of the subwatershed, where hydrology would largely function naturally. That does not preclude additional water retention elsewhere in the BISF, but a goal specific to LUP lands contributing to a 20-30% reduction in runoff rates would not be appropriate.

Comment #16.15

Regarding page 166, objective 3.8): Based on feedback from team members, the comprehensive review of all flood causes in the RRWD is, in our opinion, limited and not comprehensive. No LGU's were involved in this process either. The identified management practices that may or may not happen (as referenced in item 4 above) to alleviate downstream problems stemming from this review are wholly inadequate. The plan should include quantitative goals for the reduction of flows from the BISF that is consistent with the RRWD Overall Plan, Red River Watershed Management 1998 Mediation Agreement, and the Red River Basin Commission- Long Term Flood Solution Plan. Similar language to that included for Item 7 above should be added.

Response: We agree that the phrase about a comprehensive review of all flood causes is out of context, and we will revise the paragraph accordingly. The headwaters of the Roseau River and Warroad River watersheds are in a relatively natural condition, and we are not aware of any data that suggests runoff rates from the area exceed pre-settlement runoff rates, and certainly not by 20-30%. Because conditions are relatively natural, there are far fewer options for reducing runoff than there are for developed portions of the watershed farther downstream. But it is clear from Anderson and Kean (2004) and Solstad (1998) that land use cover conversions and wetland restorations are among the most effective mechanisms for reducing runoff rates and retaining water close to where it falls (see response to comment 16.3). Because the planning area is essentially entirely vegetated, our options for modifying vegetative cover include altering the deciduous-coniferous composition and age class distribution on the landscape. We believe this best meets the flood damage reduction principle of the 1998 Mediation Agreement (i.e., "water should be stored/managed as close to where it falls as is feasible and practical") by managing it exactly where it falls. Culvert sizing is another alternative we will further evaluate. According to the 1998 Mediation Agreement, "the smaller the drainage area is, the more effective culvert sizing can be in accomplishing meaningful, effective control." The smallest drainage areas are at the headwaters of systems, and we believe this would be a least damaging practical alternative.

Comment #16.16

Along with natural resources, the health, safety and welfare of citizens should be a priority of the plan including protection of property and public infrastructure.

Response: We agree. We believe goal statements 3 and 4 reflect this sentiment.

Comment #16.17

Consideration and mitigation of downstream impacts from excessive run-off should be addressed. Examine the ongoing effort by DNR to assess the dissemination of fisheries after the recent flooding in Duluth.

Response: We are attempting to prevent excessive run-off by implementing wider riparian management zones, increasing conifer cover and age in the watershed, strategically abandoning and restoring ditches, and we are willing to enter into a cooperative culvert downsizing initiative. We are also amendable to installing culverts in ditch plugs to slow and meter-out runoff.

Comment #20.1

I strongly support all efforts to protect and restore natural waterways. I believe the forest is a living, self-regulating ecosystem and all effort should be made to facilitate (not destroy) its natural systems. I do not believe the dams proposed for natural river and stream channels by the Roseau Watershed District are in the best interest of the forest.

Response: Comment noted.

Plan Review and Revision (Chapter 5)**Comment #4.4**

It was said plainly during the open house that this plan was to be “flexible”. What is the mechanism for us to monitor progress, provide feedback, and measure the effectiveness of the plan as implemented? If the plan is not meeting the objectives how can changes be proposed or the plan amended? Will the public continue to have input into this process?

Response: We concur that a more-detailed mechanism for revising the CCMP needs to be developed, including a mechanism for public recommendations. Revisions may be necessary as new situations or issues arise (such as a new or more virulent type of disease outbreak), as new methods become devised (particularly silvicultural methods), as laws and policies change, and in the event methods prescribed in the plan are ineffective or less effective than desired. However, petitions to modify the plan based on generic opposition to elements of the plan are not appropriate reasons for plan revisions. Therefore, any recommendations to modify the CCMP will first go the Red Lake Area Wildlife Manager, who will screen them. Modifications that the Area Wildlife Manager deems reasonable will be submitted to the DNR’s Northwest Region Management Team and to Agassiz NWR for concurrence, modification, or denial. If both the DNR’s Northwest Region Management Team and Agassiz NWR agree to the proposed modifications, they will be written up and appended to the CCMP, interested parties will be notified, and the changes will be announced in the Norris Camp Newsletter and/or on the DNR website.

Comment#16.18

We recommend that the plan include a mechanism that allows for amendments or changes as deemed necessary by the advisory group/DNR/USFWS.

Response: See response to Comment 4.4 above.

Citizen Advisory Committee**Comment #2.2, 6.2, 6.3, 15.1, and 16.2**

Two Watershed Districts request that an advisory committee be formed after plan is approved and being implemented. Flood damage reduction projects need to be supported by this plan with Watersheds having a significant say in the decision. Is it legal to have a citizen advisory committee as part of implementing the plan?

Response: The DNR, with USFWS concurrence, will establish an advisory Citizen Input Panel which will meet periodically, e.g., once or twice a year prior to the joint USFWS-DNR annual meeting described under Goal 5. However, allowing external parties to have decision-making powers would be a violation

of the Federal Advisory Committee Act. The purpose of the Citizen Input Panel would be to “improve communication related to implementation of the plan” and it would consist of invited members of several diverse interest groups. Meetings will be held at Norris Camp, at other government offices in the region, and perhaps at even more distant locations. Topics covered may include water retention issues, public use and access issues, broad vegetation management issues (goals), wildlife research projects, wildlife monitoring opportunities, volunteer opportunities, interpretive signs, public programs, historic preservation issues, and land exchange updates. Day to day wildlife and habitat management decisions, however, will not be delayed for the sake of receiving public input. This will be added to what was Objective 3.11 in the draft CCMP, which will become Objective 3.10 in the final CCMP.

Comment #4.5

The local watershed districts should have no role in the decision making process or any more direct input than the remaining public. We are all interested parties.

Response: Allowing external parties into the decision making process would be a violation of the Federal Advisory Committee Act, and will not be allowed. However, see response to Comment 2.2 (etc.), above. The Citizen’s Input Panel would not be limited to watershed district participation, but would include representation from a comprehensive suite of interest groups.

Comment #8.3 and 16.19

Include in the management plan a requirement of a citizen oversight committee empowered to make changes to the plan both before final approval and after.

Response: Allowing external parties into the decision making process would be a violation of the Federal Advisory Committee Act. However, see response to Comment 2.2 et al. above.

Wildlife

Comment #4.6

There are some pretty specific objectives in this plan. For instance; “Maintain deer herd at a density of 7.7 deer per square mile” and “Maintain a minimum of 10-13 wolf social units”. Those things sound great. What are the measurements right now? Where is that data? I also have to question moving forward how can we measure success? With all the management goals in this plan what is the ability of the public to monitor how well the plan is working? Will there be data published and accessible that can show us the goals and the progress to reaching them? Oh how I wish that the DNR would make more data available and easily accessible.

Response: There were an estimated 4 deer per square mile in Deer Management Zone 111 in late winter 2011 (before fawning), which is 43% below the target population of 7.7 deer per square mile. Data on deer densities and harvests is also available on the DNR website.

A wolf collaring project in 2007-2008 found that wolf pack distribution was about equal to the distribution reported by Fritts and Mech (1981), who reported 10-13 wolf social units (pairs and packs) in the Beltrami Island area in the mid-1970’s following initiation of wolf protection under the Endangered Species Act. The number of social units represents the actual range of numbers of social units during winter in a given year during the mid-1970’s. It is presumed that the Beltrami Island area continues to have the carrying capacity for a minimum of 10-13 pairs or packs.

The question of how success will be monitored is a crucial one. The plan emphasizes research and monitoring, and recognizes the need to seek additional funds for monitoring. Results of various research and monitoring projects are published periodically in the Norris Camp Newsletter, and we propose to have an improved and expanded weblink on activities in the Red Lake WMA work area. There will also be an opportunity for enhanced information sharing through the Citizen Input Panel.

Comment #8.4

The number of deer per square mile should be increased by 50%.

Response: Deer population goals are set by an extensive public input process for all of the state's approximately 130 deer permit areas. The permit area including LUP lands is no different. The LUP CCMP goal of 7.7 deer per square mile is based on the results of this process that occurred in 2005. However, in verifying the results from the 2005 input process, we found that the original goal for deer in permit area 111 was a 10% increase from the 2005 pre-fawn deer density of 5.5 deer/mi², or 6 deer/mi², not 7/mi². Rather than lowering the goal from 7.7/mi² to 6.6/mi² and giving ourselves 10 percent leeway, we will change the goal to a range of 6.0-7.7/mi², which incorporates the leeway into the lower value of the range only.

Comment #8.5

The number of wolf social units should be reduced by 50%.

Response: Comment noted. However, we have decided to delete a specific objective related to wolf management, and instead manage them under the State Wolf Management Plan. They are now addressed under the objective for upland furbearer management, which is now Objective 1.8.

Comment #20.2

I support Objective 1.5 which calls for maintaining 10-13 wolf social units in the LUP area. The wolf units should be carefully monitored and all care should be taken to ensure their health, well-being and survival.

Response: Comment noted. However, see response to comment 8.5 above.

Comment #10.4

We support managing LUP lands to provide more conifers, more mature forest and overall better habitat conditions for rare and sensitive species. Since many of these species and their habitats can be greatly disturbed by timber harvest, focusing on non-harvest activities would be the most beneficial. Limiting road building will also be advantageous to many sensitive species.

Response: Comment noted. Road building is not part of our plan. Presently, new permanent roads are prohibited by the 2009 Lease Amendment.

Comment #10.5

Working to improve conditions for moose should start occurring immediately. Acting sooner rather than later will ensure that we are not sorry in the future when it may be too late to restore moose populations. While we may not know exactly why moose numbers are declining, we do know that something is causing a decrease to their population numbers. Therefore, a moose restoration plan

should be included in the final decision and no hunting of moose should be allowed. Much more focus should be put on prescribed burns over timber harvesting.

Response: We concur that it would be desirable to improve conditions for moose as soon as possible. We currently shear 500-1000 acres of brushlands every year, which induces growth of browse suitable for moose. However, studies in the 1990's of the northwest moose population decline concluded that climatic conditions combined with increases in deer numbers and parasite transmission rates may have rendered this area inhospitable to moose. The decline of the moose population does not appear to be from causes that management actions can change, such as the brushland shearing just mentioned. Until the climatic factors that are making moose range shrink to the north are reversed, we will probably see fewer moose in northwest Minnesota. Hunting currently is not occurring, and will not be reinstated unless moose populations return to a sustainable, viable level. More prescribed burning is proposed under the plan.

Comment #10.6

We are concerned that the planned timber harvesting under this project will negatively impact lynx. Lynx are a federally listed threatened species and efforts need to be made to improve conditions for them if their population numbers are ever going to increase. Reducing lynx denning habitat and prey habitat is not working towards recovering this species. Preserving forest connectivity, eliminating snow compacting routes, and reducing timber harvesting will benefit lynx.

Response: We believe that lynx habitat will improve in the area under the desired goals of increasing the amount of conifer cover on the landscape and retaining more forests longer than under normal rotation forestry. However, increases in forest age on LUP lands are likely to be offset on state lands, as overall timber management in the region is directed by the Agassiz Lowlands SFRMP. Aspen and jack pine harvest also improve habitat for snowshoe hares, the main food source for lynx and bobcat.

Comment #11.8

My next area of concern is regarding wolf management. I strongly support Objective 1.5 (page 133) that calls for maintaining a minimum of 10-13 wolf social units in the LUP area. I suggest another strategy be added to this objective - coordinate with the Red Lake Tribe of Chippewa Indians to designate a wolf sanctuary area made up of LUP and tribal land in the center of the LUP area. This would complement the Tribe's Wolf Management Plan and help protect the wolf population in an area well away from any livestock operations. I also think that wolves should not be hunted during the firearms deer season as wolf pelts are not prime at that time and taking wolves that early would constitute wanton waste. If in the future wolf management blocks are set up, the quota of wolves taken in the LUP area should be minimal. Numbers of harvested wolves should be monitored and reported annually to the USFWS.

Response: Comment noted. However, see response to comment 8.5 above.

Comment #18.2 and 19.2

The plan is full of generalities that appear to have no supporting documentation. For example, page 142, "Manage a population of spruce grouse in the face of boreal forest loss to climate change..." and page 157, "Black spruce can be difficult to regenerate, and there is evidence that clearcutting may result in regenerating stands of stunted (stagnant) black spruce ..."

Response: We are not sure what has not been adequately documented regarding spruce grouse, unless it is the statement that wildlife biologists are concerned that their population could be extirpated from Minnesota. We cited that the State Wildlife Action Plan identifies the spruce grouse as a “species in greatest conservation need.” The U.S. Forest Service’s Eastern Region has prepared a Conservation Assessment for spruce grouse (Gregg et al. 2004, which we also cited). We will also add that the Association of Fish and Wildlife Agencies commissioned a continental conservation plan (Williamson et al. 2008) for the species, in part because, due to it being a non-migratory gallinaceous species, it does not fall under the auspices of the federal Migratory Bird Treaty and therefore the U.S. Fish and Wildlife Service, and therefore lacked consideration from a continental perspective. We will also reference Boag and Schroeder (1992; Spruce Grouse, Birds of North America No. 5) and note that the population Pietz and Tester (1979) studied in northern Hubbard County appears to be extirpated (fide Minnesota Breeding Bird Atlas project).

Regarding the comment on black spruce, we agree the situation is more nuanced and needs clarification. See response to comment 12.6 below.

Comment #18.3 and #19.3

Other parts of the document propose managing for species even in their absence and/or species that are not endangered or threatened. On page 134, the document state that “No goshawk nests have been found but the LUP planning area ...” It continues to state that goshawk pairs can occupy up to 18-24 thousand acres and proposes to manage for this species. Goshawk populations are not endangered, not threatened or even listed as a species of special concern, yet the proposed plan proposes to manage 25%+ of the LUP acres for goshawks that are not documented to be nesting in the LUP area.

Response: We do not believe this comment accurately characterizes our plan. The fact that we have not found goshawk nests does not mean they are not present. In fact, we know that goshawks are present. They have been on the Red Lake WMA, Hayes Lake State Park and Zipple Bay State Park bird lists for several years. They have been seen in the breeding season by DNR staff. The plan does not propose to manage 25% of the LUP area for goshawks. In fact, the plan acknowledges the improbability of being able to manage such an expansive amount of land for desired goshawk habitat needs within the lifespan of a goshawk nest. What the plan proposes to do is consider the habitat needs of goshawks when planning and reviewing proposed timber harvests. If indeed the plan did intend to manage 25% or more of LUP for goshawks, then we would have drafted a prominent objective to that end with a detailed rationale statement and suite of strategies; instead, goshawk needs are addressed in a strategy statement in an objective that covers a diverse group of rare species.

Comment #18.4 and #19.4

The document contains numerous examples similar to those above as well as several areas where research that is cited that is not germane to the project area. We recommend that the document be thoroughly reviewed to remove subjectivity and proposed management activities that are based on research conducted in regions not similar to the LUP landscape.

Response: It is common natural resource management practice and sound ecological science to apply research conducted in often distant locations to local resource issues. Models, by definition, are developed to be used as tools to interpolate and extrapolate to other areas. Models are evaluated by their robustness and are developed with statistical parameters that err on the side of caution relative to inclusion to ensure they are indeed warranted. Species across a broad geographic range often rely on

similar resources to meet their life history requirements, which is precisely why models are useful. We use the best scientific evidence available, which is often from distant locations. In such instances, it is appropriate to acknowledge the caveats, which we believe we have accomplished throughout the document. We also attempt to verify models locally when possible, monitor adequacy of models, and modify them where appropriate.

Habitat Management

Comment #10.7

We support efforts to increase the amount of jack pine, white pine, yellow birch, spruce, fir, upland white cedar and upland tamarack. Yet there are concerns regarding the amount of harvest proposed and the treatment types that have been chosen. Creating large amounts of young forest can result in damage to soil and water resources, spread of non-native invasive species and most importantly destruction of important sensitive species habitat. Clearcutting does not promote age diversity or species diversity. Instead it leads to fragmentation of the forest and fragmentation of species habitats and simplified stand structure. Timber harvesting is a poor substitute for naturally occurring stand replacing disturbances; the negative effects often outweigh any benefits that are achieved.

Clearcutting is not the optimal method of “harvest,” especially in terms of achieving age and species diversity, because clearcutting increases habitat fragmentation, which lowers overall diversity by reducing suitable habitat for forest interior species. Efforts should be made to preserve, increase and connect old growth/mature forest stands. Clearcutting also leads to stands of single age species. This simplification of forest structure and composition reduces its ability to provide habitat for a diversity of forest wildlife species. The frequency of clearcuts in the project area should be significantly reduced in favor of minimizing fragmentation and increasing species diversity through the use of plantings and prescribed burns. Focus should be on promoting wildlife protection and diversity and protecting and restoring native habitats and healthy watersheds; not on commercial timber harvesting.

Response: Comment noted. No amount of harvest is specified for LUP lands, and overall harvest in the entire project area and beyond are determined by the Agassiz Lowlands SFRMP. Clearcutting with reserves will be used on LUP lands when it is the appropriate silvicultural practice to use to achieve the desired habitat goals. Other harvest methods such as shelterwood and seed tree cuts will also be utilized when those methods are the appropriate silvicultural practice for the habitat goals. The Department will fully implement the Voluntary Site-level Forest Management Guidelines and abide by the U.S. Fish and Wildlife Service letter of May 7, 2004 to assure adequate leave trees, seed trees, and clumps remain in all stands where clearcutting is used. Efforts to preserve, increase and connect old growth/mature forest stands is given a high priority in Chapter 5 (Plan Implementation).

Comment #10.8

Tree plantations do not contribute to restoring our public forests to conditions more representative of native vegetation communities. Using agency resources to prolong plantations and create new plantations; instead of focusing on restoring these areas to their natural range of diversity is not a beneficial use of resources. Prioritizing diversity planting and prescribed burns should be favored over commercial harvesting. Plans to convert thousands of acres of forest into new pine plantations are extremely alarming, no new plantations should be created.

Plantations should be returned to their historical range of natural diversity and no longer used as plantations. Tree plantations have little structural or species diversity. They are ecologically unstable

and more susceptible to weather, fire and pests. Plantations harm soil resources by changing soil structure and chemical composition. Short term rotations and the use of heavy machinery expose soils to erosion. By planting one tree species and eliminating all other plant species, changes in the nutrient cycle and in the original soil structure may occur and may be irreversible.

Managing an area where the focus is directed to providing timber is not contributing to the biodiversity and health of the forest. Plantations often do not provide beneficial food, shelter or opportunities for reproduction for many species. According to Harvard biologist E.O. Wilson, a single species pine plantation contains 90 to 95 percent fewer species than the forest that preceded it (Williams, Ted. "False Forests," Mother Jones (Magazine). May/June 2000). How do plantations promote the recovery of lynx and gray wolf populations and other sensitive animals?

Response: The CCMP does not propose any new plantations. Plantations were established primarily in the 1930's on abandoned farm fields that lacked a viable seedbed of native plants and through the 1980's on jack pine clearcuts. The plantations have developed into a valuable timber commodity with generally limited wildlife value. Some plantations have been thinned, treated with prescribed burns, and have been seeded to create a diverse understory, and those plantations have greater wildlife value. We believe the best avenue for both enhanced wildlife protection and sustained timber production is to trade some LUP pine plantations for ecologically productive state lands, particularly in the areas of the BISF that are not part of the Red Lake WMA or Scientific and Natural Areas. Because land exchanges are based on dollar-per-dollar value and not acre-per-acre, we believe there will be a net gain in LUP lands via exchanges. The amount of plantations exchanged will likely be determined by how administratively easy or difficult they become. We acknowledge this will ultimately perpetuate red pine plantations on the landscape.

Comment #10.9

Absolutely no biomass removal or rights to harvest biomass should occur. Biomass is a vital component to a healthy forest because it provides future nutrients to the soil and important habitat for wildlife. How much and what types of biomass will be sold and which units will it come from? How will this removal of biomass affect wildlife? Good lynx denning habitat has large amounts of coarse woody debris, how will harvest of biomass affect lynx? How will this removal of biomass affect soils, and the future health of vegetation that will be deprived of these nutrients?

Response: The CCMP does not propose biomass removal from forests other than from richer fire-dependent sites which cannot be burned due to their position on the landscape, and/or where it may be necessary in order to increase conifers on the landscape. The CCMP entertains the concept of biomass removal from lowland brushland. Lowland brush is a valuable wildlife habitat, but it has increased in extent due to the absence of fire that kept brush out of sedge meadows. Sedge meadows are also valuable wildlife habitat, but for a different suite of species than brushlands, and sedge meadow habitat specialists are some of our rarest species in the state. The DNR expends money and effort at setting back lowland brush every year in order to maintain sedge meadows; commercial biomass removal would convert that activity from an expense to a source of income. However, local markets for biomass need to be developed first.

Comment #10.10

We support efforts to use prescribed burns; using prescribed burns will result in many important benefits for the forest. Over the years, a lack of fire on forest landscapes can lead to poor forest

health and very little regeneration. Overgrown stands can result in the spread of insects and disease. Fire aids in thinning out areas and improving soil conditions so that regeneration may occur.

Response: We agree in principal.

Comment #10.11

We are concerned with the potential damage that this project will have on water and soil resources. Of particular concern is the increase in young and open age classes where spring snowmelt could result in channel scouring, flooding, erosion, sedimentation and harmful effects on fish and aquatic habitats. Another concern is areas slated for clearcut. When clearcutting takes place on steep slopes, soil erosion can occur. Harvesting should not occur on steep slopes because of the risk of erosion. Clearcutting can also lead to soil compaction, reduced water infiltration and loss of soil nutrients. Effects from harvesting may include channel scouring, compaction, erosion, rutting and reduced water infiltration. Soil erosion from harvesting can lead to impaired water quality, altered surface and subsurface water flow and sediment added to aquatic systems can negatively impact fish, mussels and invertebrate communities by altering the ecosystems composition. Sediment can reduce or degrade spawning habitat and reduce water clarity which affects foraging for sight-feeding fish.

Response: We do not believe what is described above is what we are proposing. Also, steep slopes are extremely rare within the LUP planning area. The area is very gently sloping, and any noticeable slopes are quite uncommon. Also, we follow the Voluntary Site-Level Forest Management Guidelines, which minimize these sorts of impacts.

Comment #10.12

Absolutely no timber harvesting should occur in Peatland SNA Watershed Protection Areas.

Response: We do not foresee much timber harvest from LUP lands in Peatland SNA watershed protection areas, but there may be some openland situations where it is desirable, such as in islands of aspen or balsam poplar. LUP lands make up only a minor component (8.1%) of the Winter Road Lake Peatland SNA (1329 acres out of 16,342 acres in the WPA).

Comment #10.13

We support efforts to increase the width of all riparian management areas. Non-harvest restoration activities in riparian areas will enable these sites to become stronger, healthier and more resilient ecosystems able to support a diversity of species. We support the plans to restore the shoreline on Hayes Lake. It is also important to restore as many drained wetland areas as possible. Re-vegetating and restoring old gravel pits would be beneficial to the surrounding environment.

Response: We concur, although some harvesting is allowed in riparian management areas under the Voluntary Site-level Forest Management Guidelines. However, any timber harvest on LUP lands is done with the intent of benefitting wildlife with a specific goal in mind. It is also important to note that USFWS concurrence on certifying timber from LUP lands as sustainable was based on a stipulation (among many) that riparian management areas on LUP lands would be wider than prescribed in the Voluntary Site-level Forest Management Guidelines. We will also utilize findings from the report of the Riparian Science Technical Committee to the Minnesota Forest Resources Council (2007) on the science behind riparian management issues.

Comments #11.9 and #20.3

I strongly support Objective 2.4 (page 148) to manage for older forests. Given the huge age disparity of timber stands in the LUP, which is skewed heavily towards younger age classes, old forest is in short supply. Older forest communities on LUP land provide vital habitat for a number of rare plants and animals cited in the plan as species of concern. Old-growth forest provide habitat and benefits that younger forests do not. They are unique and increasingly endangered ecosystems that deserve our most vigilant efforts to protect them.

Response: Comment noted. Minnesota's forests statewide are aging, as harvest rates currently do not exceed annual average growth rates. However, much of the age increase is occurring on private lands instead of public lands.

Comment #12.1

Thank you for the opportunity to comment on the final draft of the Beltrami Island Land Utilization Project Comprehensive Conservation Management Plan. As a large consumer of wood fiber off of LUP lands, perhaps the largest consumer it is with great interest we share our thoughts and concerns regarding the management direction contained in the CCMP. Boise, Inc. is a direct local employer of 850+ employees, and also serves as a market for many local forest products businesses that operate in and around the Beltrami Island Forest. We understand that sustainable resource management is the very principle that will ensure our mill that is 100+ years old currently, will be around for another 100 years providing jobs and a wood market for all of northern Minnesota. Our biggest concern to be able to compete in a global market place is for the wood we sustainably procure to be cost effective-quality fiber. The overall tone in the CCMP trends the overall forest to an older forest condition, which generally means lower quality wood fiber. Statewide, we have an older forest condition today than we did in the past. On MNDNR administered land, based on the 1994 GEIS, an Extended Rotation Forestry (ERF) goal of 12.5% was set based off a statewide total harvest level of 5.5 million cords to meet the needs of older forest wildlife species. Today, we are currently at a statewide total harvest level of 2.6 million cords, and ERF stands on MNDNR administered lands stands at 26%. The point here is that even without intended goals to create an older forest it is happening already due to decreased markets and mills not operating anymore. Mills and logging operations fill a vital role in vegetation management objectives, while providing a much needed funding source to landowners and resource managers. We have recently seen other mill closures, and in the end, without a market for the wood, it becomes inefficient, cost prohibitive, and likely impossible to achieve forest management objectives that in turn meet and enhance wildlife objectives.

Response: Comment noted. The CCMP will not result in additional older forest on the overall landscape per se. Timber harvest levels and stand age management on the landscape are driven by the Agassiz Lowlands SFRMP. The CCMP simply lays out a vision that the older forests will be more focused on LUP lands and less focused on state lands. Even if 100% of the LUP lands were designated for Extended Rotation Forest (ERF) treatment – and they are not – additional state lands would have to be designated ERF for every forest cover type in the Agassiz Lowlands Subsection.

We agree that “even without intended goals to create an older forest it is happening already due to decreased markets and mills not operating anymore.” However, more supply from LUP lands will not create a greater demand; based on the laws of supply and demand, we believe it would only decrease prices.

Comment #18.5 and 19.5

The plan proposed three alternatives. We are surprised that none of the proposed plan alternatives include a comprehensive timber management plan. It appears that timber management will be an outcome rather than a goal.

Response: We disagree in part. The Agassiz Lowlands SFRMP is a comprehensive timber management plan. The SFRMP includes LUP lands and the LUP plan incorporates the SFRMP. The LUP plan does not alter the SFRMP. The LUP plan only provides a vision statement that the older forest elements provided for in the SFRMP will be more proportionally contained on LUP land than on state land where they provide wildlife benefits for species dependent on older, mature forests. Even then, decisions made on individual forest stands on LUP lands will take into consideration the conditions on surrounding state land under the "Manage the Landscape" alternative.

We agree in part that timber management will be an outcome rather than a goal. The Executive Order establishing the Beltrami WMA established the goal "as a refuge and breeding ground for native birds and other wildlife ..." and only alternatives that meet this overall goal can be considered. Timber harvesting is a tool that can be used to achieve certain wildlife management objectives, and it will be utilized as appropriate.

Comment #12.2

Objective 1.6: Regarding "Maintain or increase current populations of rare species and habitat specialists by managing their habitat needs," under the "Strategies" section in this objective it notes an "Increase in prescribed burning on the landscape and limit amount of salvage logging in burned over areas for 4 years following fires for benefit of three-toed and black-backed woodpeckers. Weigh benefits of controlling spread of insect outbreaks to other forest stands versus providing quality woodpecker prey base when deciding to salvage-log insect-infested stands." This statement fully ignores healthy forest management. It is based off of research or opinion from the western U.S. that has totally different tree species compositions than are found in Minnesota. Burning healthy forests to the point that salvage logging needs to take place intentionally is completely poor management. It will promote insect and disease outbreaks across the landscape to a possible point that may be unmanageable. Also, by leaving salvage logging go for 4 years, those trees are no longer salvageable; they are useless in terms of a forest product. Please consider a harvest treatment before a prescribed burn in a stand to salvage the wood. It is not good forest management to promote insects and disease in an otherwise mainly healthy forest condition.

Response: Not all wildlife depend on healthy forest conditions; some have evolved to need decadent conditions. Others have evolved to take advantage of natural disturbances, such as fires. Controlled burning of healthy forests can be good wildlife management. The strategy is based on management prescriptions from Eastern Region of U.S. Forest Service, including authors from Minnesota, who recommend prescribed fires to kill some area of trees for the benefit of black-backed and three-toed woodpeckers. Burning of forests is not intended to create need for salvage logging. The amount of area needing to be treated for BBWO and TTWO habitat will depend on frequency of natural fires. Corace et al. (2001) advocate for maintaining large tracts of habitat for BBWO through burning, in combination with even-aged timber management. The CCMP indicates we will burn an average of about 84.5-120 acres/year in order to restore the natural frequency of fire in the 8450 acres of fire-dependent native plant communities on LUP lands.

We will consider pre-treatment thinning [in interior areas to be burned] or to create firebreaks. However, Morisette et al. (2002), Hutto and Gallo (2006), and Kronland and Restani (2011) all show adverse impacts to primary cavity nesting from post-fire salvage logging, although one study showed an increase in the density of small mammal populations by increasing downed coarse woody debris compared to non-salvaged burned areas. Post-fire salvage logging could therefore benefit predators such as hawks, owls, martens, mink, fishers, and bobcat. Pre-burn thinning, however, would theoretically result in both a decrease in cavity nesting birds and downed coarse woody debris and therefore small mammals (both negative effects).

Also, we do not interpret the plan as “promot[ing] insects and disease in an otherwise mainly healthy forest.” We do recognize the alternative of allowing some outbreaks to run their natural course, though.

Comment #12.3

Objective 1.9: Regarding “Maintain or improve habitat for priority upland furbearer species (i.e. fisher, marten, and bobcat, “ in this section it mentions research done in the western U.S. using a HSI model “developed for boreal coniferous forests in the western U.S., and may not be entirely suitable for Minnesota.” In the public input focus meetings and in the beginning of the CCMP it is noted to use the “best science available”, this statement would tend to lead management on LUP lands in an implied direction based off research conducted in a totally different geographic area. This section also cites a 2007 USDA Forest Service conclusion of “because fuel loadings are not exceedingly high across Minnesota, possible fire dangers are outweighed by the wildlife habitat benefit provided by Minnesota’s diverse down woody habitats.” We would suggest that since 2007, and more recently since the Pagami Creek Fire; this statement may not be as applicable. Also, in general, this objective would severely limit the active management in spruce/fir types in the forest by calling for a 2 square mile area assessment of winter habitat needs based on the HSI that may not apply in Minnesota.

Response: We recognize the need for local verification of data and information obtained across a broader scale. For example, in addition to the studies of habitat needs for fisher and marten out west, there is both past, present and current research by the Minnesota DNR that supports the need for big denning trees and more coarse woody debris. The need for local verification also applies to levels of fuel loading. Prior to conducting prescribed burns, we assess the amount of fuel loading and plan accordingly in terms of setting goals for the burn and methods employed in implementing the burn.

Comment #17. 1

On pages 140-141 of the draft, the plan calls for managing the timber to allow it to get overmature to help the habitat of martens and other species. Will this affect the number of timber permits for spruce and balsam on LUP lands? Will it affect the size/cords of the permits? Has any consideration been given to the revenue lost by the state and the logger for the rotten timber that is not marketable and the disease and blowdown that will occur when you allow the timber to get too old?

Response: There should be no appreciable impact to the number of timber harvest permits issued, as timber harvest volumes are driven by the Agassiz Lowlands SFRMP as well as market demand. The LUP plan will only impact whether timber harvests are focused more or less on federal lands versus state lands. No revenue goes to the state General Fund from LUP timber sales; it goes into a fund for managing LUP lands. Rotten and diseased timber has value for certain species of wildlife that have evolved to utilize that naturally occurring resource, and leaving timber to age is far more cost-effective than attempting to artificially create it. Older forest stands could be viewed as a long-term investment, whereas young forest stands can be reproduced more readily.

Comment #18.6 and 19.6

Page 141 of the document states, “Before harvesting spruce or fir on LUP lands, assure that there are adequate stands for female marten wintering habitat (based on HSI models ...)...” This would suggest that timber management in these types will only occur if “suitable” habitat exists elsewhere. The plan also suggest using a HSI model to determine suitable habitat. The model cited, however, was developed for the western U.S. coniferous forests. Using this model to determine habitat for marten populations in Minnesota is highly inappropriate.

Response: The information the plan uses to form recommendations for pine marten habitat management came from research studies done in a variety of locations. Martens have similar habitat needs, no matter where they live. There are many similarities and some differences in the results of the research. The HSI (habitat suitability index) is based on the marten’s habitat needs for food and cover. The strategy of assessing habitat availability with a 2 mi² area centered on planned harvests is based on marten home range sizes determined from research in MN. The intention is to maintain sufficient conifer cover to support the minimum needs of a marten home range. Supplemental research studies are planned that may alter this recommendation.

Comment #12.4 and #17.2.

Objective 2.4 states: “Retain coniferous and mixed forests longer (beyond normal harvest age) on the landscape on LUP lands, especially in the Roseau River watershed.” It should be noted again, that older forest conditions in general produce low quality wood fiber that is not desirable in today’s market place. This management direction will cause active vegetation management to be less successful and more costly for the landowner/manager in the future on these sites, along with a substantial loss in harvestable timber from letting these sites get too old. That means revenue for our company and the State of Minnesota.

Response: The landowner is the United States of America and the Executive Order establishing the Beltrami Wildlife Management Area (i.e., the LUP lands) specifies the goal of how the lands are to be managed: for the benefit of native birds and other wildlife, not for economic gain. For these goals, retaining existing forest stands longer is a cost effective method of conserving species adapted to older forests. Older forests need to be viewed as a long term economic investment, whereas younger forests can be more readily created. Passive management using natural forest succession is also management and can be cost effective for managing for certain future forest conditions. Timber harvesting is a tool that can be used to achieve certain wildlife management objectives, and it will be utilized as appropriate.

Comment #18.7 and 19.7

The document emphasizes managing stands well beyond normal rotation ages. For example, page 148, the document states, “Retain coniferous and mixed forests longer (beyond normal harvest age) on the landscape on LUP lands...” The document continues to list a number of species that may benefit from older forests. The need for such old forest policies are not needed in Minnesota. Current harvest rates in the state are approximately 30% of what grows on an annual basis (FIA, 2011). Minnesota’s forests have the highest mortality rates of any forest compared within the Lake States Region. These mortality rates exceed 38% of growth, annually. This data shows that Minnesota’s forests will continue to become older and likely experience higher mortality rates. Policies that perpetuate old forests in an already aging forest landscape should not be developed or implemented. Species that are associated with older forests will likely have substantial habitat as we move towards the future. The question that needs to be addressed in this plan is what role should

LUP lands take on to provide younger forest habitat and reduce forest mortality. In all likelihood, current timber harvest rates will not provide enough habitats for species dependent on young forest conditions, such as golden-winged warbler.

Response: The Agassiz Lowlands SFRMP sets harvest amounts, LUP plan envisions where older forests will be; plan is not creating any more old forest per se. Market demand is also a driving force in the age structure of Minnesota's forests. Recent news article on Minnesota Public Radio reported on mill closings due to lack of demand for certain forest products and from certain locations (Tom Robertson, August 31, 2012).

Many wildlife species, including the majority of forest Species in Greatest Conservation Need, and even golden-winged warblers (Streby et al. 2011, 2012) require older forests habitat for at least a portion of their habitat requirements. DNR Forest Inventory Module (FIM) data shows a preponderance of young forest in the Agassiz lowlands landscape. Harvest rates also vary between ownerships. The most recent Forest Inventory Assessment (FIA) data (U.S. Forest Service 2011, page 34) shows that harvest on state lands exceeds growth rates, harvest on county lands equals growth rates, and harvest on federal and private lands is less than growth rates.

It is important to note that the plan is adaptable, and can reset course for younger forests in the future if needed; younger forests readily created, but older forests are a long term investment that cannot be as readily created.

Comment #12.5

Objective 2.12: Regarding "Thin and treat monotypic red pine plantations on LUP lands with prescribed burns, scallop the edges, and encourage other tree species to convert plantations to uneven aged mixed forest stands. Consider exchanging some red pine plantations on LUP land for other State lands," this management objective goes into further detail, calling for a prescribed burning occurrence of every 3-5 years to facilitate understory diversity. It is not noted in this section of the potential risks associated with prescribed fire in a forested setting (i.e. a prescribed burn that gets away, turning into a costly wildfire), specifically in a pine type that tends to grow on drier-well drained soils. This section also speaks to the interest of Division of Wildlife in exchanging some state lands for red pine plantations on LUP lands. We support this recommendation, and would further recommend to ensure the original intent of the establishment of these plantations is carried out, that the wording be changed to "The Division of Forestry is interested in exchanging for all red pine plantations on LUP lands for other state lands, specifically lands containing white cedar stands that fit numerous other objective targets contained in the CCMP. It also mentions in this section that "plantations are also usually rectangular in shape and lack a natural appearance." Please consider changing this statement or deleting it altogether. The plantations also usually follow the major roads in the Beltrami Island Forest. That is because both the roads and plantations were established on the well drained soils that follow the old beach heads of Lake Agassiz.

Response: Prescribed burns are professionally done, and fires rarely get away, but sometimes they do. Actual frequency of burns will depend on staff availability as well as seasonal and annual conditions (e.g., drought conditions and frequency) and frequency of natural fires. Continued burning of red pine plantations and other specific plant communities is a condition of USFWS' consent to have LUP lands certified as sustainable forests. However, the 3-5 year frequency suggested by Franklin et al. (2007) as an intermediate treatment was specific to longleaf pine stands in the southeastern U.S. We would not conduct an intermediate treatment burn if regeneration was occurring as a result of the initial burn, and

then again not until those trees reach a fire-resistant age. We will delete reference to the 3-5 year burn interval in the final CCMP.

The goal of exchanging all pine plantations has some logical merit, however, there may be situations in which we do not want to exchange pine plantations. For example, some exchanges could lead to creating land-ownership fragmentation in some of the few blocks where LUP lands are actually relatively consolidated, some stands could complement old-growth or old forest management complexes, some stands have been treated to create a diverse understory, and some are in the Red Lake WMA. Because the amount of plantations exchanged will likely be determined by how administratively easy or difficult the exchanges become, we need to be adaptive in how we proceed with the exchanges.

We agree that most plantations are not rectangular in shape, but they do usually have one or more straight edges and the trees are aligned in rows and evenly spaced, creating an unnatural appearance. Scalloping the edges and conducting variable density thinning are intended to recreate a more natural appearance.

Comment #17.3

On page 155 of the draft, Objective 2.12 states: Regarding “Thin and treat monotypic red pine plantations on LUP lands with prescribed burns, scallop the edges, and encourage other tree species to convert plantations to uneven aged mixed forest stands. Consider exchanging some red pine plantations on LUP land for other State lands,” in the rationale it is stated that “Plantations are also usually rectangular in shape and lack a natural appearance.” Whose opinion is this, and why would the plan call for damaging good merchantable timber with a prescribed burn? Later on in the rationale it states: create standing snags and downed course woody debris by killing live trees.” Again, why destroy good timber, when it could be logged and put to some good use. I would encourage the land swap idea but question the wisdom of management practices that are in the plan.

Response: See response to Comment 12.5. The overarching goal for LUP lands is to manage them for wildlife benefits, not for optimal timber production. The 2009 Lease Amendment requires that Ecological Classification System (ECS) – based forest stand prescriptions will be employed to benefit appropriate wildlife species, consistent with maintaining ecological integrity, range of natural variability, and forest ecosystem health concepts. Fire is a natural component of most ecosystems, with historically predictable frequencies. Fire provides diverse ecological benefits as described in the paper by Kronland and Restani (2011). The most recent issue of the Canadian Field Naturalist contained an additional article on the positive effects of fire in increasing the abundance and diversity of plant pollinators (i.e., bees and butterflies; Taylor and Catling 2011). Also, USFWS consent for having LUP forest lands certified as sustainable was premised on several conditions, including using prescribed burns in a variety of habitats including red pine plantations and jack pine harvest sites. Land exchanges will be pursued to trade valuable timber lands for valuable wildlife habitat.

Comment #18.8 and 19.8

We strongly object to the proposed language and actions to treat red pine plantations. These plantations were established back during the 1930’s with the intent to provide timber supply to the U.S. These stands for the most part have been managed in accordance with this intent. Objective 2.12 on page 155 states that red pine plantation will be treated with prescribed burning on a 3-5 year interval, edges scalloped (because they are rectangular in shape) and convert plantations to uneven-aged mixed stands. Again, this objective lacks any economic analysis that would show the costs associated with this type of management as opposed to managing these plantations for timber

products. We recommend that red pine plantations be managed to maximize timber volume and value; this was the intent of the establishment of these plantations. Further, we do not support burning or conversion of red pine plantations. If the LUP plan does not recognize the value of managing red pine plantations we recommend a land exchange with the DNR. Such an exchange would place more emphasis on the management of red pine plantations for timber products, as intended.

Response: Timber harvest will still occur on these lands, and land exchanges are proposed. The 1940 lease between the United States Department of Agriculture and the State did state that “forestry practices shall be of such character as to maintain the forest lands in a productive condition; the lands shall be managed to produce sustained or periodic growths of forest products; utilization practices shall be administered to prevent waste; [and] management practices shall be applied so as to secure the best growth of desirable species ...” It also states that “a planting program consistent with the wildlife and recreational purposes of the project shall be established.” We do not know what precise balance between forest timber products and wildlife benefits the creators of the 1940 lease had in mind. However, the 1942 Executive Order that established the Beltrami Wildlife Management Area supersedes those intentions and clearly placed the emphasis as “a refuge and breeding ground for native birds and other wildlife.” See also responses to Comments 12.5 and 17.3 above regarding management of red pine plantations.

Comment #12.6

Objective 2.13: Maintain natural diversity of all rare and highly-diverse native plant communities. It is suggested in this section that *“black spruce can be difficult to regenerate, and there is evidence that clear-cutting may result in regenerating stands of stunted black spruce, perhaps due to the nutrient-poor conditions already present prior to harvest.”* Please consider the widely implemented silvicultural practice of clear-cutting in black spruce to establish a new stand. Adopting a purely seed tree or shelter wood prescription will result in high volumes of wind throw in the residuals because of the root system and organic soils on these sites. Promoting tamarack to be established, and then succeeding to black spruce will be a long term failure. Please consider aerial seeding of black spruce on sites where forestry personnel feel natural black spruce seeding may be inadequate.

Response: We agree that black spruce stand community dynamics are more nuanced and complicated than we expressed in the draft CCMP. The prescription in the draft plan was based on one Ecological Classification System (ECS) plant community, APN81. Black spruce is a component of nine ECS communities found in or adjacent to the LUP planning area (seven of which produce commercial timber products [FPn63, FPw63, FPn71, FPn81, FPn82, APn80, APn81]; and two stagnant communities [APn90, APn91]). Historically black spruce was a major component of four or five of the pre-settlement ECS communities of commercial quality, but today under modern forestry practices it is a major component of all seven commercial quality ECS communities.

We will modify the statement about black spruce being difficult to regenerate. It regenerates well under modern forestry practices, but in most pre-settlement ECS communities black spruce had fair to good regeneration only in mature stands (exception APn80 where peak regeneration was in the first 55 years). In the seven commercial quality ECS communities, under pre-settlement conditions, black spruce started out (usually) as minor components of communities (except APn80) and increased in dominance as the stand age reached maturity; under modern forestry practices, black spruce starts out as a major component of all seven communities, but in three communities its dominance decreases back to near the same dominance level as in pre-settlement conditions as stands reach maturity.

We will also modify the statement to emphasize that we are concerned about regenerating a black spruce community, not just black spruce trees. We will add to the plan (objective 2.13, next to last strategy) that we will base black spruce stand prescriptions on the ecological classification (ECS) of the individual stand. An ECS approach is actually mandated as part of the 2009 Lease Amendment. We will also add an element to the plan to do a retrospective case study of black spruce community regeneration dynamics.

Comment #17.4

On page 157 of the draft, under Objective 2.13: Regarding “Black spruce can be difficult to regenerate, and there is evidence that clear-cutting may result in regenerating stands of stunted black spruce, perhaps due to the nutrient-poor conditions already present prior to harvest,” whose opinion is this and what evidence supports this? This is not what I have seen in my 40 plus years of logging experience. Black spruce generates very well in a variety of conditions. In the Strategies section on page 158 of the draft, the plan calls for “reserving black spruce stands occurring on ‘raised bogs’ from harvest” and “using harvest methods other than clear cutting such as seed tree or shelterwood methods.” Usually when you leave seed trees out in the open, they blow down within a year, negating the chance for them to see anything. If I understand this correctly, the plan calls for converting a black spruce site to tamarack and then wait 100 years for the spruce to come back. Why convert a good black spruce site that grows merchantable timber to tamarack that is much harder to find a market for?

Response: See response to Comment 12.6 above. Also, regarding the last sentence of the comment, DNR Forestry’s Ecological Land Classification Program Specialist does not know of any black spruce stands that have been harvested, regenerated, and harvested a second time, although there are three stands in the Baudette work area that are second growth and scheduled for harvest. An interdisciplinary team visited one site on August 28, 2012 and found excellent regrowth and a diverse understory. However, aerial photography from 1940 showed that the original stand was near Miller Creek and had a distinct photo-signature from the adjoining stand that was not harvested. Our interpretation was that regenerating stand had a more favorable moisture environment than the rest of the non-harvested stand. Another complex of stands east of Chase’s Creek on the north side of the Rapid River Road that we visited on August 28, 2012 showed some regenerating stands had a diverse understory while others were almost devoid of an herbaceous understory. The DNR Forestry’s Ecological Land Classification Program Specialist has suggested that the type of stand-regenerating disturbance is critical to the community that returns; for example, stand initiation by fire might favor black spruce, mistletoe would favor tamarack, and larch sawfly might create a young stand of pure black spruce (John Almendinger, DNR, personal communication, August 22, 2012).

Comment #12.7

Again, thank you for the opportunity to give feedback on the CCMP. In closing, please consider both the positive and negative aspects of proposed management activities on the LUP lands. Much of the funding for these lands comes from sustainable forest management that involves timber harvesting. Though mentioned as a tool, the emphasis of this plan goes in a direction of older forest with less active forest management (harvesting operations), that would lead to less funding and research in the future. Please consider although not an all-inclusive approach on all sites, timber harvesting has a direct financial benefit back to the management of these lands, as well as the surrounding communities. By using this approach, wildlife benefits for the greatest good can continue to be met,

in a controllable way that does not jeopardize the long term health of the forest and those species found in it.

Response: We agree.

Comment #17.5

In the mission statement for the DNR it states: “and to provide for commercial uses of natural resources in a way that creates a sustainable quality of life.” Why do all of these management plans take away timber harvesting sites and revenue for the logger and state and favor the wildlife or biological by limiting or eliminating sites that can be harvested? Can consideration be given to the livelihoods of the local communities that depend on the jobs logging and the supporting industries create?

Response: The purpose for which the LUP lands were created is stated in Executive Order 9091: “as a refuge and breeding ground for native birds and other wildlife and for research relating to wildlife and associated forest resources...” This does not preclude consideration to the livelihoods of local communities and jobs, but it does dictate what the forest management emphasis will be. Timber harvesting is a tool that can be used to achieve certain wildlife management objectives, and it will be utilized as appropriate. Again, timber harvesting rates are set by the Agassiz Lowlands SFRMP; the LUP CCMP advises the SFRMP on the distribution of the harvest sites.

Comment #18.9 and 19.9

The proposed plan lacks a fiscal or economic analysis of the proposed management alternative. The only area that provides any financial awareness is presented in Goal 5 on page 172 of the plan. This goal states, “Assure that there are sufficient funds in the Beltrami Island Fund to adequately manage LUP lands ...” This section continues to state that no federal appropriations are made available to manage the lands and that income to manage the LUP lands are generated through timber sales. The above paragraphs are a couple of examples of where a comprehensive timber management plan would benefit the management of LUP lands. A timber management plan would allow the coordination and arrangement of timber harvest units across the landscape that would assist to assess wildlife habitat and management. And secondly, since timber income is the sole source to implement management strategies, a timber harvest plan would display revenue that could be generated via timber sales. This revenue in turn could be apportioned to implement management projects on LUP lands. Historically, LUP lands harvested approximately 15,000 cords of timber annually. It is estimated this timber harvest generated more than \$430,000 of revenue and provided a local and regional economic impact of more than \$17 million annually. We recommend that a comprehensive timber harvest plan be developed for the LUP area. The timber harvest plan would identify stands to be managed and associated timber sale revenue generated by timber management actions.

Response: An economic analysis is not necessary; such an analysis would necessarily be subjective and arbitrary anyway, as ecosystem services are inherently difficult to assess. Economics are mentioned in the draft plan other than in relation to Goal 5 (on pages 113 and 123 in relation to the value of ecosystems services provided). Also, a timber management plan already exists for the Agassiz Lowlands landscape of which LUP lands are a part. The SFRMP is a vegetation management plan that includes timber management.

We see the value in a timber harvest management plan for LUP lands if forests were managed under Alternative C, “Manage by Species,” in which management of the federal LUP and the state forest lands

were compartmentalized. It is more difficult to do under Alternative B, "Manage the Landscape," in which state and federal land management is more coordinated, and given our desire to incorporate adaptive management techniques. Nonetheless, we see value in being able to project future forest conditions on LUP lands and future potential income from LUP lands. We do not have sufficient local staff time or skills to accomplish this now, but we will consider seeking LCMR or similar grants to accomplish a timber management plan that accommodates a variable range of outcomes under an adaptive management scenario.

Land Consolidation

Comment #9.3

Our hope is that those land consolidation efforts between the various land management groups will yield some larger LUP parcels that can be developed for those ecotypes where threatened species can be better managed. Old growth forest or sedge meadows would be examples. Could a wolf sanctuary be established within the most remote LUP areas? Can enough acreage be contiguous to designate a federal wilderness area?

Response: Comment noted. Regarding a wolf sanctuary, see response to Comment 11.8. There appears to be enough contiguous acreage in the Rapid River headwaters area to establish a federal wilderness area, however, this cannot be confirmed without Wilderness Area reviews. Unfortunately, initiation of Wilderness Reviews would encumber vast amounts of time from U.S. Department of Interior agency staff, and we are not in a position to encumber other agency's staff time without further consultation.

Comment #10.14

We are excited about and fully support plans to begin Wilderness Area reviews and to create a Scientific and Natural Area in the Bemis Swamp area. Initiation of Wilderness Area reviews should be upgraded to a higher priority project/goal.

Response: Comment noted. Unfortunately, initiation of Wilderness Reviews would encumber vast amounts of time from U.S. Department of Interior agency staff, which we are not in a position to do. Therefore, we will drop initiation of Wilderness Reviews from our list of secondary action items.

Comment #11.10

I strongly support Objective 2.8 (page 151) to manage the Rapid River headwaters area and spring fen channels area south of the Rapid River Road to retain their wilderness characteristics. However, I think this should be taken one step further and an actual federal Wilderness Area Designation should be sought for these areas. This concept was supported by people at the public informational meetings and at the Focus Groups where it was discussed. Both areas are currently roadless so no one's outdoor activities are going to be impacted by these designations. Wilderness Area Designation takes a long range approach to insuring the integrity of this area. We need to do all we can to protect intact headwater areas – there are so few left.

Response: Comment noted, however, we do not intend to pursue an actual Wilderness designation. A true wilderness area has inherent existence; it is not created by an official Wilderness designation. An official Wilderness designation serves to protect and perpetuate an inherent wilderness area, which we propose to accomplish through this plan by managing the area to retain its wilderness values and characteristics.

Comment #11.12

I strongly support the following land trade concepts: 1) trade the LUP land within Hayes Lake State Park for environmentally sensitive land outside the park. Land within the park, while not all managed for recreational use, is more intensively used for recreation than land outside the park and includes horse and snowmobile trails.; 2) acquire sensitive lowland conifer land through trade downhill from Bemis Hill; 3) trade some of the red pine plantations (~ 50%) on LUP land for areas of ecological importance such as areas of designated old growth or lowland conifer.; 4) trade LUP areas that have heavy OHV trail use for land within "Areas of Limitations" where OHVs are not allowed. I do not support any trades that would allow flood impoundments to be restored or built on natural stream flow sites.

Response: We intend to pursue the types of trades suggested. However, it is possible that there would also be land exchanges to facilitate flood reduction projects in the Warroad and Roseau River watersheds.

Comment #11.13

Continue acquiring in-holdings with proceeds from LUP land as mentioned (page 173). Land acquisition should not only be upon request by the USFWS. The MNDNR is far more knowledgeable of the area and landowners and should initiate new LUP land acquisitions as well.

Response: We intend to continue acquiring in-holdings as proceeds or other funding opportunities allow, within the guidelines of the DNR's Land Asset Management program.

Miscellaneous Comments**Comment #1.1, 5.1**

An excellent, readable report; informative and well organized. Very comprehensive and very large undertaking, a lot of work well done.

Response: Comments appreciated.

Comment #1.2

I very much appreciate your use of my material. Please cite my paper in the final draft as: Zager, S.C. 2011. The Natural History of Federal LUP Lands Within The Beltrami Island Area. Unpublished report submitted to Red Lake Wildlife Management Area, Wildlife Division, Minnesota Department of Natural Resources and Agassiz National Wildlife Refuge, U.S. Fish and Wildlife Service, Department of Interior. 148 pages with illustrations.

Response: Comment noted. In order to maintain a consistent style throughout the References section, we will cite your paper as "Zager, S.C. 2011. The natural history of federal LUP lands within the Beltrami Island area. Unpublished report submitted to Red Lake WMA and Agassiz NWR."

Comment #9.4

Beltrami Island State Forest is truly unique and, unfortunately, the majority of our local residents have little or no understanding of what makes this area so special.

Response: Appreciation of a resource is key to preserving it. Objectives 1.1, 3.4, 3.5, and 3.11 were developed to increase both public and scientific appreciation and awareness of LUP lands.

Comment #10.15

We are concerned with the resiliency of our northern forest ecosystems to rising temperatures. Global warming threatens to wipe out many wildlife species. Recently we have seen declines in Minnesota's moose population, possibly due to rising temperatures. The effects of global warming will worsen unless steps are taken to protect and prepare habitats for the effects of climate change. Some climate change is already happening and with it will come extreme weather, drought, loss of food sources and new diseases. It is our responsibility to ensure wildlife have the food, water and range they need to breed and survive. Protecting wildlife habitat not only ensures that we will be able to enjoy our outdoor traditions for years to come—it also helps combat global warming. By keeping our wetlands and forests intact, we help clean carbon pollution from the air and stop the worst impacts of global warming. If we want America's wildlife to survive, we must help them adapt by protecting critical habitat and creating wildlife corridors that will allow for migration as temperatures rise.

Response: Comment noted.

Comment #11.14

Thanks for the opportunity to comment on this management plan. My compliments to you and the leadership team on a document that is well thought out and supported with scientific data. The amount of information located in one place is incredible and will serve current and future MNDNR managers and the USFWS well in providing sound conservation management of the LUP lands. I also want to recognize your public outreach efforts. The general public meetings and the two focus group meetings held at Norris Camp were especially helpful for getting public input.

Response: Comment much appreciated.

Comment #11.15

Regarding management capability, as with all the DNR Wildlife stations in northwest Minnesota, there is a need to fill vacant positions. The staffing levels of 6 positions (5 full time, 1 half time) at Red Lake WMA and 4 (3 full time, 1 half time) at the Baudette Wildlife office should be filled as soon as possible. I think this should be added as an Objective, perhaps under Goal 5, Fiscal Management of LUP lands, which could be changed to Fiscal and Human Management of LUP Lands.

Response: Comment noted. This is beyond the purview of the CCMP, but filling these positions is a requisite part of accomplishing the CCMP. The DNR is moving forward on filling these vacancies.

Comment #11.16

Regarding BELT Funds (page 173), I strongly support an annual meeting of state and federal staff to review annual work plans and budgets. Field managers from Agassiz NWR, Red Lake WMA and Baudette must be included at the annual budget meetings. I think it is appropriate and crucial to the LUP lands that the first order of expenses to be paid from the BELT account is for LUP land research and monitoring projects. Past and recent research and monitoring projects using this funding have had landscape level benefits. This includes the moose research, insect inventories, plant community data collection and mapping, and the spruce grouse research. Cooperative assistance using BELT

funds has also supported other research and monitoring efforts including larch beetle research, the County Biological Survey, the Breeding Bird Atlas, frog and owl surveys, and research on bird use of lowland conifers. It is important that these efforts be continued especially in the face of climate change in order to facilitate management with the environmental changes that will almost certainly be coming. The soil monitoring station mentioned in the plan is an excellent example of important future monitoring. Funding for monitoring and research are critical to fulfilling the Goals and Objectives of this CCMP. Funding for land acquisition should be the second priority. Perhaps a set annual minimum amount of 10% of timber sale proceeds should be set aside each year for this purpose. These funds should be held by the USFWS since this agency completes appraisals and negotiations with landowners. Expenses paid to the Division of Forestry should be paid as the third priority. Forestry expenses should be kept to a minimum by Section of Wildlife staff setting up, designing, and marking out timber sales on LUP land. Forestry should be limited to appraising the timber and writing up and administering the timber sale contract. Operating expenses, including equipment, utilities, and supplies for the Red Lake WMA should not be limited to being paid by BELT funds only. Equipment expenses paid by BELT funds should be limited to when that equipment is being used for LUP land management. All vehicle FLEET charges should not be paid 100% by BELT funds. A common sense approach should be used in equipment sharing between Red Lake WMA and Agassiz National Wildlife Refuge. Equipment sharing should include on-road vehicles as has been done successfully in the past.

Response: The management of BELT Funds is covered under the 2011 Session Law, 1st Special Session, Chapter 2, Art. 4, Sect.5; by DNR Operational Order # 123 "Forest Management Cost Certification on Non-Forestry Administered Land Units"; and by the agreement reached between the DNR and the U.S. Fish and Wildlife Service at a joint meeting on January 30, 2012. However funding for land acquisition is the third priority for funding, not the second. The plan, while not stipulating an annual minimum amount of 10%, does state that remaining balances in the fund will be available for land acquisition when there is funding left after other expenses have been paid as per the above plans dictate. Operating expenses for the Red Lake WMA are not 100% paid by BELT funds. Other funding, such as from the Game and Fish funds, are used and will continue to be used, in addition to BELT Funds, for expenses such as Fleet, salaries, and building maintenance charges. Equipment sharing with Agassiz National Wildlife Refuge has been very successful in the past and will continue to be explored in the future.

Comment #11.17

Management of BELT Funds: In the past the MNDNR has handled proceeds from timber sales, provided an annual budget for approval by USFWS, and expended funds. To ensure the most cost effective management of these funds an administrative review should be conducted to compare costs with USFWS performing this function. If the USFWS charges less administrative fees then the MNDNR then USFWS should hold the funds and pay the MNDNR based on appropriate expenses for managing LUP lands. An annual payment could be made based on approved budget.

Response: This is a good suggestion and one that can be brought up and explored during the annual, required DNR-FWS budget meetings.

Comment #11.18

As I stated in my first paragraph I think the team, and you as the contractor, did a great job gathering an enormous amount of information and reaching out for public input. However, in my opinion the

process was compromised when one group, the Roseau River Watershed District, was given a preview of the 'draft' plan prior to release to the public at large. This type of preview allows for influence (on planners, politicians and public) prior to the general public and other special interest groups having a chance to comment. This is not the way the process is supposed to work – all interests should have an even playing field. In fact, if this plan were to have been reviewed on a National level, as all USFWS comprehensive conservation plans are, conservation groups such as The Wilderness Society and Audubon would have commented as would have groups such as The Humane Society. In the future this type of 'preview' should not be allowed, especially with a group that is very influential with water management. This CCMP is for federally owned lands and should have received national review.

Response: It is important to clarify that the RRWD did not receive an advance copy of the complete plan to review. During focus group meetings in April and May 2011, we offered to consult with any of several varied interest groups present – ATV enthusiasts, loggers, local environmentalists, wildlife biologists, historians – on issues of particular interest to them. Only the Roseau and Warroad WD's requested more discussions of interest to them. Also, it was determined by USFWS staff that a national review was not necessary for coordination lands.

Comment #11.19

Minnesotan's are very fortunate to have such a unique and special area in the State and Nation. The LUP lands, the Beltrami Island State Forest, the WMAs and Tribal lands are truly special and breathtaking in their variety of habitats. While managing an area with multiple and scattered ownerships, jurisdictions, and different missions is complex -- there is great strength in that diversity. I love this area and truly appreciate the opportunity to comment on the CCMP.

Response: Comment noted.

Comment #13.5

MCEA is a Minnesota-based non-profit environmental organization, serving as a legal and scientific voice protecting and preserving Minnesota's wildlife, natural resources and the health of its people. MCEA has a long history of interest and engagement in natural resource management issues in the Red River Basin including serving on the Flood Damage Reduction Work Group and their Technical and Scientific Advisory Committee, completing natural resource assessments for all watershed district plans, and serving on several mediation-based watershed project teams. MCEA appreciates the opportunity to comment on each chapter the Draft LUP CCMP. Chapter 1 of the plan provides an extensive and detailed review of the history of ownership and management of LUP lands. This chapter also includes an extensive review of state, regional, and local plans that have relevance to the LUP lands. The vision statement for these lands is to: "Preserve the headwaters area for the Roseau River, Rapid River, Warroad River, Winter Road River, and Red Lake River in a predominately pristine condition where hydrologic conditions at the top of the watersheds function naturally, where quality timber is produced, and where ecologically healthy native plant and animal communities provide opportunities for recreation and human sustenance." This vision statement is clear and provides a basis for review of the alternatives and objectives presented later in the plan. The review of the plans and other guiding documents builds a strong case that this vision is consistent with regional, state, and local planning efforts related to natural resource management. Chapter 2 details the public involvement process and presents the results of various efforts that the DNR made to gather public input into the plan, particularly at the local level. The range of current uses documented by surveys

and in focus groups suggests that recent management activities are consistent with the vision statement for these lands. Public involvement also revealed some desired uses that are in conflict (e.g. more motorized trails versus fewer motorized). Overall, this Chapter seems complete and provides good information. Chapter 3 provides a comprehensive overview of this area in terms of its ecological, socioeconomic, historical, and land management context and presents detailed information in the wide variety of areas needed to develop this plan (e.g. climate, geology and soils, hydrology and peat, plant communities, peatlands, birds, rare species, keystone species, mammals, furbearers, current management). The information provide in this chapter is well researched and comprehensive. It provides the reader with the information needed to better understand the environmental setting of these lands, their existing condition, and their potential condition in the future based on future management.

Response: Comments much appreciated.

Comment #16.20

Regarding page 155: A concern for county residents is the gating and closing of existing gravel pits.

Response: The need for gating and closing some gravel pits is to remedy the deposition of trash, lead, and shells; preventing the spread of exotic invasive species, and stopping destruction of vegetation. Some gravel pits may be exchanged with the State and not be subject to the provisions of the LUP plan. Others can be remediated without gating them. Ultimately, however, they must be managed in a manner that provides wildlife benefits as prescribed in Executive Order 9091.

Comment #16.21

Thank you for the opportunity to comment on the Draft Beltrami Island Land Utilization Project Comprehensive Conservation Management Plan. The Roseau River Watershed District Board of Managers, Warroad River Watershed District Board of Managers, Roseau County Board of Commissioners and the City of Roseau offer the following comments on the Draft Plan. The LGU's are presenting a unified position regarding water and natural resource management. These comments should not be received as a few individuals' opinions; instead they represent the concerns of thousands of affected citizens we represent. That is how a representative democracy works.

Response: Comment noted.