

Minnesota Department of Natural Resources  
NE Region 2 – NE Regional Director  
1201 East Highway 2, Grand Rapids, MN 55744

**May 28, 2020**

Constance Cummins - Forest Supervisor,  
C/O: Michael Jiménez, Project Leader,  
USDA – US Forest Service  
Superior National Forest, Tofte Ranger District  
8901 Grand Avenue Place  
Duluth, MN 55808  
Phone: 218-626-4382; email: comments-eastern-superior@usda.gov

**RE: Scoping EIS Lutsen Mountains Ski Area Expansion Project** -Agency Comments and Recommendations

Dear Constance Cummins,

The Minnesota Department of Natural Resources (MN DNR) has conducted a review of the **Scoping EIS Lutsen Mountains Ski Area Expansion Project** information provided by the US Forest Service. This letter provides our preliminary comments on the Lutsen Ski Resort proposed expansion. Once the full project proposal with details is submitted, we will be able to provide more specific comments.

We thank you for the opportunity to comment on this project. We hope that our comments help to minimize potential impacts to the state's natural resources, and encourage continued outreach and coordination as the Lutsen Project proposal moves forward.

We encourage the project to consider all of the past and current comments and information. We also hope that developers will consult this information during the planning process to minimize potential impacts to natural resources like vegetation, fish, wildlife, and forest habitat resources.

## **Specific Project Related Topics**

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### **Permits**

A private entity conducting work on federally managed lands in Minnesota, including the USFS, will need to work with the MN DNR to obtain the necessary permits. Additionally, we encourage the project managers to consult the US Army Corps of Engineers, Board of Water and Soil Resources (BWSR) and Cook County to ensure that all needed permits are obtained from those entities as well. Please note that Rare NPCs (Native Plant Communities) are mapped within the boundary of the project and these may require special consideration related to wetland permitting (see NHIS section below).

### Public Waters Work Permit

Public Waters Work permits may be required for proposed stream crossings. Lutsen Mountains, Inc. will be responsible for submitting applications through the MN DNR MPARS online permitting system (<https://www.dnr.state.mn.us/mpars/index.html>) for permanent trail crossings of MN public watercourses.

### Water Appropriation Permits

Currently, the Poplar River Watershed Management District, which supplies Lutsen Ski Resort with water, is permitted to appropriate 10 million gallons per year (MGY) from Lake Superior for domestic use and 400 MGY from Lake Superior for Snow/Ice Making. Lutsen Mountains Corporation, the acting agent for the Poplar River Watershed Management District, will need to request a permit amendment if the development increases the water supply needs over 400 MGY or 10 MGY per use type, or if any additional use types will be needed. Based on the information provided, the expansion will involve an increased area for snow making and the project website calls for around 13,000,000 gallons per year of additional water for snow making.

Additionally, if dewatering of the work area is needed during the project, or if water use is needed for any construction activity, such as dewatering for building foundations or dust control on road expansions, a separate temporary appropriation permit may be needed if appropriation of surface or groundwater exceeds 10,000 gal/day or one million gal/year.

### Air Quality

Air quality has been documented to be negatively impacted by activities related directly and indirectly to Ski Resorts such as snow machines, chair lifts, and vehicle emissions from visitors. Air quality can impact the ecological and organismal health of vegetation, fish, and wildlife. We suggest working with the Minnesota Pollution Control Agency to establish existing air quality and work with them to find ways to reduce emissions for the expanded plan taking climate change into consideration in those efforts.

<https://www.pca.state.mn.us/quick-links/pollution-prevention>

### Water Quality

#### Aquatic/Fish

Protection of water quality and ecological integrity is our primary focus for Rollins Creek and the first and higher order streams on Moose Mountain. De-vegetation, artificial snow creation and other factors can have direct and indirect impacts to area streams. Rollins Creek is a designated trout stream, known to support small steelhead (rainbow trout) that run in its extreme lower reaches below a barrier falls, just above Lake Superior. Although it is unknown if a resident trout population is supported in its upper reaches (only limited data exist), upper reaches are important as a source of clean, cold water to support fish using the lower reach.

De-vegetation and alterations resulting in open lands on the ski hills or runs developed on the steep north-facing slopes above the stream can increase runoff and erosion. Control of erosion and run-off on the steep slopes found on the north side of Moose Mountain would be extremely difficult, since those slopes are laid out to go vertically down the face of the slope. The heavy use, compaction over time, and lack of soil retention coupled with increased snow amounts on exposed areas will increase rill erosion, soil mobility, and sediment transport via erosion to the stream. This can negatively impact water quality, stream hydrology, and ecological integrity. These factors will likely result in increased peak flows in Rollins Creek, causing channel changes, bank erosion downstream, and adversely affecting habitat for steelhead and other resident fish species that exist in the stream. The upper reach of Rollins Creek may be particularly vulnerable to siltation, since gradient there

appears to be low and beaver activity is present. In-stream silt can be trapped in beaver impoundments, degrading the quality of those habitats, and creating a bank of sediment to be released when the dams fail. Potential impacts from adding a large amount of artificially produced snow cover, and subsequent run-off, to the creek's upper reaches include a change in stream hydrology, with related changes to the stream channel, including increased channel and bank erosion due to higher flow volumes in the spring. Planned runs on the Moose Mountain portion of the project lie on a steep slope, and would end at the edge of the extensive, high-quality wetland that is the source of flows in Rollins Creek. This wetland serves a critical role in the ecology and support a wide variety of wetland-dependent wildlife and plant communities.

Excess sediment can destabilize streams, impact aquatic habitat, and directly impact aquatic organisms, which can decrease the overall aquatic ecological health/integrity. Increased sedimentation can contribute to phosphorus loading to Lake Superior.

Continued efforts to address the adverse effects on the Poplar River are encouraged and similar impacts to Rollins Creek should be prevented. There are other examples along the North Shore where vegetation and land use changes on the ridge have had significant effects on hydrology, damaging both the natural environment and infrastructure. It is recommended that you work with MN DNR staff such as Hydrologists, Fisheries staff, and our Regional Clean Water Legacy Specialist to develop best management plans (BMPs) for addressing these concerns. Some suggestions of BMPs are: direct flow into the wooded areas using slash and native vegetation buffers to help reduce rill erosion and increase infiltration (difficult with frozen ground); leave natural woody diverse vegetative buffers along the streams; avoid any work near stream banks and on the flood plains where spring high water and flooding can compromise erosion retention efforts and exacerbate erosion; and ensure erosion prevention is used during all project stages of development and for the life of the project area. MESBOAC guidelines for stream crossings should be followed for intermittent channels when hydrology is likely to be altered in a sensitive system like a trout stream.

The proposed expansion will increase the amount of artificial snow creation, thereby increasing the volume of spring snowmelt runoff above historical amounts. Effects will be variable and hard to predict without sophisticated hydrologic modeling. Temporal and spatial variables will determine the potential impacts to the Poplar River, the most likely being increased erosion and stream instability due to increased flow rates and volumes.

### **Habitat Loss / Fragmentation**

Minimizing habitat loss and fragmentation is important to reduce the impact on species that depend on larger areas of woodlands such as white-tailed deer, moose, bobcat, lynx, fisher, marten, and amphibian and bird species. Habitat clearing and fragmentation can reduce critical habitat for furbearer species such as fisher and marten that depend on continuous forest, particularly older timber stands, for hunting in trees. These species also use hollow trees, rock crevices and other such places for denning and they usually avoid open areas to evade predation. Altered fragmented habitats can shift the density and distribution of competitive species such as increasing habitat for coyotes or other species. Cedar and conifer trees also provide thermal cover for many animals and are critical for white-tailed deer and moose. Bobcat and lynx are also known to be associated with this habitat type. Avoiding older stands of aspen and hardwoods, and conifer (cedar) stands will help reduce impacts on many of these species.

## State Trails

It appears that this Lutsen Mountains expansion plan will not impact any Grant-in-Aid Snowmobile trails or the Gitchi-Gami State Trail in this area. This plan may impact the Superior Hiking Trail. We suggest reaching out to the Superior Hiking Trail Association.

## Non-game and NHIS

The DNR has provided an extensive **NHIS review letter** of this project. Please reference the NHIS information for detailed information on rare resources such as native plant communities and state-listed species. Please note the Rare NPCs mapped within the boundary are FDn43c (Upland White Cedar Forest - S3) and MHn45c (Sugar Maple Forest [North Shore] – S3). These may have implications for WCA applications and we ask that they be considered in the USACE 404 applications. We suggest working with MN DNR to determine whether any rare species populations would be impacted by the proposal.

## Habitat and forest fragmentation

The North Shore Highlands is characterized by a comparatively large unbroken forested habitat composed of high-quality native plant communities, habitats and rare species occurrences, and also serves as a continentally significant bird migration corridor. The existing Lutsen Mountain Resort and associated developments have resulted in large fragmentations of these native habitats and forests. The proposed intensive development of additional acres will increase fragmentation and further impact the ecology and biology of the area.

As documented in the NHIS letter, Upland white cedar (FDn43c) forests are considered by the state to be “vulnerable to extirpation”. In the North Shore area FDn43c has been significantly reduced since the late 19th century and is a focus of public and private restoration efforts begun more than a decade ago. Further loss or degradation to the remnants of upland cedar forest will cause loss of critical habitat, may increase the likelihood for extirpation and conflicts with restoration efforts. In addition to direct impacts resulting from cutting/clearing and prolonged use, indirect effects also may result to both communities from upslope changes which impact hydrology. It is requested that the USFS consider potential impacts to the lowland cedar forest in the headwaters of Rollins Creek resulting from changes to the vegetation on the slope above; e.g. edge effects, loss of interior forest, increased beaver flooding.

The impacts from changes in the skiing areas, such as loss of forest canopy cover and loss or changes to understory vegetation are concerns. Because they are interconnected, altering either of these can result in a decrease and change in the other. Canopy cover loss reduces habitat availability, alters local micro-climates resulting in changes to species compositions and interactions of the entire forest system. Canopy cover retention is optimal; however, please note that the potential impacts of the project to understory composition and structure will need to be identified to consider the full range of potential impacts to the system.

Please provide information resulting from rare plant and non-game surveys in the proposal. Please reference the NHIS review letter to ensure all state species are captured.

## Scientific Natural Area

The project is directly adjacent to Lutsen Scientific and Natural Area (SNA). Please coordinate with MN DNR SNA staff on the boundary location to avoid encroachment, ensure compliance, and minimize potential impacts. We recommend ensuring a clear depiction of this SNA on all maps. It is requested that you work with MN DNR staff to address potential direct and indirect impacts to SNAs from all stages of the project development and use over time, including: rare species habitat, old-forest fragmentation, native plant communities, erosion, and

hydrology. Please note the 'Poplar Agnes' and 'Onion River Hardwoods' are sites of Biodiversity Significance ranked as having Outstanding Statewide Biodiversity Significance.

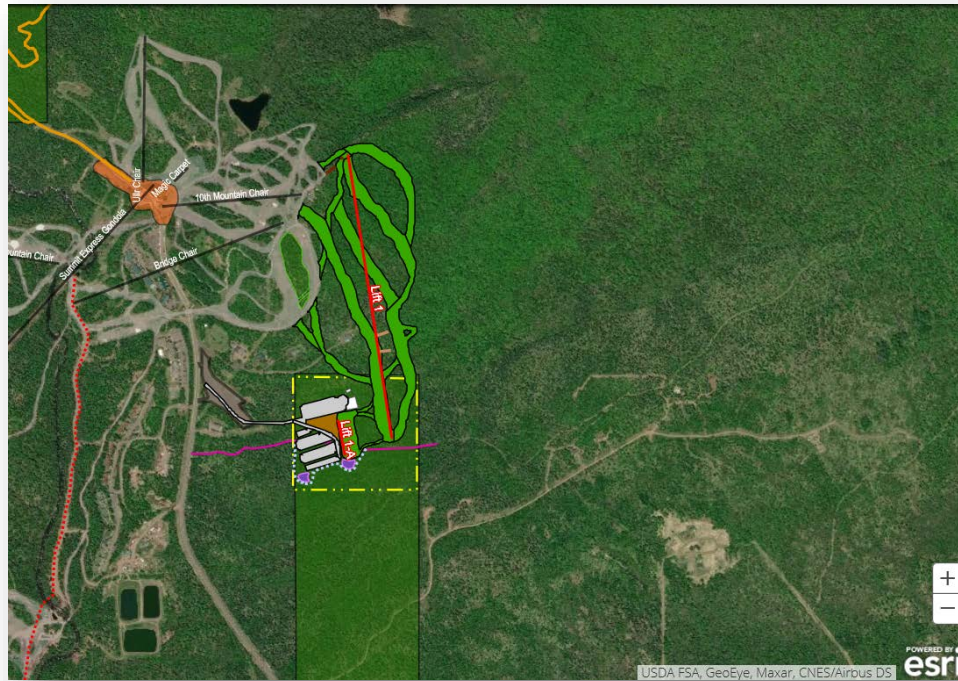


Figure 1. Lutsen Project Map.

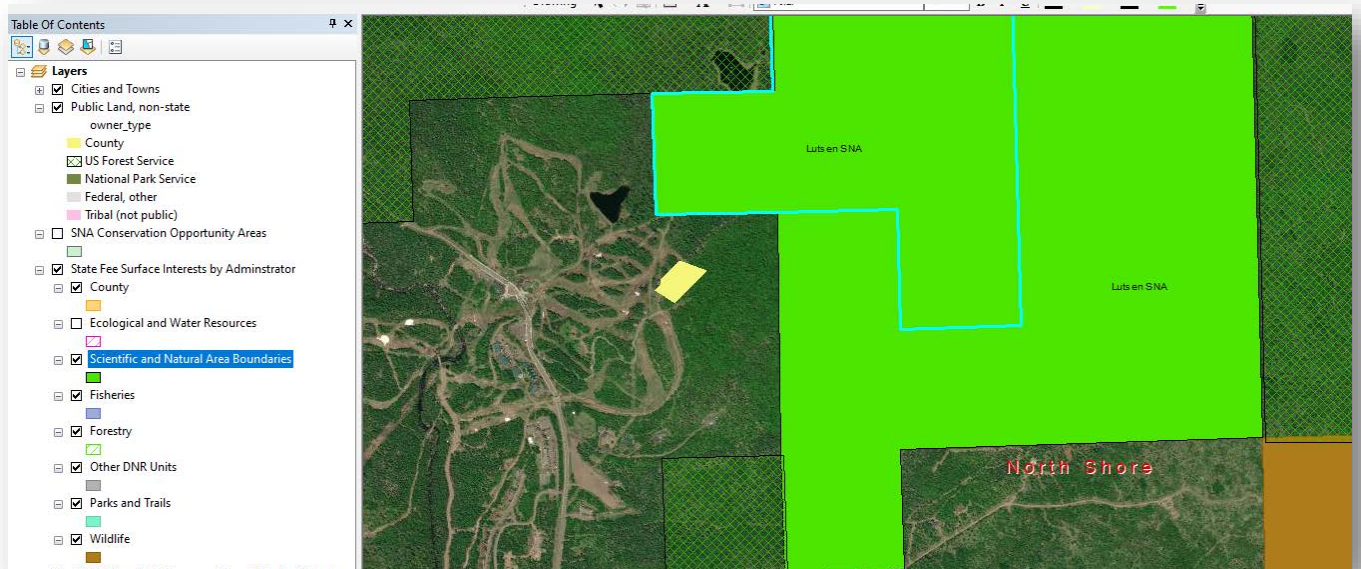


Figure 2. The Lutsen Project (Figure 1) in relationship to the boundaries of the Lutsen Scientific and Natural Area (SNA)

### Climate and Cumulative Effects

Please consider cumulative impacts of all phases of the expansion of the project and potential impacts related to climate.

Thank you for the opportunity to review the document. We look forward to receiving responses to our comments. Please contact MN DNR Regional Environmental Assessment Ecologist, Margi Coyle with any questions. Margi can be reached at (218) 328-8826 or [margi.coyle@state.mn.us](mailto:margi.coyle@state.mn.us).

### Citation:

1. The Effects of Ski Resorts in the Lake Tahoe Region of California on Population Dynamics of the American Marten. [https://www.fs.fed.us/psw/partnerships/tahoescience/documents/p022\\_SlausonProposalRedacted.pdf](https://www.fs.fed.us/psw/partnerships/tahoescience/documents/p022_SlausonProposalRedacted.pdf)

Sincerely,

Patty Thielen  
NE Regional Director, MN DNR

CC:

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