MINNESOTA POLLUTION CONTROL AGENCY

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May 26, 2020

Constance Cummins, Forest Supervisor
c/o Michael Jiménez, Project Leader
Superior National Forest
8901 Grand Avenue Place
Duluth, MN 55808

Re: Lutsen Mountain Ski Area Expansion Scoping Document

Dear Constance Cummins:

Thank you for the opportunity to review and comment on the Environmental Impact Statement (EIS) Scoping Letter for the Lutsen Mountain Ski Area Expansion project (Project) in St. Louis County, Minnesota. The Project consists of an expansion of the existing ski area. Regarding matters for which the Minnesota Pollution Control Agency (MPCA) has regulatory responsibility or other interests, the MPCA staff has the following comments for your consideration.

General Description:
The proposed Project is located in the larger geographic area of Hydrologic Unit Code area (HUC-10) #0401010107 Poplar River watershed. This area includes the drainages of the Poplar River, Onion River, Rollins Creek and other frontal unnamed tributaries to Lake Superior. Much of the proposed expansion appears to impact Rollins Creek, possibly Onion River and some of the frontal tributary watersheds. An important element of the proposed EIS would be to provide more precise maps that include hydrologic features and better define possible impact areas.

Land Use
The Scoping Letter language suggests only winter use, but the expansion documents reference year round activities. The EIS should explore the full operational activity and impacts, including cumulative impact and the best practicable estimates of build-out and operations. Planned or potential future developments like hotels/condos, etc. should be discussed in the EIS. Appropriate estimates of impact should be provided (for example, number of new wells drilled for service, pumps and utility lines laid for expanded snowmaking services, width and distance of these corridor impacts and servicing these areas, etc.).

The Project encompasses a large land area, 495 acres, and currently appears to be fully forested. The Poplar River Total Maximum Daily Load (TMDL) report investigated ski run design and ski run management and its role in stormwater runoff and management. The EIS should provide comments on "lessons learned" from the TMDL investigative process. Given the steep slopes, shallow bedrock and marginal soils, any disturbance requires enhanced efforts and methods to minimize erosion and stabilize disturbed areas. Best management practices (BMPs) to reduce impervious surfaces, maintain soil health, incorporate vegetated matter from tree clearance or other enhanced practices should be discussed. Poplar River reports are located at: https://www.pca.state.mn.us/water/tmdl/poplar-river-turbidity-tmdl-project

Water Quality: Flows and Hydrology
The Minnesota Pollution Control Agency, Minnesota Department of Natural Resources, and local water resource partners conducted water quality and biological health monitoring and assessment in this watershed during the years 2013-15. Overall, results indicate high scores for biological life and water quality parameters. Many streams support cold water life, but may experience summer temperature stress.

For these reasons, it is essential to maintain a significant degree of landscape protection, which will aid in protecting localized groundwater inputs and maintain well-vegetated riparian cover along all waterways and tributaries. Some of these features and waterway locations serve as thermal refuges for aquatic life when stressful periods occur. Connectivity and protection of these resources is critical to maintaining these high quality water resources. The EIS should examine impacts to the full spectrum of water resources, as surface and groundwater play important inter-connected roles. The MPCA reports pertaining to these watersheds are located at: https://www.pca.state.mn.us/water/watersheds/lake-superior-north.

Water Quality: Surface Water Runoff
The scoping process is an opportunity to think about potential secondary effects that an increased use of water for snowmaking may have on ski slope soil erosion with regard to cumulative effects and how those effects might be mitigated. Potential effects to all ski run acreages should be considered. The following is a short discussion of cumulative concerns specific to erosion on the slopes. For more detailed information, see the Poplar River TMDL documents.

Snowmaking will place additional artificial snow on the runs. This snow has been described to melt more slowly relative to that of natural snow. The description suggests a large melting pool may occur saturating the same area on a slope for a longer period of time. If that location of longer melt is a weaker area, for example, thin, fine soils close to bedrock, compacted soils, compacted subsoils, or a higher perched water table in that particular area, or in some other way geotechnically compromised, the site is more sensitive and could respond with some type of erosive failure.

In addition, higher potential runoff from saturation or pooling leads to increased potential sheet, rill and gully erosion. Saturation of the soil profile above shallow bedrock on steep slopes will lead to increased potential for mass wasting.

Locations of artificial snow application, the conditions of the soil and perched water table beneath those areas, routine assessment of the slope conditions and vegetated cover, installation and operation of special BMPs to manage for artificial snow runoff, are important in understanding how erosion may occur on the steep ski slopes. A process to evaluate snowmaking impacts (erosion/soil loss/sediment delivery) should be described and implemented along with appropriate responses to mitigate any negative impacts. A pro-active operation and maintenance plan geared toward prevention of any further erosion and potential surface sediment runoff should be discussed.

Onion River Watershed characteristics
The Project appears to extend to the eastern area of the Onion River watershed. It is difficult to determine what area of the Onion River watershed may be impacted. The following information is provided for review and potential evaluation. The Onion River watershed is a nine square mile area located west of the Poplar River drainage. It is characterized by limited development, is largely forested, with some recreational trails. One definable road, the Onion River Road, provides access into the upland areas of the watershed. Overall, the Onion River watershed exhibits excellent water quality, with low concentrations of bacteria, nutrients, sediment, and ions. Mean total suspended solids numbers were 1.5 milligrams per liter (mg/L), total phosphorus was 16 parts per billion (ppb), and E.Coli geometric mean was 13 colony forming units (cfu). These are low numbers compared to more developed watersheds. MPCA reports recommend protecting baseflows for the Onion River and also providing

continued shading for streams and tributaries. The EIS document should discuss how this protection will continue, given the large forest impact intended for final proposed build-out scenarios, ski runs, lifts, utilities and road network. The EIS should also describe efforts/measures to be taken to mitigate those impacts.

Rollins Creek watershed characteristics
The Project will impact the Rollins Creek watershed. While a small stream, Rollins Creek is valuable for its cold-water conditions. It is a stream with very cold temperatures, adequate year round flows, and dissolved oxygen concentrations in the lower reaches of the watershed. The stream profile is steep. There are few perennial tributaries and some natural barriers to fish movement. The headwaters of Rollins Creek is a beautiful forested area and includes large, old-growth white cedar trees, floating bogs, and crystal clear water. There may be some dissolved oxygen limitations for trout in portions of the stream. This needs confirmation via additional stream monitoring. A wetland plant survey should be completed prior to any area development. Plants and stream invertebrates may be better indicators to detect change in the upper reaches. The riparian corridor is exceptional with many large trees and should be protected.

Ski lifts 4, 5, and 6 appear to be located on the north side of the ridgeline within the Rollins Creek watershed, along with proposed Road #6. Proposed Road #5 appears to also be on the ridgeline (the watershed divide between Rollins Creek and other drainages). From recent efforts to improve the Poplar River watershed, we have learned the importance of roads as conduits of stormwater and potential flow pathways of excess sediment to nearby streams and wetlands. The EIS should provide adequate information to understand the sensitivity of the proposed road areas to erosion and sediment loss, as well as the design elements that will result in zero sediment impact to water resources. Maintaining vegetation for shade and enhancing conditions that contribute to coldwater inputs is required management to protect the stream qualities.

Permits and approvals
The proposed Project may also trigger state environmental review due to the scope of the project and/or proposed activities. The review process should discuss this and define how follow-up activities will be completed or ensured, if needed. Also, there may be an opportunity to coordinate state and federal environmental review processes.

Wastewater review, design and permits
The EIS should indicate the findings and process that will occur to provide for satisfactory sewage management.

Wetland impacts
Potential impacts to wetlands should be discussed thoroughly. A cursory review using the National Wetlands Inventory Wetlands Mapper online tool (U.S. Fish and Wildlife Service) identifies wetlands within the Project area, mainly surrounding Rollins Creek. With additional field investigation, it is likely there may be pocket wetlands along the hillslope and Rollins Creek tributaries/drainages. As noted above in the watershed discussion, these are important resources for maintaining baseflows and aquatic refuges during thermal stress events. The EIS should explore the full range of avoiding, minimizing and mitigating impacts to all wetlands.

Stormwater
The Project will need an National Pollutant Discharge Elimination System/State Disposal System (NPDES/SDS) General Construction Stormwater permit (CSW Permit) from the MPCA for the land disturbance, including tree removal areas, grading and construction of new access roads and any other land disturbance areas. The EIS should discuss stormwater BMPs which will be used both during construction, to prevent sediment discharges, and post construction to retain stormwater, preferably via infiltration, from the new impervious areas as required in the CSW Permit. A Stormwater Pollution

Prevention Plan (SWPPP) will need to be prepared that describes stormwater BMPs used on the Project. The needed utilities and their installation can also cause erosion and drainage issues. New roads may result in channelizing and concentration sheet flows from the hillslopes. A careful assessment of the locations for these projects is important as the area also suffers from geotechnical instability. Within the existing development, one area is required to pump and manage thousands of gallons of subsurface groundwater to maintain building and road stability. If the Project will disturb 50 or more acres and the site has the ability to discharge to an impaired water, the SWPPP will require review and approval by the MPCA prior to obtaining CSW Permit coverage.

Noise
The EIS should address how each proposed component of this Project would impact noise in the area of Lutsen Mountain, although the impact for each is of differing duration and intensity. The following comments are made based on the Minnesota state noise standards in Minn. R. ch. 7030.

Construction noise
Several of the proposed components of this Project include the construction of new buildings, as well as other physical changes to the landscape during clearing and grading of new runs, roads, and parking areas. In order to minimize the impact of this noise on nearby land uses (hiking trails or resorts, for example), all equipment used - including construction equipment and forest-clearing equipment - should be muffled, as appropriate. The MPCA also recommends that, to the extent practical, the construction work take place during daytime hours (7:00 am to 10:00 pm).

Operational noise
The proposed addition of new ski routes, parking areas, and guest services would increase the amount of noise generated by the guests and operators at Lutsen. Although we don't have any specific concerns regarding noise at this time, we'd recommend that Lutsen and the U.S. Fish and Wildlife Service consider these long-term impacts of additional use on nearby hiking trails, camping areas (if applicable), resorts, or other lodging. In particular, we would recommend attention be paid to noise coming from snowmaking equipment and re-routed snowmobile trails.

We appreciate the opportunity to review this Project. Please be aware that this letter does not constitute approval by the MPCA of any or all elements of the Project for the purpose of pending or future permit action(s) by the MPCA. Ultimately, it is the responsibility of the Project proposer to secure any required permits and to comply with any requisite permit conditions. If you have any questions concerning our review of this Scoping Document, please contact me by email at Karen.kromar@state.mn.us or by telephone at 651-757-2508.

Sincerely,

Karen Kromar

Karen Kromar
Project Manager
Environmental Review Unit
Resource Management and Assistance Division

KK:bt

cc: Dan Card, MPCA, St. Paul
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