



March 15, 2020

Tammy Randall-Parker, Forest Supervisor
c/o Janelle Walker, Project Leader
Mammoth Ranger District
PO Box 148
Mammoth Lakes, CA 93546

Submitted via: <https://cara.ecosystem-management.org/Public/CommentInput?Project=54453>

Re: Woolly's Adventure Summit Summer Uses Project and Mammoth Mountain Snowmaking Project #54453

Dear Forest Supervisor Randall-Parker,

Friends of the Inyo (FOI) respectfully submits the following comments on the Woolly's Adventure Summit Summer Uses and Mammoth Mountain Snowmaking Projects. We are a grassroots nonprofit conservation organization based in Bishop, California, dedicated to the stewardship, exploration and preservation of the Eastern Sierra's public lands and wildlife. Over a 30-year history, FOI has become an active partner with federal land management agencies, was an essential stakeholder in the Land Management Plan revision and provides comments on many Inyo National Forest projects.

Expansion of Snowmaking

On behalf of our members and supporters, we have some concerns about the adequacy of the Environmental Assessment (EA) and impacts to groundwater and water quality as they relate to expanded snowmaking by Mammoth Mountain Ski Area (MMSA) and wildlife impacts regarding new activities at Woolly's Adventure Summit.

The EA neither presents nor analyzes data to support MMSA's claims of groundwater extraction to support additional snowmaking. Further the EA does not address how the USFS would monitor and limit groundwater pumping to fulfill its legal obligations as land manager. A rapidly changing world will bring more periods of drought and light snowpack years in our future, so such conditions should be monitored and analyzed post-construction into the foreseeable future.

Snowmaking has become an essential operation in the Mammoth Mountain ski operation to open terrain and lifts for skiing in the early part of the season and to augment the snow cover later in the

season during lean years. Water for snowmaking at Mammoth comes from pumped groundwater, which is stored in a reservoir near McCoy Station, which houses the transition from the Lower to Upper Panorama Gondolas. The main hydrological impact to be considered is the effect of the withdrawal and recharge of groundwater on the associated drainage basins. FOI does not assert that significant impacts will occur but argues that the possibility must be considered, monitored, and possibly mitigated.

Historically, snowmaking at Mammoth has occurred mainly in the parts of the mountain that drain into the Dry Creek Basin. The proposed expansion of snowmaking would add areas that drain into the Mammoth Creek Basin. The two new proposed wells are in the Dry Creek Basin. The Mammoth Community Water District already withdraws about 3000 acre-feet of water annually from wells in the Dry Creek Basin. All of this water is used in the Mammoth Creek Basin, hence it comprises a consumptive loss to the groundwater in the Dry Creek Basin that exceeds current and likely future consumptive losses of groundwater from snowmaking.

Potential hydrological impacts lie in the consumptive loss of water from snowmaking. Therefore, a strategy and plan for monitoring and analysis, starting with currently available data and continuing through the foreseeable future, should be required for the approval of this project. The project document states, “[The] California Ski Industry Association (CSIA) and the Forest Service generally consider snowmaking water use to be at least 80 percent non-consumptive . . . [so] additional water withdrawals for snowmaking are not expected to negatively impact the aquifer volume, or associated spring and groundwater dependent ecosystems in the Dry Creek drainage.” Current empirical and theoretical evidence do not contradict this statement, but in this location in the Sierra Nevada with the current and future projections of the state of the hydrology and climate, monitoring the situation would either dispel concerns or call for mitigating actions should unanticipated effects materialize.

Questions about current and future rates of sublimation over a range of years can be answered based on data available from the CRREL/UCSB snow study site on the knoll above McCoy Station and the ski patrol study site off the Sesame Street run. The data from these two sites have already been curated and published in a form ready for inputs into a snow energy balance model, and the sublimation calculations can be verified with the network of snow lysimeters at the CRREL/UCSB site. Expertise is available locally to analyze the recent half-decade that has included the driest year in the period of record and two other years among the wettest. The same models, once validated, can be run for future climates, and the data collection infrastructure is already available and supported to continue.

Future monitoring of water use in specific areas along with sampling of the snowpack will be critical in understanding sublimation of snow during snowmaking. Through a pilot program or conditional permit, sublimation could be mitigated, for example by not making snow at high wind speeds.

In addition to groundwater, the permit should require water quality tests from all the wells on its property and at Big Springs to monitor how much salt used on the runs is seeping into the groundwater. A USGS study of the tributaries to the San Joaquin River and springs within Devils Postpile National Monument states that MMSA applies an average of 120,000 lbs/yr of salt to the ski area. That USGS study identified salt in the Upper Dry Creek groundwater along with emerging contaminants e.g. caffeine, sunscreen chemicals, DEET¹. The USGS report recommends a monitoring

¹ <https://pubs.usgs.gov/sir/2017/5048/sir20175048.pdf>

program that FOI supports—regular sampling of stream chemistry and installation of observation wells to measure groundwater levels and quality; these activities are recommended to document all aspects of MMSA’s management of the snowpack, not confined to snowmaking.

Expansion of Footprint and Activities at Woolly’s Tube Park

Numerous wildlife species such as small mammals, bear, deer, bobcat and coyote utilize the proposed recreational area. The expansion of these recreational activities through Woolly’s Adventure Summit and into previously unutilized areas of the ski permit boundary (see appendix A) could have potential wildlife impacts. The EA fails to include design features and a thorough analysis of biological resources across all seasons. At a minimum wildlife mitigations and monitoring should be included in any permit stipulations and the feasibility of wildlife corridor crossings should be studied and considered.

Thank you for the opportunity to comment on this proposed action. In summary, the permit stipulations and post-construction activities should include requirements for groundwater, water quality and wildlife monitoring in addition to design features to mitigate any future negative environmental impacts. Friends of the Inyo looks forward to reviewing future documents related to this proposal and continuing to work with the Inyo National Forest.

Sincerely,



Executive Director
Friends of the Inyo



Jeff Dozier
Board Member
Friends of the Inyo