UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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MAY 01 2017

Ref: 8EPR-N

Scott Fitzwilliams, Forest Supervisor
c/o Max Forgensi, Mountain Sports/Special Uses Administrator
White River National Forest
P.O. Box 190
Minturn, CO 81645

Re: Scoping Comments for Golden Peak Improvements Project

Dear Supervisor Fitzwilliams:

The U.S. Environmental Protection Agency Region 8 has reviewed the U.S. Department of Agriculture Forest Service (USFS) notice of intent (NOI) to prepare an Environmental Impact Statement (EIS) for the Vail Ski Resort (Vail) proposed Golden Peak Improvements Project within its USFS-administered Special Use Permit (SUP) area. The USFS White River National Forest (WRNF) intends to analyze and disclose the potential environmental impacts that may be associated with the proposed action. The EPA provides these comments to assist with development of the USFS's EIS and in accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA).

Background

Supplemental information provided in the USFS's scoping letter notes that improvements to Vail's Golden Peak were originally analyzed in a 2009 EIS, but were not approved in the Record of Decision due to concerns with stream health, soil stability, and sedimentation. Subsequently, Vail and the USFS collaborated on the development and implementation of a drainage management plan and slope stability analysis. Following this effort, Vail has proposed a modified version of the proposed project.

Key Topics the EPA Recommends Be Addressed During the NEPA Process

Based on our current understanding of the proposed project and the area, the EPA is providing scoping comments and recommendations related to the following key topics: 1) baseline environmental conditions; 2) potential impacts to water resources, including wetlands; and 3) potential impacts to air quality. Our detailed recommendations are provided for your consideration in the enclosure.

Note that the EPA's primary concern is potential impacts to wetlands and waters of the U.S. resulting

from the considerable earth work associated with construction and installation of the proposed projects. Therefore, we recommend that the environmental review and alternatives analysis meet the requirements of both NEPA and Section 404 of the Clean Water Act (CWA).

Closing

We appreciate the opportunity to provide comments at this early stage of the NEPA process. Thank you for considering our input. If we may provide further explanation of our comments, please contact staff member Amy Platt at (303) 312-6449. For questions related to the CWA and wetlands, please contact Sarah Fowler, Wetlands Program, at (303) 312-6192. I can be reached at (303) 312-6704.

Sincerely,

Philip S. Strobel
Director, NEPA Compliance and Review Program
Office of Ecosystems Protection and Remediation

Enclosure

cc: John Duggan, Colorado Department of Public Health and Environment
Zach Hope, Colorado Department of Labor and Employment

ENCLOSURE

The EPA's May 1, 2017 Detailed Scoping Comments for the Golden Peak Improvements Project EIS

Vail has identified the need to: (1) develop racing and training terrain that meets international racing standards for women's Downhill and men's Super G courses, a moguls course, and skier cross course to adequately meet demand; and (2) provide adequate separation between terrains for ski/snowboard racing, training, and general public use in order to improve the quality of both the training venue and the guest experience. To address these needs, proposed projects including the following elements:

- Lift and Terrain- construct one lift (either surface or aerial) and approximately 42 acres of new ski trail courses for women's Downhill, men's Super G, moguls, and skier cross;
- Facilities- construction of buildings and facilities for lift operation, race starts, equipment storage, 100,000-gallon underground diesel fuel storage tank, and maintenance;
- Snowmaking and Infrastructure- construct snowmaking infrastructure on new ski trails;
- Construction Maintenance and Access- access road for construction of new lift and ski trails; and
- Clearing, Grading and Surface Smoothing- remove vegetation and smooth/grade surface for new ski trails and drainage management.

Based on our understanding of the information currently available for this project, we offer the following scoping comments for your consideration.

(1) Baseline Environmental Conditions

When evaluating effects of project alternatives, we recommend that current existing environmental conditions be used as the baseline for comparison of impacts across all alternatives, including the No Action alternative. This is especially important when there are environmental protections in place that are based on current conditions. For all resources, we recommend that historical data (5 years or older) are verified as representative of current conditions.

CWA Waters of the U.S., including Wetlands

We recommend the Draft EIS include a thorough characterization of existing aquatic resources and baseline conditions in the proposed project area, including quality, quantity and location of springs, surface waters, wetlands[1] (including peatlands or fens), streams and ephemeral drainages; watershed conditions; sediment loads; streambank conditions; vegetation cover; soil conditions; and wildlife and fish population health and habitat. We also recommend that the Draft EIS include a map that identifies

[1] Under Executive Order (EO) 11990, Protection of Wetlands, wetlands do not have to be jurisdictional wetlands but may contain wetland vegetation as the dominant plant community.

all waters of the U.S. (*e.g.*, streams, wetland delineation), with dominant plant community types identified, that are located within 500 feet from any construction activities. We recommend identifying which waters of the U.S. may be directly impacted by the construction activities, including an estimate of the potential impacted acreage of wetlands and linear feet of stream, as well as the types of wetlands and streams (e.g., year-round flows, ephemeral and intermittent). The EPA recommends that the Cowardin System be used to assess and categorize wetland types.

We recommend that maps be included in the Draft EIS with a scale that provides sufficient detail to understand the impacts to various types of wetland plant communities from proposed ski area features. Larger scale maps are useful to more fully disclose impacts from specific ski area features and to assist with future avoidance and minimization efforts with final design. We recommend the Draft EIS include "1 inch equals 100 feet" scale mapping for wetland plant communities impacted by ski area features, including direct, indirect/secondary, temporary, and vegetation removal types of impacts.

Streamflow and Water Quality Data

We recommend the Draft EIS provide a summary of available information and monitoring data on water quality for the project area. Such data for any streams and lakes of the project area would provide a baseline for future monitoring of impacts and evaluation of potential influence on downstream water quality. Critical parameters to include are those of interest for impaired waterbodies within or downstream of the project area. Identification of any significant gaps in data may be helpful in developing the project monitoring plan.

We recommend all analyses consider the most recent water quality data available (i.e., past 5 years) to ensure that potential project-related impacts from terrain expansion and associated increased snow-making are assessed using an appropriate baseline. We recommend the following:

- Provide a hydrologic baseline analysis to enable the assessment of biological and geomorphic impacts and potential influences of drought on future hydrology. We recommend including wet, average, and dry year analyses at a daily time-step.
- Include aquatic resources directly impacted by the project footprint within the geographic scope of analysis, as well as the resources indirectly (or secondarily) impacted by the project. These indirectly impacted areas may include downstream segments, source water areas where water withdrawals will occur, and any other resource areas which may be affected by changes in water management or operations.
- Include current water quality at a critical flow condition in any affected stream reaches.
- Consider and document water quality impairments per State CWA Section 303(d) lists, draft or established TMDLs, and potentially affected dischargers, including water treatment providers.
- Identify any Source Water Protection areas and how the project will be consistent with Source Water Protection planning measures.

Groundwater

Because the proposed project includes the installation of a 100,000-gallon underground diesel fuel storage tank, groundwater may be an important resource to analyze, particularly if it provides domestic and/or public water supply in the analysis area. Groundwater quality is also important because groundwater may discharge to lakes and streams or be recharged by these water bodies. Shallow aquifers are more susceptible to contamination because a contaminant introduced at the surface may more rapidly enter the system, and there is less intervening soil to adsorb the contaminants before they reach the groundwater.

We recommend the Draft EIS include a map of all groundwater resources in the proposed fuel storage area(s) and discussion to include the following information, if available:

- Identification of major aquifers;
- Location and extent of groundwater recharge areas; and
- Location of shallow and sensitive aquifers that are susceptible to contamination from surface activities, including alluvial aquifers along streams and rivers.

Please include available groundwater quality information, and identify which shallow aquifers are sources for public water systems, domestic wells or stock wells. We also recommend identifying any public water systems in the planning area with water quality violations or with requirements for increased frequency of monitoring. The Colorado Department of Public Health and Environment (CDPHE) is a good source of information concerning aquifers.

Public Drinking Water Supply Sources: In order to ensure that public drinking water supply sources (e.g., surface water sources, including groundwater under the direct influence of surface water sources, and groundwater sources) are protected from potential impacts associated with USFS-authorized activities in the project area, it is important to identify where these sources are located. Therefore, the EPA recommends that the Draft EIS include a map depicting municipal supply watersheds[2] and source water protection areas for public water supply wells and surface water intakes (streams, rivers and reservoirs) in accordance with state data security requirements. Please contact the CDPHE Source Water Protection Program Coordinator, John Duggan, at 303-692-3534 or john.duggan@state.co.us for more information and these Geographic Information System (GIS) layers.

Air Quality

To characterize baseline air quality conditions, we recommend that the Draft EIS include the following:

- Identification of sensitive receptors (such as population centers and Class I and Sensitive Class II areas in the vicinity);

[2] Forest Service Manual (FSM2542) defines Municipal Supply Watersheds to include: "surface supply watersheds, sole source aquifers, and the protection zones around wells and springs."

- Ambient air quality data including air quality trends of any Class I areas in the vicinity over the past several years. Such data are available from CDPHE and the VIEWS site for air quality related values (AQRVs) (http://views.cira.colostate.edu/web/); and
- A description of current and projected vehicle data and trends associated with resort visitation.

(2) Potential Impacts to Water Resources including Wetlands

The proposed action includes construction of various facilities and an access road, a new lift, the development of new trails/terrain, installation of a large underground diesel fuel storage tank, and installation of new infrastructure for additional snowmaking. Such activities may require extensive grading and tree/vegetation removal. In mountain environments, cut and fills associated with grading have the potential to impact streams, wetlands, and their supporting hydrologic systems. Thus, it is important to include the design details for these projects in the Draft EIS.

Given the potential for this type of project to affect aquatic resources, we recommend that the USFS evaluate potential impacts resulting from the alternatives by including the following in the Draft EIS:

- Assessment of potential impacts on baseline conditions, including direct, indirect and cumulative effects, that would result from activities associated with each alternative. Impacts may include changes in surface and groundwater hydrology supporting streams and wetlands.
- A description of any wetland impacts (both jurisdictional and non-jurisdictional, see Footnote No. 1), temporary and permanent, direct and indirect, past and reasonably foreseeable. Such impacts may include proposed or inadvertent functional conversion of wetlands (e.g., forested to shrub-scrub); changes to supporting wetland hydrology even if these wetlands are outside of the construction footprint (e.g., snow melt patterns, sheet flow, and groundwater hydrology); and wetland disturbance.
- Potential for impacts to aquifers (e.g., fuel spills/leaks, changes in hydrology, etc.).
- Discussion of potential impacts to public drinking water supply sources and mitigation options for protecting these high value drinking water resources.

Wetlands

The USFS's NOI does not mention impacts to wetlands; however, non-jurisdictional wetlands (which would be protected under EO 11990, Protection of Wetlands) and/or waters of the U.S. (tributaries) may be present on the site. The wetlands typically found in mountain environments represent highly valuable montane wetland ecosystems performing a variety of functions and values. Impacts to the types and functions of wetlands in montane environments are difficult or impossible to mitigate due to shorter growing seasons and low temperatures at night. The EPA recognizes the challenges facing the USFS in managing wetland resources in forested montane environments.

The EO 11990 requires the USFS to show "there is no practicable alternative" to the proposed action and "that the proposed action includes all practicable measures to minimize harm to wetlands." We recommend the Draft EIS describe how the USFS will show consistency with EO 11990, including how

wetlands will be identified and avoided, and how unavoidable impacts would be minimized and mitigated.

Discharge of dredged or fill material into waters of the U.S., including wetlands, is regulated under CWA Section 404. This permit program is administered jointly by the Corps and the EPA. Please consult with the Corps to determine the applicability of CWA Section 404 permit requirements to wetlands that would be impacted in the project area. We also recommend the Draft EIS include a description of impacts to waters not regulated by the Corps, as well as potential impacts of other activities in the project area covered under individual or nationwide permits authorizing the discharge of fill or dredge materials to waters of the U.S.

We recommend avoiding impacts to aquatic resources that are considered "difficult to replace" under the EPA's and the Corps' Final Rule for Mitigation for Losses of Aquatic Resources [33 CFR Parts 325 and 332; 40 CFR Part 230 (73 FR 19594, April 10, 2008)]. The rule emphasizes the need to avoid and minimize impacts to these "difficult-to-replace" resources (including streams, springs and fens) and requires that any compensation be provided by in-kind restoration, rehabilitation, or enhancement to the extent practicable. We recommend that restoration plans require soil profiles and hydrology to be re-established as much as possible to the original state. In addition, the USFS may want to consider the Mitigation Rule to protect aquatic resources even when a CWA Section 404 permit is not required.

Mitigation of Impacts to CWA Waters of the U.S. including Wetlands

For impacts to aquatic resources, we recommend that mitigation be consistent with the 2008 Rule on Compensatory Mitigation for Losses to Aquatic Resources for CWA Section 404 related impacts. If there are project activities that will impact aquatic resources, we recommend the Draft EIS include a waters of the U.S. conceptual mitigation plan. The scope of this plan will depend on the extent of both direct and indirect unavoidable impacts on waters of the U.S. We also recommend the Draft EIS identify potential mitigation sites as close to the impacted area as possible, preferably within the affected sub-watershed.

The use of functional replacement-based wetland mitigation is often preferred to an acre-to-acre replacement approach since it ensures that the specific wetland functions are replaced in an ecosystem. Because replacement wetlands may have lower functions and values, acre-to-acre replacement may result in a net loss of wetland functions. In order to identify wetland functions and values, we recommend a functional assessment or comparable method, such as the Summit County Wetland Assessment Method, be conducted in the upcoming growing season for those waters impacted by the project and the results included in the Draft EIS. If non-jurisdictional wetlands on federal lands are going to be impacted, we recommend disclosure of the offsetting mitigation efforts that will be incorporated by the USFS in the Draft EIS.

Road and trail stream crossings can cause sedimentation loading and possible pollutant delivery. For trail construction, in addition to wetlands and sensitive ecological areas being avoided and/or bridged wherever possible, the EPA's general recommendations include:

- Minimize road/trail construction and road density to reduce adverse impacts to watersheds;
- Locate roads/trails away from difficult to replace alpine resources, such as alpine meadows, streams and riparian areas as much as possible;
- Locate roads/trails away from steep slopes or erosive soils;
- Minimize road/trail stream crossings;
- Stabilize cut and fill slopes according to BMPs developed by the USFS that are applicable to sensitive alpine areas;
- Provide adequate road/trail drainage and control surface erosion with adequate waterbars, crowns, and ditch relief culverts to promote drainage off roads or along roads/trails;
- Consider road/trail effects on stream structure and seasonal spawning habitats when determining alignment; and
- Allow for adequate large woody debris recruitment to streams and riparian buffers near streams.

If the proposed project would include unavoidable installation of snowmaking pipe or utilities through wetland areas, then we recommend the Draft EIS provide details on how these pipes/utilities would be installed to minimize adverse impacts. We recommend including a description of the type and diameter of pipe; width and depth of trenching necessary; width of the disturbance corridor; location where soil from trenching would be temporarily stored; type of equipment that would be utilized and amount of compaction expected from that equipment; and identification of any fill material that would be placed in trenching to promote drainage. Measures for minimizing the extent of these wetlands impacts include revegetation with similar wetland vegetation, bulkheads to minimize disturbance widths, and fabric or hay layers to protect existing vegetation from stockpiled dredged material. It is imperative that the USFS implement mitigation to assure that proposed new/expanded/relocated snowmaking infrastructure and utilities, as well as associated trenching, do not act to drain groundwater or otherwise alter hydrology of wetlands systems.

To mitigate unavoidable secondary or indirect adverse impacts to wetlands from vegetation removal, we recommend that the USFS consider potentially mitigating out-of-kind by considering improved snow disposal/management options in concert with the Vail Ski Resort. Specifically, we recommend the USFS review current snow disposal methods from the existing paved and unpaved parking lots and evaluate the potential impacts from these practices. Snow disposal has the potential to discharge sediment, trash and other pollutants into wetlands and tributaries with long-term adverse impacts to the aquatic ecosystems.

Groundwater

Because underground fuel storage tanks have the potential to leak and contaminate groundwater supplies, it will be important that Vail constructs, maintains, and operates its proposed underground diesel fuel storage tank in a manner that provides for safe storage. The USFS's March 30, 2017 scoping letter indicates that a new 100,000-gallon underground diesel fuel storage tank is proposed at a "logical location" on the southwest side of the Riva Bahn Lift mid-station for use in the maintenance of the new

racing/training areas and terrain parks. A storage tank of this size will be regulated by the Colorado Department of Labor and Employment's Division of Oil and Public Safety. Please contact Zach Hope, Release Prevention Supervisor, at 303-318-8545 for assistance with regulation applicability, design and installation requirements.

There are additional requirements for field constructed tanks greater than 50,000 gallons that may be applicable. Please refer to *Requirements for Field-Constructed Tanks and Airport Hydrant Systems* (www.epa.gov/ust/requirements-field-constructed-tanks-and-airport-hydrant-systems) for a summary of the 2015 federal Underground Storage Tank (UST) requirements specific to UST systems with field-constructed tanks and airport hydrant fuel distribution systems. Questions related to this guidance may be directed to Janice Pearson, Chief of our Region 8 UST, Solid Waste and PCB Unit, at 303-312-6354 or pearson.janice@epa.gov.

Water Quality and Impaired Waterbodies

We recommend that the USFS: (a) analyze potential impacts to impaired waterbodies within and/or downstream of the planning area, including waterbodies listed on the most recent EPA-approved CWA § 303(d) list; and (b) coordinate with the CDPHE if there are identified potential impacts to impaired waterbodies (in order to avoid causing or contributing to the exceedance of water quality standards). Where a Total Maximum Daily Load (TMDL) exists for impaired waters in the area of potential impacts, pollutant loads should comply with the TMDL allocations for point and nonpoint sources. Where new loads or changes in the relationships between point and nonpoint source loads are created, we recommend that the USFS work with CDPHE to revise TMDL documents and develop new allocation scenarios that ensure attainment of water quality standards. Where TMDL analyses for impaired waterbodies within, or downstream of, the planning area still need to be developed, we recommend that proposed activities in the drainages of CWA impaired or threatened waterbodies be either carefully limited to prevent any worsening of the impairment or avoided where such impacts cannot be prevented.

Water Quality Impacts of Soil Disturbance

We recommend the Draft EIS describe site-specific current soil conditions and include an assessment of potential project impacts. Such impacts may include soil loss, increased surface storm flow, and changes in water temperature associated with erosion of soils and stream banks, water channelization, reduced stream base flows from decreased infiltration to groundwater, soil compaction, and vegetation loss. We recommend this analysis assess impacts to aquatic resources, including water quality, stream and wetland processes, and fish populations/habitat, and provide mitigation measures to address such impacts.

Water Quality and Additional Snowmaking

Although supplemental information provided in the USFS's scoping letter does not include operational details of the proposed new snowmaking infrastructure, it does note that it will be installed to provide

coverage on all 42 acres of the proposed new ski trails. Installation will include the following: a 500-square foot booster pump station located near the bottom of the proposed lift; approximately 7,500 feet of snowmaking pipelines; 9,000 feet of buried electric lines; and approximately 4,300 feet of communication cables, transformers and waterline. The scoping letter briefly mentions "installation of drainage management infrastructure, including waterbars," but no details are provided.

We recommend that the Draft EIS include the following details related to snowmaking:

- A map with both current snowmaking coverage and proposed new coverage;
- A discussion of the existing snowmaking operation and why the proposed additional amount of snowmaking is needed;
- Water quality analysis of the water to be used for snowmaking, as well as an assessment of water quality in the receiving waters to which the snow melt will flow;
- An assessment of whether snowmaking water is likely to adversely impact streams, soils, plants or wetlands on or below the ski area; and
- An assessment of water quantity issues (including as it relates to water quality) associated with the snowmaking and municipal withdrawals to serve the project area.

To address water quantity concerns associated with snowmaking, the EPA recommends the Draft EIS include information regarding whether Vail's existing water rights are adequate to support the proposed additional snowmaking and whether Vail has opportunities to improve upon current snowmaking efficiency practices to support the proposed additional snowmaking. Because there will be operational changes associated with the additional snowmaking, we recommend including additional details such as timing of implementation and operational design. We also recommend that information be included regarding where withdrawals would occur, the timing and magnitude of withdrawals, the ability to maintain critical instream flows, and potential adverse impacts to aquatic habitat from additional diversion and changes in water yield due to snowmaking.

When determining the impact analysis area, please ensure that critical resources are considered and the scope of analysis is appropriate. Critical resources include species recovery areas, recreational areas, critical habitat for threatened or endangered species, segments impaired per Section 303(d) of the CWA, segments for which TMDLs have been established, receiving waters for permitted dischargers, and source water areas. If the project will alter in-stream flow quantity or quality, we add the following recommendations for assessing impacts:

- Comparison of pre- and post-project water usage and impacts to stream flows, which include the maximum, minimum and mean or median values for each month for the proposed snowmaking source water;
- An analysis of additional spring runoff to streams in the project area resulting from increased snowmaking and the potential for stream bank erosion and spawning habitat degradation resulting from increased flow;
- An analysis of the extent to which withdrawals for snowmaking will result in reduced flow for dilution of stream pollutants downstream of the withdrawal point (*e.g.*, metals,

wastewater effluent) and whether that loss of dilution flow will contribute to or exacerbate water quality concerns;

- Quantification of the cumulative total diversions as the proportion of average monthly or daily streamflow diverted in areas where impacts from water withdrawal are occurring from multiple past, present and future diversions;
- An analysis of impacts to resident fish species and invertebrate assemblages; and
- Comparison of current and post-project water quality at a critical flow condition and expected impacts to assimilative capacity or permit limits, which account for applicable water quality standards, water quality impairments per State CWA Section 303(d) lists, draft or established TMDLs, and potentially affected dischargers.

Because the proposed project area may still contain drainage issues resulting from connected graded terrain, expanding the graded terrain could further increase direct surface flows to the stream system, exacerbating impacts to the drainage system. To avoid or offset the direct, indirect and cumulative impacts to streams from snowmaking, we recommend that the Draft EIS identify site-specific design criteria, such as improved vegetative cover and reconstruction of water bars, that will prevent or minimize sediment delivery and hydrologic impacts to Mill and Gore Creek.

Drought and Future Availability of Water

Several reports prepared for the Colorado Water Conservation Board (see http://cwcb.state.co.us/) predict that, on average, Colorado's mountains will experience warmer winters, earlier runoff, and decreased streamflow. Given these predictions, we recommend the Draft EIS consider how the project might be affected by such conditions, and whether there are opportunities to design the project to avoid impacts that might be anticipated if snow patterns change over time. There may be opportunities for the proposed project design to integrate ideas such as the following: water conservation; improved snow making efficiency; shade in areas vulnerable to snow melt; and modified timing of water withdrawals to avoid impacts in years with below average stream flow.

(3) Potential Impacts to Air Quality

The USFS's scoping letter notes that 42 acres of proposed trails would be cleared of overstory vegetation, de-stumped, and smoothed. If burning is one of the potential methods for vegetation removal, then we recommend that the Draft EIS discuss the potential for fire activity to cause periodic degradation of air quality and visibility in the region. In addition, we recommend the discussion include information on the type of proposed burning and the amount of burning potential (e.g., number of piles if pile burning removed trees), the typical pollutants associated with burning, and an estimate of predicted emissions that would result from project-related burning. We encourage public notification of pending burns.

Other Considerations

General Considerations for Mitigation Measures

The EPA recommends that the USFS seek alternatives and mitigation to avoid, reduce and compensate for impacts associated with the project including water quality impacts, wetland and aquatic resources impacts, air pollution, permanent vegetation change and permanent habitat loss. In addition, we recommend that the description of mitigation measures include the following:

- Designation of the entity responsible for implementing the mitigation;
- A defined monitoring plan;
- Specific management decision points based upon protecting the minimum desired environmental conditions (thresholds) in the project area, which would trigger action;
- Management alternatives and mitigation measures that would be implemented should a threshold be exceeded;
- Identification of funding sources;
- Mechanisms for public disclosure of the analysis and management decisions; and
- Specific temporal milestones to meet any rehabilitation standards.