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Organization: United States Environmental Protection Agency, Region 8
Title: Chief, NEPA Branch
Comments: Dear Supervisor Stewart:

The U.S. Environmental Protection Agency Region 8 has reviewed the U.S. Department of Agriculture Forest Service (USFS) scoping notice that the Grand Mesa Uncompahgre and Gunnison National Forests (GMUG) will be preparing an Environmental Assessment (EA) for the proposed Powderhorn Mountain Resort (PMR) Snowmaking Supply Line and Trail Project. In accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA), we are providing scoping comments.

The proposed project includes: 1) installation of snowmaking infrastructure that would add an additional 3,000 gallons of water per minute (GPM) to the existing snowmaking system that will be leased from the City of Grand Junction for 40 years; and 2) construction of a 7,540-foot Rim View Connector Trail to integrate PMR's mountain biking trail to an adjacent trail network. The proposed project would result in a total of approximately 10 acres of disturbance: 8.6 acres for the snowmaking pipeline, and an additional 1.6 acres for the Rim View Connector Trail.

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 provides comments and recommendations related to baseline environmental conditions and impacts to water resources including waters of the U.S. and wetlands.

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. For all resources, we recommend that historical data are verified as representative of current conditions. Comparison of the action alternative to existing conditions is an important frame of reference to quantify and/or characterize the magnitude of effects and understand impacts. This is especially true when there are environmental protections in place that are based on current conditions, such as total maximum daily loads (TMDLs) for impaired river segments. It can also be useful, although often less certain, to compare alternatives against a no action baseline that includes reasonably foreseeable future conditions. The EPA recommends that the NEPA analysis compare and present impacts to resources against the existing conditions baseline using a consistent method to measure project impacts on these critical resources. By utilizing existing environmental conditions as a baseline, future changes to environmental resources can be more accurately measured for the Action and the No Action alternatives.

Clean Water Act Waters of the U.S. including Wetlands

We recommend the EA identify existing aquatic resources baseline conditions in the proposed project area, including wetlands (including peatlands or fens), springs, streams and ephemeral drainages.

Specifically, we recommend describing watershed conditions, streambank conditions, vegetation cover, soil conditions, and wildlife and fish population health and habitat. We also recommend that the EA include a map that identifies all waters of the U.S. (e.g., streams, wetland delineation) within a minimum of 500 feet from any construction activities, with dominant plant community types identified. The NOPA briefly mentions wetlands located on the fringe of Anderson #2 Reservoir that may be impacted by the project; the EA would benefit from more detailed analysis of this area and any other potentially[shy] impacted resources.

Streamflow and Water Quality Data

We recommend the EA provide a summary of available information and monitoring data on water quality for the snowmaking source and receiving waters and identify impaired waterbodies within and downstream of the planning area, including waterbodies listed on the State of Colorado's most recent EPA-approved Clean Water Act (CWA) [sect] 303(d) list. Such data for any streams and lakes potentially affected by snowmaking or trail construction would provide a baseline for future monitoring of impacts and evaluation of potential influence on downstream water quality. We recommend including parameters of significance to 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 that the USFS coordinate with the Colorado Department of Public Health and Environment, Water Quality Control Division, if the project has potential to contribute to water quality standard exceedances. Based on Colorado's assessed and impaired waters information, it appears that the State has identified waters in the Powderhorn Mountain Resort watershed that are not supporting the water supply use for arsenic. The State continues to monitor waters for the aquatic life use where there is reason to suspect water quality problems due to iron; however, there are insufficient data to make a supporting/not supporting water quality determination. Please refer to the web-links below for the most recent water quality information available from the state. The USFS should determine whether this project will contribute to a further degradation of water quality in this watershed, particularly for arsenic and iron.

Colorado's 2018 Integrated Report is available here:

https://www.colorado.gov/pacific/sites/default/files/93_2018%2803%29.pdf

The State's Draft 2020 Integrated Report can be found here:

https://www.colorado.gov/pacific/cdphe/wqcc-rulemaking-proceedings

When defining baseline conditions, please consider the following:

* Include 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 identify 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.

Water Quality and Snowmaking

We recommend that the EA include the following baseline information related to snowmaking:

* A discussion of the existing snowmaking operation and why the proposed additional amount of snowmaking is necessary; and
* 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.

Potential Impacts to Water Resources including Waters of the U.S. and Wetlands

In mountain environments cut and fills associated with grading for trail and road construction trenching for utilities have the potential to impact streams, wetlands, and their supporting hydrologic systems. It is important to include the design details for these actions in the EA.

Given the potential for these projects to affect aquatic resources, we recommend that the EA evaluate potential impacts by including the following information in the analysis:

* Assessment of potential impacts on baseline aquatic resource conditions, including direct, indirect and cumulative effects. Impacts may include changes in surface and groundwater hydrology supporting streams and wetlands.
* A description of any wetland impacts, temporary and permanent, direct and indirect, past and reasonably foreseeable. Such impacts may include 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.
* Disclosure of any aquifers that may be vulnerable to impacts from the project (e.g., changes in hydrology).

Wetlands

The wetlands typically found in mountain environments represent 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 sometimes 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 and we appreciate the intent to minimize such impacts with this project. The NOPA identifies wetlands that could be affected by the activities outlined in this project. We recommend the EA describe how the project will show compliance with Executive Order 11990, Protection of Wetlands, 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. We recommend the USFS consult with the Corps during the NEPA process to determine the applicability of CWA Section 404 permit requirements to any wetlands that would be impacted in the project area. We also recommend the EA include a description of impacts to waters not regulated by the Corps. 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 CPR 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 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 reestablished as much as possible to the original state. In addition, the EPA recommends the USFS consider applying the mitigation approach from the rule to protect aquatic resources even when a CWA Section 404 permit is not required.

To ensure that wetlands are protected, it may be necessary to consider exclusion of road, trail or infrastructure construction and mechanized vegetation and tree removal treatments in areas where wetlands or riparian areas would be adversely impacted either directly or indirectly from adjacent construct on activities, changing supporting wetland hydrology. The EPA recommends the USFS reduce impacts through the use of Best Management Practices (BMPs) to protect sensitive soils, wetlands, riparian areas, meadows, stream crossings, and critical habitat. We support establishment of riparian habitat buffer zones to avoid adverse impacts to streams and riparian areas.

We also recommend that the EA assess surface disturbance impacts related to installation of snowmaking infrastructure and utilities, including:

* Location and length of pipe proposed in wetlands (if applicable);
* Location where the soil from the trench would be temporarily stored;
* Amount of wetland soil compaction expected from related installation equipment; and
* Identification of fill material that would be placed in the trench that may inadvertently promote drainage (e.g., gravels).

It can be difficult to avoid permanent impacts to sloped wetlands from placement of snowmaking pipelines and other on-mountain facilities. Where wetland crossings are unavoidable, we encourage the use of the following BMPs during design and construction:

* Selecting the narrowest available crossing locations and avoiding crossings through fen-type wetlands.
* The use of bulkheads, where applicable, to minimize the disturbance width for utility line trench in wetlands.
* Placement of groundwater barriers on the downgradient side of the utility crossing to prevent wetland drainage. Site-specific engineering design details should be reviewed by the USFS hydrologist and by resource agencies prior to approval of the wetland permit.
* Protection of wetland vegetation adjacent to the trench by use of construction fabric, hay layers, or wood chips to store trench soils. This can minimize or prevent damage from soil compaction and soil mixing.
* Monitoring wetland BMPs during construction and post-construction to ensure effectiveness and a requirement that any drainage problems be corrected.

We recommend applying mitigation measures that would minimize the extent of wetlands impacts from a water conveyance system. Such measures include the following:

* Reseed as soon as possible after the disturbance and monitor for 5 years to ensure successful revegetation of impacted areas.
* Use bulkheads or box structures to minimize the chance of trenches acting to drain groundwater or otherwise alter hydrology.
* Use fabric or hay layers to protect existing vegetation from stockpiled dredged material and to mark existing contours.

Water Quality and Impaired Waterbodies

We recommend that the USFS: (a) analyze potential direct and indirect impacts to impaired water bodies within and/or downstream of the planning area, including waterbodies listed on the most recent EPA[shy] approved CWA [sect] 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 EA 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

We recommend that the EA include the following information related to snowmaking:

* A map with both current snowmaking coverage and proposed new coverage;
* Details on any operational changes including the timing of implementation and operational design;
* 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 any water quantity issues associated with the snowmaking and municipal withdrawals to serve the project area.

Because there may be operational changes associated with the additional snowmaking, we recommend including additional details such as timing of implementation and operational design. We also recommend additional detailed 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 selecting stream reaches for the impact analysis, ensure that potentially affected critical resources are included within the scope of analysis. 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 detailed 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 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 snowmaking may cause or exacerbate drainage problems and increase direct surface flows to streams, we recommend that adverse impacts from snowmaking (including past, present and reasonably foreseeable development) be evaluated in the EA.

We also recommend the EA analyze the potential impacts of less availability of water during drought years on viability of the proposed project. The EA should consider whether continuation of recent snowpack trends could result in the need for expanded snowmaking to maintain the same level of existing and proposed snow coverage.

Other Mitigation Considerations

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, and permanent vegetation change and permanent habitat loss.

CWA Waters of the US. including Wetlands

If jurisdictional or non-jurisdictional wetlands on federal lands are going to be impacted, we recommend identifying the offsetting mitigation that will be incorporated by the USFS consistent with EO 11990.

The use of functional replacement-based 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 aquatic resources impacted by the project and the results included in the NEPA document.

Water Quality and Road Impacts

Road and trail stream crossings can cause sedimentation loading and possible pollutant delivery. For route construction including the formal establishment of new mountain bike trails, the EPA's general recommendations include:

* Avoid or bridge wetlands and sensitive ecological areas where practicable;
* Minimize road and trail construction and road density to reduce adverse impacts to watersheds;
* Locate roads and trails away from difficult to replace alpine resources, such as alpine meadows, streams and riparian areas as much as possible;

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

We appreciate the opportunity to provide comments at this early stage of the NEPA process. These comments are intended to facilitate the decision-making process; thank you for considering our input. If we may provide further explanation of our comments, please contact me at (303) 312-6704, or your staff may contact Melanie Wasco at (303) 312-6540 or wasco.melanie@epa.gov.

Sincerely,

Philip S. Strobel

Chief, NEPA Branch

Office of the Regional Administrator