



REGION 8

DENVER, CO 80202

August 25, 2025

Kevin Wright, Forest Supervisor
c/o Matt Loscalzo, Project Manager
Dixie National Forest
820 N. Main Street
Cedar City, Utah 84721

Dear Supervisor Wright:

The U.S. Environmental Protection Agency Region 8 has reviewed the U.S. Department of Agriculture Forest Service July 2025 Notice of Intent (NOI) for the Brian Head Resort Expansion Environmental Impact Statement (EIS) in Iron County, Utah. Through this NOI the Forest Service is soliciting comments on the Brian Head Resort Recreation, L.L.C. 2023 Master Development Plan that would expand the resort on both federal and private lands. The scoping letter indicates the EIS for the project would be implemented under the USDA July 3, 2025, NEPA Implementing Procedures, and that a Final EIS will be published for an Objection Period two years from the publication of this NOI. The following comments were prepared in accordance with our responsibilities under Section 102(2)(C) of the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act (CAA). The CAA § 309 role is unique to the EPA. It requires the EPA to review and comment publicly on any proposed federal action subject to NEPA's EIS requirement and to make its comments public.

The proposed action includes the expansion of the Brian Head Resort's (BHR) Special Use Permit (SUP) area and the addition of two SUP expansion areas for additional resort operations. According to the scoping letter, "In total, the proposed action includes the expansion of BHR's existing SUP by approximately 1,651 acres to a total SUP boundary of 2,538 acres; construction of approximately 382 acres of new clear-cut and graded ski trails; installation of 14 new lifts; construction of four new on-mountain restaurants; construction of eight new ski patrol spaces (with an additional two new ski patrol spaces co-located with other proposed new infrastructure); construction of approximately 19 miles of new snowmaking lines that would allow for approximately 186 acres of new runs with snowmaking; construction of approximately 10 miles of new administrative roads and improvements to approximately five miles of existing roadbeds; installation of approximately 13 miles of new utilities; re-routing of an existing snowmobile route; and vegetation management and timber removal on up to 520 acres affected by the 2017 Brian Head Fire."

Based on the available information, we are providing the enclosed detailed comments to assist the Forest Service with the evaluation of water and air resources in the EIS. The EPA appreciates the opportunity to provide comments at this early stage of the NEPA process and are committed to working with the Forest Service as it

finalizes the EIS and Record of Decision. If further explanation of our comments is desired, please contact me at 303-312-7011 or dorian.david.i@epa.gov , or Shannon Snyder, lead reviewer, at (303) 312-6335 or snyder.shannon@epa.gov .

Sincerely,

David I. Dorian
Acting Manager, NEPA Branch
U.S. EPA Region 8

Enclosure

EPA's Detailed Comments on the Brian Head Resort Expansion EIS

Purpose and Need

A discussion and analysis of recent visitation/skier data and associated trends to document the level of demand for expanded terrain and facilities would strengthen the purpose and need statement. In addition, we recommend the EIS document how the Forest Service is ensuring the proposed facilities “would be harmonized with natural environment” (16 USC § 497(c)(2)(B)(i)) and are consistent with its planning responsibilities under the Federal Land Management and Policy Act of 1976, as amended.

Alternatives Analysis

The EPA recommends the Forest Service consider a full range of alternatives and evaluate in detail all reasonable alternatives that fulfill the project’s purpose and need. We encourage selection of alternatives that protect, restore, and enhance the environment. We support efforts to identify and select alternatives that maximize environmental benefits that avoid, minimize, and/or otherwise mitigate environmental impacts.

Existing Environmental Conditions

Existing conditions are a key frame of reference for quantifying and characterizing magnitudes of adverse and positive environmental effects under each alternative. The EPA recommends evaluating the effects of project alternatives against existing environmental conditions as the basis for comparison. If the No Action Alternative includes future actions and is not representative of current conditions, we recommend also evaluating the no-action alternative against the existing condition baseline. Although alternatives can also be compared against a projected no action scenario that includes reasonably foreseeable future conditions, this approach can result in additional uncertainty for the alternatives analysis. By utilizing existing environmental conditions as a point of comparison, future changes to environmental resources can be more accurately measured for all alternatives, including the No Action alternative. Verifying whether historical data (e.g., data five years or older) are representative of current conditions is particularly important since this project will tier to the Dixie National Forest 1986 Land Use Plan. Details can be found below regarding additional information we recommend considering when evaluating existing conditions for water and air resources.

Aquatic Resources Existing Conditions. The EPA considers the protection of aquatic resources to be among the most important issues to be addressed in any NEPA analysis for a ski resort expansion. Most activities under the proposed action have the potential to adversely impact aquatic resources, including surface waters, wetlands, streams, springs, riparian areas, and their supporting hydrology. It is with this in mind we recommend the EIS:

- Describe watershed conditions, streambank conditions, vegetation cover, soil conditions, and wildlife and fish population health and habitat.
- Include a map of the project area that identifies wetlands and other regional water features within a minimum of 500 feet from any construction activities, with dominant and rare plant community types identified.
- Conduct wetland functional analyses if there is any potential that project elements will cause impacts.

Water Quality Existing Conditions. We recommend the EIS provide a summary of available information and monitoring data on water quality for the snowmaking source and receiving waters. The summary should identify impaired waterbodies within and downstream of the planning area, including waterbodies listed on the State of Utah’s most recent EPA-approved Clean Water Act (CWA) § 303(d) list. Such data for any streams and waterbodies potentially affected by project proposals such as snowmaking or trail construction would provide information for the evaluation of the potential influence of current and future resort area activities 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.

When defining existing conditions, please consider including the following:

- Resources directly impacted by the project footprint as well as the resources indirectly (or secondarily) impacted by the project. 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.
- Current water quality at a critical flow condition in any affected stream reaches.
- Water quality impairments on State CWA § 303(d) lists and any associated draft or established Total Maximum Daily Loads (TMDLs), and identifying potentially affected dischargers, including water treatment providers.
- Source Water Protection areas and how the project will be consistent with Source Water Protection planning measures.

Snowmaking Existing Conditions. The NOI states the proposed action has the potential to impact hydrologic and/or groundwater resources from additional water use for expanded snowmaking operations. We recommend the EIS describe existing water rights and the current snowmaking operation. The EPA is interested in what impacts may be currently occurring from snowmaking activities to assist with understanding how proposed changes in the snowmaking water withdrawal regime and application would impact the project area. We recommend that the EIS include the following information related to snowmaking:

- A discussion of the existing snowmaking operation, and any related impacts to hydrology or water quality;
- A 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 as mentioned above; and
- A soil analysis of the proposed enhancement areas to determine possible soil mineral/nutrients that could be disturbed and leaked into increased runoff from snow melt and enter surrounding waterbodies.

Air Quality Existing Conditions. The EPA recommends that the EIS evaluate whether project activities could affect air quality. To do so, we recommend characterizing existing conditions, which should help to understand how project activities may affect air quality and what measures may be needed to mitigate any potentially significant impacts. The project area is in proximity to Zion National Park. In addition to the health-based National Ambient Air Quality Standards (NAAQS), the CAA provides Class I Areas special protection for air quality and air quality related values (AQRVs), including visibility. To characterize air quality conditions, we recommend that the EIS include the following:

- For criteria pollutants we recommend coordinating with the Utah Department of Environmental Quality (DEQ) to establish representative design values (background pollutant concentrations) based on the most recent monitoring data that are representative of the project area. Alternatively, data are available from EPA at their design values webpage.¹ Monitoring locations and data can also be accessed by the public through EPA's outdoor air monitor webpage,² as well as through the EPA's Air Quality System

¹ <https://www.epa.gov/air-trends/air-quality-design-values#:~:text=Design%20Value%20Reports-,What%20is%20a%20Design%20Value%3F,in%2040%20CFR%20Part%2050%20>

² <https://www.epa.gov/outdoor-air-quality-data/interactive-map-air-quality-monitors>

(AQS) for AQS users.³

- Identification of sensitive receptors in the vicinity (such as population centers, and Class I and Class II areas with sensitive resources);
- Trends in air quality and AQRVs at the adjacent Zion National Park Class I Area, provided by the National Park Service on their air quality trends website;⁴
- A description of current vehicle data and trends associated with resort visitation; and
- Any regional air quality concerns in the area (e.g., whether there are any PM₁₀ issues in the area, seasonal wildfire smoke, etc.). This is particularly important since burn activities related to tree and vegetation removal are planned for the proposed action.

Potential Environmental Impacts

Potential Impacts to Aquatic Resources. In mountain environments, cut and fills associated with grading for trail and road construction and trenching for utilities have the potential to impact streams, wetlands, and their supporting hydrologic systems. Given the potential for these projects to affect aquatic resources, we recommend that the EIS evaluate potential impacts by including the following information in the analysis:

- An assessment of reasonably foreseeable impacts on aquatic resource existing conditions. Impacts may include changes in surface and groundwater hydrology supporting streams and wetlands.
- An evaluation of reasonably foreseeable wetland impacts, including temporary and permanent. Such impacts may include direct loss due to fill and functional changes due to the type of conversion of wetlands (e.g., forested to shrub-scrub); and changes to supporting wetland hydrology outside of the construction footprint which could result in the indirect loss of wetlands or type-conversion (e.g., snow melt patterns, sheet flow, and groundwater hydrology).
- The disclosure of any aquifers that may be vulnerable to impacts from the project (e.g., changes in hydrology).

Wetland Impacts. The wetlands typically found in mountain environments represent valuable montane wetland ecosystems. 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 Forest Service in managing wetland resources in forested montane environments and we appreciate the intent to minimize such impacts with this project. We recommend the EIS 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.

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 supporting hydrology would be adversely impacted either directly or indirectly from construction activities. We support establishment of riparian habitat buffer zones to avoid adverse impacts to streams and riparian areas.

Discharge of dredged or fill material into waters of the U.S., including certain wetlands, is regulated under CWA § 404. This permit program is administered jointly by the Army Corps of Engineers (Corps) and the EPA. We recommend the Forest Service consult with the Corps during the NEPA process to determine the applicability of CWA § 404 permit requirements in the project area. We also recommend the EIS 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 CFR Parts 325 and 332; 40 CFR Part 230 (73 FR 19594, April 10, 2008)]. The rule emphasizes the

³ <https://www.epa.gov/aqs>

⁴ <https://www.nps.gov/subjects/air/park-conditions-trends.htm>

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 re-established as much as possible to the original state. In addition, the EPA recommends that the Forest Service consider the mitigation rule to protect aquatic resources even when a CWA § 404 permit is not required.

We also recommend that the EIS 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).

Avoiding permanent impacts to sloped wetlands from placement of snowmaking pipelines and other on-mountain facilities presents challenges. Where wetland crossings are unavoidable, we encourage the use of the following Best Management Practices (BMPs) and mitigation measures during design and construction of a water conveyance system:

- Selecting the narrowest available crossing locations and avoiding crossings through fen-type wetlands (see additional information on fen wetlands below).
- 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 Forest Service hydrologist and by resource agencies prior to approval of any CWA § 404 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.⁵
- Reseed as soon as possible after the disturbance and monitor for 5 years to ensure successful revegetation and maintenance of pre-disturbance hydrology in impacted areas.

Mitigation of Wetland Impacts. If wetlands on federal lands are going to be impacted, we recommend identifying the offsetting mitigation that will be incorporated by the Forest Service. 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. The EPA notes that wetland functions are tied to wetland type and conversion from one type of wetland to another will likely result in the loss or degradation of certain wetland functions. Assumptions regarding wetland quality and function should be field verified using the Utah Rapid Assessment Procedure (URAP),⁶ or an assessment method appropriate for the region. Including the assessment results in the EIS would be benefit the analysis. Post-project monitoring should be conducted to ensure that the project achieves no negative effects to the function of wetlands within the project area.

⁵ <https://usfs-public.app.box.com/s/w5uaibpacn5714amovpu0wy4ehopwnx6>

⁶ [Utah Rapid Assessment Procedure](#)

Fen Wetlands. According to the Colorado Natural Heritage Program report for the Dixie National Forest, there is the potential for fen wetlands in the project area.⁷ Fen wetlands provide important hydrological and water quality functions by improving water quality in headwater streams and may support rare assemblages of aquatic invertebrates. They also provide critical ecological functions such as providing base flows to streams during late summer and/or drought periods. The EPA recognizes fen-type wetlands as ecologically critical in that they provide local and regional biodiversity. The U.S. Fish and Wildlife Service (USFWS) Region 6 designated fen wetlands as Resource Category 1, which is habitat that is considered unique and irreplaceable. The mitigation goal of USFWS Resource Category 1 is no loss of existing habitat value.⁸ In addition, the Rocky Mountain Region 2 of the U.S. Forest Service considers fens a sensitive plant habitat that should be managed for conservation and restoration.⁹ Further underlining the uniqueness and importance of fens in Utah, the Corps revoked the use of the majority of Nationwide Permits in peatlands/fen-type wetlands to protect this unique wetland type.

Disturbances that impede or alter surface or groundwater flows such as activities related to new project infrastructure (e.g., trenching needed to connect to existing utilities) can have a substantial impact on the hydrologic regime and the biotic integrity of fens. For example, roads, trails, and associated drainage structures upslope of fens may intercept groundwater flow, alter subsurface flow pathways, and concentrate overland flow away from the fen area, causing desiccation of the fen. Roads are also a common source of sediment that can overlay organic soils. Construction related disturbances (e.g., excavating, grading) and subsequent use from motorized equipment can negatively impact fens by exposing soil and bare peat, causing erosion, creating channels which act as a water diversion, and compacting soil.^{10,11} Implementation of the new ski teaching terrain may result in additional winter grooming in previously ungroomed areas. Although minimum snow depths buffer against the effects of soil compaction caused by over-snow vehicles (e.g., snow groomers), recent research indicates that over-snow vehicle use can have detrimental impacts to fens by compacting snow cover, eliminating the insulating function of snow cover and causing the fens to freeze.^{12,13} Snow compaction caused by over-snow vehicles can substantially reduce the thermal insulation of snow cover beneath the surface, exposing underlying vegetation to potential frost-related damage. Snow compaction may ultimately result in a reduction in soil temperatures as well as a delay in snowmelt, potentially reducing the length of the growing season and altering primary productivity and organic matter decomposition rates.^{14,15,16,17}

⁷ https://cnhp.colostate.edu/download/documents/2018/Fen_Mapping_for_the_Dixie_NF_FINAL.pdf

⁸ Hartman N. (1999, January 20). Regional Policy on the Protection of Fens, As Amended [Memorandum]. USFWS

⁹ U.S. Forest Service (USFS) (2011) FSM 2600—Wildlife, Fish, and Sensitive Plant Habitat Management. Chapter 2630—Management of Wildlife and Fish Habitat. Supplement No.: 2600- 2011-2. Forest Service Manual. U.S. Forest Service, Rocky Mountain Region (R2), Denver, CO.

¹⁰ Chimner, R. A., Lemly, J. M., & Cooper, D. J. (2010). Mountain fen distribution, types, and restoration priorities, San Juan Mountains, Colorado, USA. *Wetlands*, 30(4), 763-771.

¹¹ See footnote 5.

¹² See footnote 6.

¹³ Gage, E., & Cooper, D. J. (2009). Winter recreation impacts to wetlands: a technical review. *Report for Arapaho-Roosevelt National Forests, White River National Forest, and Black Hills National Forest. USDA Forest Service, Washington, DC.*

¹⁴ Mullet, T. C., & Morton, J. M. (2021). Snowmobile effects on height and live stem abundance of wetland shrubs in south-central Alaska. *Journal of Outdoor Recreation and Tourism*, 33, 100347.

¹⁵ Fahey, B., Wardle, K., and Weir, P. (1999). Environmental effects associated with snow grooming and skiing at Treble Cone Ski Field, Part 2. Snow properties on groomed and non-groomed slope. *Science for Conservation*, 120, 49-62.

¹⁶ Keller, T., Pielmeier, C., Rixen, C., Gadiant, F., Gustafsson, D., and Ståhl, M. (2004). Impact of artificial snow and ski-slope grooming on snowpack properties and soil thermal regime in a sub-alpine ski area. *Annals of Glaciology*, 38, 314-318.

¹⁷ See footnote 8.

These wetland ecosystems are non-renewable and irreplaceable. Fen communities are very sensitive to hydrologic alterations and restoration is extremely challenging once function has been impaired. Due to the slow rate of accumulation of peat in fens, mitigation for fen impacts is not possible on regulatory time scales. Because fens develop over thousands of years, have unique ecological values and are irreplaceable, the EPA considers any temporary or permanent impact to fens or to their groundwater source to be a “significant” impact under NEPA. We recommend that the resource analysis delineate the spatial extent of all fens within the project area as well as an analysis of potential impacts that could occur from proposed project activities. We strongly recommend that project design criteria include requirements to avoid both direct and indirect impacts, whether permanent or temporary, to these highly valued resources.

Water Quality Impacts and Impaired Waterbodies. The Forest Service should determine whether this project will contribute to degradation of surface water quality in the area. We recommend that the Forest Service: (a) analyze potential direct and indirect impacts to any 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 Utah DEQ 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 TMDL exists for impaired waters 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 Forest Service work with Utah DEQ 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 needs to be developed, we recommend that proposed activities in the drainages of CWA impaired or threatened waterbodies are either carefully designed to prevent any worsening of the impairment or avoided where such impacts cannot be prevented.

Water Quality Impacts of Soil Disturbance and Hydrologic Changes. We recommend the EIS describe site-specific current soil conditions and include an assessment of potential project impacts. Such impacts may include soil loss, altered soil chemistry from melted artificially made snow, increased surface storm flow, changes in water temperature associated with erosion of soils and stream banks, water channelization, soil compaction, reduced stream base flows from decreased infiltration to groundwater, 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.

Project elements such as snowmaking, tree clearing, trail modification and development, construction areas, and any grading are likely to increase surface runoff and can cause sedimentation loading and possible pollutant delivery. The EPA’s general recommendations for the EIS include:

- Avoid or bridge wetlands and sensitive ecological areas where practicable;
- Minimize road and trail construction and density to reduce adverse impacts to watersheds;
- Locate roads and trails away from difficult to replace alpine resources, such as alpine meadows, wetlands, 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 Forest Service that are applicable to sensitive alpine areas;
- Locate cut and fill in areas that are unlikely to impact wetland hydrology, with additional attention to fen wetlands;
- 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.

Water Quantity and Quality Impacts with Additional Snowmaking. We recommend that the EIS include the following information related to snowmaking:

- A description of the increase in total acreage of snowmaking coverage compared to the current artificial snowmaking activities;
- Details on any operational changes needed for the proposed project, including the water volumes required for proposed operations, timing of withdrawals and application, and amount of snow being made;
- 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 the magnitude and impact of water quantity changes 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 information 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. Potential impacts should also be considered through the lens of regional meteorological trends. We recommend the EIS discuss the effects of current and projected trends in the project area, and how implementation of the proposed project could exacerbate these effects. This discussion should assess potential impacts from changes in the amount and timing of streamflow. Such changes could affect aquatic habitat and lifecycles, riparian and wetland areas and functions, and water quality parameters like water temperature.

We also recommend the EIS analyze how the potential for drought and reduced water availability impacts the viability of the proposed project. The EIS should also 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.

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 § 303(d) of the CWA, segments for which TMDLs have been established, receiving waters for permitted dischargers, receiving waters for snowmaking runoff, 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, mean and 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, accounting for applicable water quality standards, water quality impairments per State CWA § 303(d) lists, draft or established TMDLs, and potentially affected dischargers.

We also recommend the EIS analyze how the potential for drought and reduced water availability impacts the viability of the proposed project. The EIS should also 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.

Potential Impacts to Air Quality. Protection of air quality is important to address in the EIS. We recommend the EIS include a discussion of the activities and equipment that will be necessary to complete the project. Based on the level of emission generating activity and the schedule for construction, we recommend generating an emission inventory. Based on the description of the activities, emission sources, schedule, and emission inventory, we recommend disclosing potential impacts to air quality and AQRVs. We also recommend the EIS include projected future year (post construction) vehicle data and trends with expanded resort visitation. If large increases in visitation are projected, it may be appropriate to include these emissions in the emission inventory.

The scoping documentation states that some burning may be conducted on site related to tree and vegetation removal for this proposed project. Fire activity may cause periodic degradation of air quality and visibility in the region. We recommend the EIS include information on the potential amount of slash burning proposed to be chipped or stacked (e.g., number of slash piles). Because burning is proposed, we recommend that the EIS include in the emission inventory an estimate of predicted emissions and potential air quality impacts that may result from burning. In order to understand the region of influence from any burning, we recommend the EIS include the location of any proposed burning areas on any vegetation/tree removal maps.

In addition, we recommend considering opportunities to reduce vehicle and equipment emissions by limiting unnecessary idling, as well as minimizing road and construction-related fugitive dust emissions (as appropriate) through the application of BMPs such as dust suppression practices.

Mitigation

The EPA recommends the Forest Service 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. We recommend that each alternative in the EIS explicitly include identification of mitigation where impacts are expected. Monitoring and modeling efforts are key components for accurately assessing current conditions, predicting project impacts, and ultimately ensuring adequate mitigation planning and implementation of effective mitigation. The higher the uncertainty is surrounding project impacts, the more emphasis there should be on providing mitigation details to assure protection of resources. At a minimum, we recommend including the following information in the EIS:

- Provide a description of the required mitigation and its expected effectiveness;
- Identify the entity responsible for implementing the mitigation;
- Outline a detailed plan for the monitoring of the mitigation measures to ensure timely and correct implementation and maintenance;
- Outline a detailed plan for existing condition baseline monitoring if data are lacking;
- Provide an evaluation process for determining the effectiveness of the implemented mitigation and further measures to apply in cases of ineffectiveness;
- Define specific management decision points based upon protecting desired environmental conditions (thresholds) in the project area, which would trigger action;
- Identify management alternatives and mitigation measures that would be implemented should a threshold be exceeded and timeframes for corrective action;
- Identify funding sources and financial assurances to sustain mitigation commitments;
- Establish mechanisms for public disclosure of the analysis and management decisions; and

- Define specific temporal milestones to meet rehabilitation standards.

We emphasize the importance of the EIS including details on mitigation measures for any impacted resource, especially effects related to water quality, stream morphology, and aquatic life impacts. The EPA also recommends the EIS include:

- A list of BMPs that will be required to protect water resources;
- A discussion of the circumstances under which the BMPs would be applied (e.g., proximity to surface water resources, presence of erosive soils, slope, sensitive aquifers, spring emergencies, etc.); and
- An explanation of how the Forest Service or another entity would ensure that the BMPs would be funded and monitored to ensure timely and correct implementation.