
3.0 ENVIRONMENTAL CONSEQUENCES

3.9 CUMULATIVE EFFECTS

INTRODUCTION

NEPA requires the consideration of cumulative impacts for a proposed action or project. CEQ regulations (40 CFR 1508.7) implementing NEPA defines cumulative impacts as follows:

Cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other action. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

In order to provide a conservative, worst-case analysis, the cumulative analysis has been based upon buildout of the Mammoth Mountain Ski Area (MMSA), as projected in the *MMSA Master Plan*.⁷³ It should be noted that environmental issues for which the Proposed Action is not anticipated to result in adverse effects, would not result in cumulative impacts. As such, only the environmental issue areas analyzed in this Final EA are anticipated to result in potential cumulative impacts and therefore, are analyzed below.

3.9.1 EVALUATION OF POTENTIAL CUMULATIVE EFFECTS

a. Recreation

(1) Proposed Action

Cumulative development assumed in the *MMSA Master Plan* would result in an increase of 2,240 skiers/snowboarders on a normal day and 3,200 skiers/snowboarders on a peak day. However, as described in Section 3.2, *Recreation*, the Proposed Action would have a beneficial effect on winter sports by providing the Ski Back Trail, which was assumed in the *MMSA Master Plan*. The Ski Back Trail would increase skiable terrain at the Canyon Lodge portal and simultaneously create skier return capacity to The Village portal. Therefore, construction of the

⁷³ *Mammoth Mountain Ski Area, MMSA Master Plan, Table II.27 and Table VI.6, 2005.*

Ski Back Trail would reduce the cumulative demand for the Village Gondola and the Canyon Lodge and Main Lodge Transit systems, resulting in a beneficial cumulative impact on winter sports.

The proposed Ski Back Trail would require mitigation measures for short-term impacts to the Uptown and Downtown mountain bike trails and to ensure mountain bikers do not utilize the Ski Back Trail. Similar to the Proposed Action, cumulative development may result in a general increase in use of the mountain bike trails at North Village build out and may result in higher maintenance needs, trail restoration needs, and a minor reroute to accommodate the roundabout. However, cumulative projects that may result in adverse effects to the mountain bike trails would be required to restore the trails or provide alternative routes. Therefore, there would be no cumulative adverse effects to mountain bike trails.

(2) Alternative 1 – Original Alignment Proposal

Alternative 1 would reduce the cumulative demand for demand for the Village Gondola and the Canyon Lodge and Main Lodge Transit systems, resulting in a beneficial cumulative impact on winter sports. In addition, under Alternative 1, cumulative development may result in a general increase in use of the mountain bike trails with buildout of the North Village and may result in higher maintenance needs, trail restoration needs, and a minor reroute to accommodate the roundabout. However, cumulative projects that may result in adverse effects to the mountain bike trails would be required to restore the trails or provide alternative routes. Therefore, there would be no cumulative adverse effects to mountain bike trails.

(3) Alternative 2 – Transit Emphasis Alternative

Alternative 2 would result in adding a total of four buses during the peak hour (3:30 P.M. to 5:00 P.M.) running only from the Main Lodge to The Village. While this Alternative would reduce the cumulative demand for the Village Gondola and the Canyon Lodge and Main Lodge Transit systems, it would not increase skiable terrain to accommodate the increase in skiers under buildout conditions.

This Alternative would not require construction of the Ski Back Trail. Mitigation would not be required for the mountain bike trails. Regardless, similar to the Proposed Action, there would not be a cumulative adverse effect regarding summer recreational facilities.

(4) Alternative 3 – No Action Alternative

Alternative 3 would not result in development of the Ski Back Trail and therefore, would not provide additional skiable terrain or provide skier return capacity to The Village portal

resulting in a cumulative adverse effects to winter recreational sports. However, while this Alternative would not impact mountain bike trails, cumulative development may result in a general increase in use of the mountain bike trails with buildout of North Village and may result in higher maintenance needs, trail restoration needs, and a minor reroute to accommodate the roundabout. However, cumulative projects that may result in adverse effects to the mountain bike trails would be required to restore the trails or provide alternative routes. Therefore, there would be no cumulative adverse effects to mountain bike trails.

b. Transportation

(1) Proposed Action

The analysis in Section 3.3, *Transportation*, included buildout of the MMSA and therefore, included cumulative effects. As described in Section 3.3, based on the buildout traffic analysis for the *General Plan Update*, the intersections of Minaret Road/Main Street will be LOS D and the intersection of Minaret Road/Forest Trail Road will be LOS B. In addition, under cumulative conditions, the Village Gondola return trip demand will increase to 4,500 skiers and on peak days 6,400 skiers.⁷⁴ Finally, cumulative development would increase the lines for the buses going from the Canyon and Main Lodges to The Village.

As concluded in Section 3.3, under cumulative (buildout) conditions, the Ski Back Trail would not provide relief to traffic congestion on southbound Minaret Road towards The Village but would provide an alternative to waiting in line for public transit and would provide relief to existing and future demand for the Village Gondola. Therefore, implementation of the Proposed Action would result in a beneficial cumulative effect to transportation.

(2) Alternative 1 – Original Alignment Proposal

Similar to the Proposed Action, Alternative 1 would not provide relief to traffic congestion on southbound Minaret Road towards The Village but would provide an alternative to waiting in line for public transit and would provide relief to existing and future demand for the Village Gondola. Therefore, implementation of Alternative 1 would result in a beneficial cumulative effect to transportation.

⁷⁴ *Town of Mammoth Lakes, North Village Specific Plan (2000), identifies the projects that are currently in the CDD development list.*

(3) Alternative 2 – Transit Emphasis Alternative

Alternative 2 would provide an additional four buses during the peak hour (3:30 P.M. to 5:00 P.M.) running only from the Main Lodge to The Village. As concluded in Section 3.3, Alternative 2 would reduce the line of transit riders but would not result in a change in traffic congestion due to latent demand. Regardless, similar to the Proposed Action, this Alternative would not result in a cumulative adverse effect regarding transportation.

(4) Alternative 3 – No Action Alternative

The No Action Alternative would not develop a Ski Back Trail to alleviate the cumulative demand for the Village Gondola and the Canyon Lodge and Main Lodge Transit systems. As such, this Alternative would result in a cumulative adverse effect regarding transportation.

c. Air Quality

(1) Proposed Action

While the Proposed Action would not result in adverse effects to air quality as a result of construction activities, construction emissions associated with buildout of the MMSA could exceed the Great Basin Unified Air Pollution Control District's (GBUAPCD) emission thresholds. However, the GBUAPCD requires standard mitigation measures associated with any construction activities. As such, compliance with the GBUAPCD requirements for mitigating construction emissions would ensure that there would not be a cumulative adverse effect to air quality due to construction activities.

As discussed in Section 3.4, although the proposed Ski Back Trail is located in a region that is in non-attainment for ozone and PM₁₀, the emissions associated with the Proposed Action would not be cumulatively considerable, as the emissions would fall below GBUAPCD emission thresholds. In fact, it should also be noted that the Proposed Action would result in a net reduction of operational emissions as a result of development of the Ski Back Trail. In addition, the Proposed Action would be consistent with the Air Quality Management Plan (AQMP), which is intended to bring the Basin into attainment for all criteria pollutants. As such, the Proposed Action would have a beneficial effect regarding cumulative air quality.

(2) Alternative 1 – Original Alignment Proposal

Under Alternative 1, compliance with the GBUAPCD requirements for mitigating construction emissions would ensure that there would not be a cumulative adverse effect to air

quality. In addition, Alternative 1 would result in a net reduction of operational emissions and as such, would have a beneficial effect regarding cumulative air quality.

(3) Alternative 2 – Transit Emphasis Alternative

Under Alternative 2, no construction activities would be required and therefore, there would not be construction emissions that would contribute to the local and regional air quality. With the increase of four buses during the peak hour, Alternative 2 would result in a greater amount of operational emissions. Regardless, the operational emissions associated with Alternative 2 would be below GBUAPCD thresholds and would be consistent with the AQMP and therefore, would not contribute to a cumulative adverse effect regarding air quality.

(4) Alternative 3 – No Action Alternative

This Alternative would not result in any construction or operational emissions. Therefore, Alternative 3 would not result in cumulative adverse effects to air quality.

d. Noise

(1) Proposed Action

Similar to the Proposed Action, cumulative development projects would be required to comply with the Town's Noise Ordinance requirements, which states that the maximum construction noise level permitted is 75 dBA or lower for residences in a single-family residential zone. Section 15.08.020 of the Town of Mammoth Lakes Municipal Code also limits construction during the weekdays and only permits weekend construction activities with prior approval. Therefore, all cumulative projects would be required to comply with the Town's Noise Ordinance ensuring that there would be no adverse cumulative noise effects.

Similar to the construction noise effects, the Town's Noise Ordinance stipulates indoor and outdoor noise requirements for various land uses. Therefore, future development within the MMSA would all be required to comply with the Town's Noise Ordinance, ensuring that there would be no adverse noise effects due to cumulative operations.

(2) Alternative 1 – Original Alignment Proposal

Under Alternative 1, compliance with the Town's Noise Ordinance would ensure that there would be no adverse cumulative noise effects due to construction activities. In addition, cumulative projects would all be required to comply with the maximum permitted interior and

exterior noise levels permitted by the Town's Noise Ordinance, ensuring that there would be no adverse noise effects due to cumulative operations.

(3) Alternative 2 – Transit Emphasis Alternative

Alternative 2 would not require construction activities and as such, there would be no cumulative adverse effects regarding noise due to construction activities. In addition, this Alternative would result in adding four buses during the peak hour to Minaret Road, which is already a highly trafficked road. The increase in four bus trips combined with the trips associated with the cumulative projects would not result in an increase in ambient noise level. Therefore, there would not be a cumulative adverse effect to noise with implementation of Alternative 2.

(4) Alternative 3 – No Action Alternative

The No Action Alternative would not result in construction or operational noise impacts since there would be no development under this Alternative. As such, Alternative 3 would not result in a cumulative adverse effect regarding noise.

e. Biological Resources

(1) Proposed Action

As concluded in Section 3.6, *Biological Resources*, the study area is not expected to support any sensitive plant species, is not considered a wildlife movement corridor, and is not within critical habitat for any listed plant or wildlife species. In addition, the Proposed Action is not expected to have any adverse impacts to regional populations of sensitive wildlife species. Finally, similar to the Proposed Action, cumulative projects would be required to limit construction activities during nesting periods, in order to further ensure there would be no adverse effects to wildlife resources. As such, implementation of the Proposed Action would not result in adverse cumulative effects to biological resources.

(2) Alternative 1 – Original Alignment Proposal

Under Alternative 1, the study area is not expected to support any sensitive plant species, is not considered a wildlife movement corridor, and is not within critical habitat for any listed plant or wildlife species. In addition, Alternative 1 is not expected to have any adverse effects to regional populations of sensitive wildlife species. Finally, cumulative projects would be required to limit construction activities during nesting periods, in order to further ensure there would be

no adverse effects to wildlife resources. As such, implementation of Alternative 1 would not result in adverse cumulative effects to biological resources.

(3) Alternative 2 – Transit Emphasis Alternative

Alternative 2 would provide four additional buses along an already developed roadway that is currently heavily trafficked. Therefore, the addition of four buses during the P.M. peak hour is not anticipated to impact biological resources. Consequently, implementation of Alternative 2 would not contribute to cumulative adverse effects to biological resources.

(4) Alternative 3 – No Action Alternative

The No Action Alternative would not result in biological resources impacts since there would be no development under this Alternative. As such, Alternative 3 would not result in a cumulative adverse effect regarding biological resources.

f. Cultural Resources

(1) Proposed Action

A Heritage Resources records review and field survey conducted for the proposed Ski Back Trail concluded that there were no cultural resources within the Ski Back Trail's Area of Potential Effect (APE) and therefore, the Proposed Action would not result in adverse effects to cultural resources. In addition, similar to the Proposed Action, all cumulative projects would have to comply with federal and State regulations if cultural resources are identified during construction activities. As such, there would not be a cumulative adverse effect regarding cultural resources.

(2) Alternative 1 – Original Alignment Proposal

The Heritage Resources records review and field survey concluded that there were no cultural resources within the Proposed Action's APE, which includes the Original Alignment Proposal. Therefore, Alternative 1 would not result in adverse effects to cultural resources. In addition, all cumulative projects would have to comply with federal and state regulations if cultural resources are identified during construction activities. As such, there would not be a cumulative adverse effect regarding cultural resources.

(3) Alternative 2 – Transit Emphasis Alternative

Alternative 2 would provide four additional buses along an already developed roadway that is currently heavily trafficked. Therefore, the addition of four buses during the P.M. peak hour is not anticipated to impact cultural resources. Consequently, implementation of Alternative 2 would not contribute to cumulative adverse effects to cultural resources.

(4) Alternative 3 – No Action Alternative

The No Action Alternative would not result in cultural resources impacts since there would be no development under this Alternative. As such, Alternative 3 would not result in a cumulative adverse effect regarding cultural resources.

g. Aesthetics

(1) Proposed Action

The Ski Back Trail is surrounded by development with residential uses located south of the trail and Minaret Road, a heavily trafficked roadway, located north of the trail. Cumulative projects within the area would, therefore, be separated by intervening development. In addition, the remaining surrounding area consists of the MMSA, which has significant intervening topography and forestation that obstructs views of surrounding areas. Therefore, due to intervening development and the visual separation of the Proposed Action from the cumulative projects, the potential for simultaneous viewing of the Proposed Action and the cumulative projects is minimized. Therefore, there would be no cumulative adverse effects regarding aesthetics.

(2) Alternative 1 – Original Alignment Proposal

The Original Alignment Proposal is surrounded by development with residential uses located south of the trail and Minaret Road, a heavily trafficked roadway, located north of the trail. Cumulative projects within the area would therefore, be separated by intervening development. In addition, the remaining surrounding area consists of the MMSA, which has significant intervening topography and forestation that obstructs views of surrounding areas. Therefore, due to intervening development and the visual separation of Alternative 1 from the cumulative projects, the potential for simultaneous viewing of Alternative 1 and the cumulative projects is minimized. Therefore, there would be no cumulative adverse effects regarding aesthetics.

(3) Alternative 2 – Transit Emphasis Alternative

Alternative 2 would provide four additional buses along an already-developed roadway that is currently heavily trafficked. Therefore, the addition of four buses during the P.M. peak hour is not anticipated to impact the aesthetic value of the area. Consequently, implementation of Alternative 2 would not result in a cumulative adverse effect regarding aesthetics.

(4) Alternative 3 – No Action Alternative

The No Action Alternative would not result in aesthetic impacts since there would be no development under this Alternative. As such, Alternative 3 would not result in a cumulative adverse effect regarding aesthetics.