4.3 AIR QUALITY

Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant Impact With Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Conflict with or obstruct implementation of the applicable air quality plan?			✓	
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		✓		
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?		✓		
d. Expose sensitive receptors to substantial pollutant concentrations?		✓		
e. Create objectionable odors affecting a substantial number of people?			✓	

The project site is located within the Town of Mammoth Lakes, which is part of the Great Basin Valleys Air Basin (Basin) and under the jurisdiction of the Great Basin Unified Air Pollution Control District (GBUAPCD). The GBUAPCD is one of 35 air quality management districts that have prepared Air Quality Management Plans (AQMPs) to accomplish a five-percent annual reduction in emissions. The most recent AQMP was adopted in 1990.

Both the State of California and the Federal government have established health-based Ambient Air Quality Standards (AAQS) for criteria air pollutants. These pollutants include carbon monoxide (CO), ozone (O_3), nitrogen oxides (NO_X), sulfur oxides (SO_X), particulate matter up to 10 microns and 2.5 microns in diameter (PM_{10} and $PM_{2.5}$, respectively), and lead (Pb). O_3 is formed by a photochemical reaction between NO_X and reactive organic compounds (ROGs). Thus, impacts from O_3 are assessed by evaluating impacts from NO_X and ROGs.

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. The *Air Quality Management Plan for the Town of Mammoth Lakes* (AQMP) was developed in compliance with the Federal Clean Air Act (FCAA) requirement to produce a State Implementation Plan (SIP) to demonstrate how the Mammoth Lakes area would attain and maintain the National AAQS for PM_{10}. The AQMP was specifically designed to address the air quality impacts associated with the yearly influx of visitors to the Town during the peak winter season. Increases in population and vehicle traffic result in an increase in PM_{10} emissions from wood stoves, fireplaces, and from traffic-related road dust and cinders.

During the development of the AQMP, an ad-hoc committee was formed to investigate appropriate control measures for PM_{10}. The final control strategy was adopted by the Mammoth Lakes Town Council on November 7, 1990 and was incorporated in the Town of Mammoth Lakes Municipal Code as Chapter 8.30,

Particulate Emissions Regulations. The measures included within Chapter 8.30 include a limit of 106,600 vehicle miles traveled (VMT), street sweeping measures, and regulations on wood-burning stoves and fireplaces.

According to the Town of Mammoth Lakes Traffic Analysis Zone (TAZ) map, the project site is located in TAZ 197. The existing trip generation of TAZ 197 shows that there are 16 residential high-density (residents) units, 30 residential medium-density (visitors) units, 42 residential high-density (visitors) units, and 42 lodging/hotel (visitors) units. The Holiday Haus currently has 34 keyed units (15 hotel units and 19 other/manager's units), which is consistent with the existing uses of TAZ 197. Based on the General Plan build out of TAZ, 197,560 visitor lodging/hotel units would be constructed. The proposed 118-traffic generating unit project is consistent with existing, cumulative, and General Plan build out conditions and land use provisions. Therefore, the proposed number of units would not exceed those programmed into TAZ 197.

Refer to Response 4.3 (b), *Long-Term (Operational) Impacts*, for a discussion regarding the vehicle miles traveled (VMT) load of the proposed project. The proposed project would create a net addition of 1,422 VMTs, resulting in approximately 2.96 pounds per day of PM_{10} from vehicular sources. The project's PM_{10} emissions would be approximately 0.62 percent of the Town's emissions at the VMT limit. Additionally, 2.96 pounds per day of PM_{10} would be approximately 33.23 $\mu g/m^3$ which is below the State standard of 50 $\mu g/m^3$ for a 24 hour averaging period. Impacts related to VMTs are anticipated to be less than significant.

Fire Access Road Alternative

Similar to the proposed project, the Fire Access Road Alternative would not conflict with or obstruct implementation of the AQMP for the Town. The project proposes more units and is more conservative in nature than the Fire Access Road Alternative. Thus, the Fire Access Road Alternative would result in a less than significant impact, as the proposed land uses would remain the same.

Mitigation Measures: No mitigation measures are required.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Less Than Significant Impact with Mitigation Incorporated.

Short-Term Impacts

Short-term air quality impacts are anticipated during grading and construction operations associated with implementation of the proposed project. Temporary air emissions would result from the following activities:

- Particulate (fugitive dust) emissions from grading and demolition; and
- Exhaust emissions from the construction equipment and the motor vehicles of the construction crew.

The project's construction activities would include demolition, grading, excavation, and construction commencing in 2009 and finishing in 2010. Grading activities would include 1,000 cubic yards of excavation and embankment, 45,000 cubic yards of excavation and export, and 1,100 cubic yards of cut and fill. The demolished and aggregate material would be exported to the Benton Crossing Landfill. The 45,000 cubic yards of unusable materials would be exported off-site and deposited at the United States Forest Service (USFS) pit at Mammoth-Yosemite Airport.

Fugitive dust from grading and construction activities is expected to be short-term and would cease following completion of the proposed improvements. Most of this material is inert silicate and are less harmful to health than the complex organic particulates released from combustion sources. The greatest amount of fugitive dust generated is expected to occur during site excavation and grading. Of particular concern is the amount of PM_{10} generated as a part of fugitive dust emissions. The Basin is currently classified as nonattainment for particulate matter (PM_{10}). Implementation of the recommended mitigation regarding dust control techniques (e.g., daily watering), limitations on construction hours would reduce impacts of PM_{10} fugitive dust. The GBUAPCD utilizes a permitting process to regulate emissions resulting from construction activities. The following list shows the rules and regulations that are applicable to the proposed project:

a. *GBUAPCD Rule 200-A and 200-B. Permits Required - Before any individual builds or operates anything, which may cause the issuance of air contaminants or the use of which may eliminate, reduce or control the issuance of air contaminants, such person must obtain a written authority to construct and permit to operate from an Air Pollution Control Officer.*

b. *GBUAPCD Rules 401 and 402. Fugitive Dust and Nuisance - Rule 401 requires that airborne particles remain on the site they originate from under normal wind conditions. Proper mitigation techniques approved by the GBUAPCD must be implemented to ensure that fugitive dust is contained. This does not apply to dust emissions discharged through a stack or other point source.*

   Rule 402 states that any air discharge that may cause injury or detriment, nuisance or annoyance, or damage to any public property or considerable number of people is regulated. This rule discusses all the health and safety issues that may interfere with public and private areas surrounding the site.

The applicable rules and regulations have been listed as mitigation measures for the proposed project based on guidance from the GBUAPCD. With compliance to Mitigation Measures AQ-1 through AQ-3 for construction activities, the proposed project is not anticipated to result in significant short-term construction impacts. Construction activities and emissions would be regulated through the permitting process and with implementation of standard fugitive dust control measures. Impacts are concluded to be less than significant.

Asbestos

The project would demolish approximately nine structures. It should be noted that the structures are anticipated to have been built prior to 1978. Thus, buildings that would be demolished may contain friable asbestos, which has been identified as a hazardous airborne contaminant. Regulations are currently in place, which require demolition activities to minimize asbestos released into the air. Primarily, this is accomplished through the asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP). The Environmental Protection Agency (EPA) through the California Air Resources Board (CARB) and the GBUAPCD enforces this NESHAP.

The asbestos NESHAP specifies work practices to be followed during demolition of all structures that contain, or may contain asbestos. These work practices have been designed to effectively reduce airborne asbestos to safe levels. The project would be subject to the asbestos NESHAP, and thus would be required to comply with these specified work practices. Demolition activities would be subject to Toxic Substance Control Act (TSCA), (15 U.S.C. Section 2601 et. seq.) *Title 2 - Asbestos Hazard Emergency Response* (refer to Mitigation Measure AQ-4).

Long-Term (Operational) Emissions

Mobile Source Air Emissions

The AQMP is the primary document for the Town to satisfy the FCAA requirement to develop an SIP to demonstrate how the Mammoth Lakes area will attain and maintain the National AAQS for PM_{10}. Although Mono County is categorized as nonattainment of the state ozone standard, there is no ozone implementation plan for attaining the ozone standard in Mono County, nor is one required as outlined in the *2001 CARB Ozone Transport Review*.[1] This document states that "Transport from the central portion of the (San Joaquin) Valley is responsible for ozone violations in Mammoth Lakes . . ." and that the impacts on the Town's air quality from sources in the San Joaquin Valley were "overwhelming". Table 4.3-1, *Long-Term Project Air Emissions*, presents anticipated operational emissions, as modeled with URBEMIS 2007.

Table 4.3-1
Long-Term Project Air Emissions

Project	Pollutant (pounds/day)[1]					
	ROG	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
• Area Source Emissions[2]	1.41	0.98	3.95	0.00	0.01	0..01
• Vehicle Emissions	3.78	2.24	27.34	0.01	2.96	0.57
Total Emissions	*5.19*	*3.22*	*31.29*	*0.01*	*2.97*	*0.58*

Notes:
1. Based on URBEMIS 2007 (Version 9.2.4) modeling results, worst-case seasonal emissions for area and mobile emissions have been modeled.
2. Area source emissions exclude the use of fireplaces and wood burning stoves.

[1] California Air Resources Board, *2001 CARB Ozone Transport Review*, 2001.

Project-Related Particulate Matter Emissions

Based on guidance provided by the GBUAPCD, the long-term operational impacts were analyzed in relation to the 106,600 VMT limit. As previously stated, Section 8.30.110 of the *Municipal Code* requires that the Town, in its review of proposed project development, incorporate measures that reduce projected VMTs. Mobile source emissions would be generated from vehicle trips produced by residents, employees, and guests. An estimated 916 daily vehicle trips would be generated by the proposed project. As a result, the proposed project would also generate approximately 1,472 VMT. Based on the URBEMIS2007 emissions, the vehicle PM_{10} emissions of the proposed project would be 2.96 pounds per day from vehicular sources. The project's PM_{10} emissions would be approximately 0.62 percent of the Town's emissions at the VMT limit. Additionally, 2.96 pounds per day of PM_{10} would equate to 33.23 $\mu g/m^3$ which is below the State standard of 50 $\mu g/m^3$ for a 24 hour averaging period.

Future development within the Town has been anticipated within the recent Town of Mammoth Lakes *2005 General Plan Update FPEIR*. The *2005 General Plan Update FPEIR* modeled traffic loads for year 2004 as well as future year 2024. According to the *2005 General Plan Update FPEIR*, VMT within the Town is projected to produce a traffic load of 159,961 VMT at buildout, which would exceed the AQMP target by about 53,400 VMT. In order to address the anticipated increase at future buildout, the General Plan Update has included several goals and policies to further regulate the anticipated PM_{10} emissions resulting from the increase in VMT. Such goals and policies would build upon the regulations set forth within the current *Municipal Code*, Section 8.30, and GBUAPCD Rule 431. As an example of the new goals and policies, the recent *2007 General Plan Update* has included the use of higher density residential and mixed-use development adjacent to commercial centers, mountain portals, and transit corridors, which would reduce the number of vehicle trips, VMT, and encourage alternative modes of transportation. It should be noted that the *1987 General Plan* does not have specific goals or polices directly related to air quality.

Current Measures, Policies, and Programs

Compliance with Town Policies and implementation of the following features would reduce the proposed project's PM_{10} emissions:

- Design and Location Features. The proposed project includes 14 workforce housing units on-site to reduce vehicle trips generated by project employees. Additionally, the project proposes higher density residential development adjacent to commercial centers, mountain portals, and transit corridors.
- Proximity to Transit Stops. The closest transit stop is located approximately 150 feet to the northwest of the project site. The Red Line runs along Old Mammoth Road to SR-203/Main Street. The Green Line generally runs along Sierra Nevada Road and Meridian Boulevard. The Town also operates a free trolley during the summer that follows the same route as the Red Line on Main Street.
- Street Sweeping/Vacuuming Program. Town of Mammoth Lakes has implemented a street sweeping/vacuuming program, which reduces the road

and cinder dust along the streets. These measures have been included in GBUAPCD Rule 431 and Section 8.30.110 of the *Municipal Code.*

- Elimination of Wood Burning Stoves. The proposed project would utilize propane fireplaces in each unit and no wood burning fireplaces are proposed in the lobby or common area.

Particulate Matter Trends

The EPA, in collaboration with CARB, has conducted monitoring studies to determine the benefits from the implementation of the particulate matter standards. Specifically, data compiled from the CARB Ambient Air Quality Data Summaries database (ADAM) shows that at the Mammoth Lakes Gateway Home Center Air Monitoring Station, the 24-hour average for PM_{10} has dropped from 160 µg/m^3 in 1990 to 60 µg/m^3 in 2007; refer to the *Particulate Matter Trends* Exhibit in Appendix B, *Air Quality Data*.[2] It is anticipated that with the implementation of the existing fugitive dust controls and PM_{10} standards, particulate matter emissions would continue to decrease.

According to the AQMP, particulate matter that causes PM_{10} violations consists primarily of road dust and soot from wood combustion. The proposed project does not include wood stoves or fireplaces. In addition, motor vehicle emissions such as those used in snow-removal equipment have been greatly reduced since the AQMP analysis was completed because State and Federal programs now require the use of low-sulfur diesel fuel as of 2006. Additionally, pursuant to CARB regulations and technology improvements, diesel engines are producing lesser amounts of criteria air pollutants. When fully implemented in 2010, heavy duty on-road diesel engines would be up to 95 percent cleaner than today's models. CARB estimates a 90 percent reduction in particulate emissions for new on- and off-road engines. As a result, tailpipe emissions are a declining source of PM_{10} in the Mammoth Lakes area.

The proposed project would be required to implement Mitigation Measure AQ-5, which would include measures to reduce VMTs. Such measures include but are not limited to shuttles to and from other areas within the Town, providing a linked system to developed areas through existing road networks, public transit systems, open space systems, and bicycle and pedestrian systems. With the implementation of Mitigation Measure AQ-5, the proposed project would have a less than significant impact.

Area Source Emissions

Pollutant emissions associated with energy demand (i.e., electricity generation and natural gas consumption) are classified by the GBUAPCD as regional stationary source emissions. Criteria pollutant area source emissions would be generated by increased concentration of electrical energy and natural gas as a result of development of the proposed project. Electric power generating plants are distributed throughout the Basin and western United States. Electricity is considered an area source since it is produced at various locations within, as well as outside of

[2] The data was compiled from measurements taken at the Mammoth Lakes Gateway Home Center Monitoring Station located at State Route 203 and Old Mammoth Road.

the Basin. Since it is not possible to isolate where electricity is produced, these emissions are conservatively considered to occur within the Basin and are regional in nature. The primary use of natural gas by the proposed land uses would be for combustion to produce space heating, water heating, other miscellaneous heating, or air conditioning, consumer products and landscaping.

The area source emissions are also generated by the use of wood burning ovens or fireplaces. The proposed project would not include the use of wood burning ovens or fireplace; therefore, there are no impacts in this regard. The proposed project shall comply with Mitigation Measure AQ-6, which would prohibit the use of wood burning stoves or appliances. Therefore, impacts associated with area sources are not anticipated.

Carbon Dioxide

The Town of Mammoth Lakes is located near the southwest edge of the Long Valley Caldera, which overprints the Sierra Nevada boundary fault system. Persistent earthquake and volcanic activity over the past four million years have formed the eastern Sierra landscape in the vicinity of Long Valley Caldera and the Mono Basin. Detailed surveys indicate that the central portion of the Long Valley Caldera has risen more than 30 inches since the late 1970s, possibly in response to the filling of a shallow magma chamber. In 1990, it was recognized that magmatic gasses were killing trees in certain portions of the caldera. The trees were killed by high carbon dioxide flux in the soil gasses surrounding their roots. The most well known location of high carbon dioxide soil gas is at the north end of Horseshoe Lake where scientists estimate between 50 and 150 tons of carbon dioxide are emitted daily. However, based on studies performed by the California Division of Mines and Geology and the U.S. Geological Survey, it is noted that there have been no areas of high carbon dioxide flux identified in the project vicinity. Therefore, the future occupants of the proposed building would not be exposed to carbon dioxide.

Fire Access Road Alternative

Similar to the proposed project, the Fire Access Road Alternative would not violate air quality standards or contribute substantially to an existing or projected air quality violation as construction and operations of the proposed project would be similar. The Fire Access Road Alternative would result in a less than significant impact with mitigation measures incorporated, as the proposed land uses would remain the same.

Mitigation Measures:

Construction Impacts

AQ-1 Prior to approval of the project plans and specifications, the Public Works Director, or his designee, shall confirm that the plans and specifications stipulate that, in compliance with GBUAPCD Rule 401, excessive fugitive dust emissions shall be controlled by regular watering or other dust preventive measures, as specified in the GBUAPCD Rules and Regulations. In addition, GBUAPCD Rule 402 requires implementation of

dust suppression techniques to prevent fugitive dust from creating a nuisance off-site. Implementation of the following measures would reduce short-term fugitive dust impacts on nearby sensitive receptors:

- All active portions of the construction site shall be watered to prevent excessive amounts of dust;
- On-site vehicles' speed shall be limited to 15 miles per hour (mph);
- All on-site roads shall be paved as soon as feasible or watered periodically or chemically stabilized;
- All material excavated or graded shall be sufficiently watered to prevent excessive amounts of dust; watering, with complete coverage, shall occur at least twice daily, preferably in the late morning and after work is done for the day;
- If dust is visibly generated that travels beyond the site boundaries, clearing, grading, earth moving or excavation activities that are generating dust shall cease during periods of high winds (i.e., greater than 25 mph averaged over one hour) or during Stage 1 or Stage 2 episodes; and
- All material transported off-site shall be either sufficiently watered or securely covered to prevent excessive amounts of dust.

AQ-2 Under GBUAPCD Rule 200-A and 200B, the project Applicant shall apply for a Permit to Construct prior to construction, which provides an orderly procedure for the review of new and modified sources of air pollution.

AQ-3 Under GBUAPCD Rule 216-A (New Source Review Requirement for Determining Impact on Air Quality Secondary Sources), the project Applicant shall complete the necessary permitting approvals prior to commencement of construction activities.

AQ-4 Prior to demolition activities, the Applicant shall demonstrate to the GBUAPCD that the project is consistent with the Toxic Substance Control Act (TSCA), (15 U.S.C. Section 2601 et. seq.) Title 2 - Asbestos Hazard Emergency Response for handling asbestos.

Operational Impacts

AQ-5 The project shall implement the following measures to reduce overall VMT per day and associated PM_{10} emissions:

- The project shall include a transportation demand management program to reduce overall VMTs, in order to demonstrate compliance with the Federal PM_{10} standard of 150 $\mu g/m^3$. The program shall include, but not be limited to circulation system improvements, shuttles to and from major destinations like the Mammoth Mountain Ski Area ski area, and the location of facilities to encourage pedestrian circulation;

- Contribute to a Townwide traffic monitoring program to reduce VMTs;
- The project shall be linked to existing developed areas through existing road networks, public transit system, open space systems, and bicycle and pedestrian systems;
- The project shall implement trip reduction measures particularly during PM peak hours to disperse trips between areas and mountain pedestrian systems; and
- Hotel Condominium units shall enter into a transit fee agreement with the Town consistent with the Town's established Transit Fee Agreement Program.

AQ-6 Prior to approval of building plans, the Applicant shall provide confirmation, to the satisfaction of the Town of Mammoth Lakes Community Development Department, that wood fired stoves or appliances would not be used on-site.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Less Than Significant Impact with Mitigation Incorporated.

Cumulative Construction Impacts

The GBUAPCD has developed a permitting process prior to the construction of any development within the Basin to ensure that construction activities would not result in exceedances of National Ambient Air Quality Standards (NAAQS). The GBUAPCD emphasizes the use of control measures during construction activities. As stated in the Construction Air Emissions discussion in response 4.3(b), Mitigation Measures AQ-1 through AQ-4 would reduce impacts associated with construction through the application of proper permits and by demonstrating that the appropriate control measures would be utilized during construction activities. Therefore, cumulative construction impacts would be less than significant in this regard.

Cumulative Long-Term Impacts

The GBUAPCD does not have numerical thresholds for criteria pollutants to determine whether the project would result in a cumulatively considerable net increase of PM_{10} or O_3 precursors. However, construction and operation of the project would result in an increase in air emissions, such as those associated with vehicle trips, as compared to existing conditions. These impacts would be less than significant with mitigation incorporated. Refer to Responses 4.3 (a) and (b).

Adherence to GBUAPCD rules and regulations would help to alleviate potential impacts related to cumulative conditions. Emission reduction technology, strategies, and plans are constantly being developed. GBUAPCD standards and Town requirements would be implemented on a project-by-project basis.

Implementation of Mitigation Measures AQ-5 and AQ-6 would reduce the project's operational emissions to the greatest extent feasible. As a result, the proposed project would not contribute a cumulatively considerable net increase of any nonattainment criteria pollutant. Therefore, cumulative operational impacts associated with the proposed operation of the project would be less than significant.

Global Climate Change

California is a substantial contributor of global greenhouse gases, emitting over 400 million tons of CO_2 a year.[3] Climate studies indicate that California is likely to see an increase of three to four degrees Fahrenheit over the next century. Methane is also an important greenhouse gas that potentially contributes to global climate change. Greenhouse gases are global in their effect, which is to increase the earth's ability to absorb heat in the atmosphere. As primary greenhouse gases have a long lifetime in the atmosphere, accumulate over time, and are generally well-mixed, their impact on the atmosphere is mostly independent of the point of emission.

The impact of anthropogenic activities on global climate change is apparent in the observational record. Air trapped by ice has been extracted from core samples taken from polar ice sheets to determine the global atmospheric variation of CO_2, methane, and nitrous oxide from before the start of the industrialization (approximately 1750), to over 650,000 years ago. For that period, it was found that CO_2 concentrations ranged from 180 parts per million (ppm) to 300 ppm. For the period from approximately 1750 to the present, global CO_2 concentrations increased from a pre-industrialization period concentration of 280 ppm to 379 ppm in 2005, with the 2005 value far exceeding the upper end of the pre-industrial period range.

Greenhouse Gas Emissions and Global Climate Change Strategies

Table 4.3-2, *Estimated Annual Carbon Dioxide Emissions*, estimates the CO_2 emissions of 91 units. These estimations are based on energy emissions from indirect electricity consumption, area source emissions, and automobile emissions. As shown in *Table 4.3-2*, the proposed project would result in 326.43 tons of CO_2 per year during the operational phase. The proposed project would be subject to any regulations developed under Assembly Bill 32 as determined by CARB. Currently, there is not an industry-wide accepted method to quantify greenhouse gases from development projects.

[3] California Energy Commission, *Inventory of California Greenhouse Gas Emissions and Sinks:1990 to 2004,* 2006. http://www.energy.ca.gov/global_climate_change/inventory/documents/index.html

Table 4.3-2
Estimated Annual Carbon Dioxide Emissions

Project	CO_2 (tons/year)[1]
Operational Emissions	
▪ Indirect Source (Energy Consumption)[2]	0.35
▪ Mobile Source Emissions[3]	173.12
▪ Area Source[3]	152.96
Total Operational Emissions	*326.43*

Notes:
1. The Project is not expected to result in the emissions of hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), or sulfur hexafluoride (SF_6), the other gases identified as greenhouse gases in Assembly Bill 32.
2. Energy consumption calculated based on emissions factors provided by U.S. Energy Information Administration, *Domestic Electricity Emissions Factors 1999-2002*, October 2007. (http://www.eia.doe.gov/oiaf/1605/techassist.html)
3. Emissions calculated using the URBEMIS 2007 (version 9.2.4) model.

The Intergovernmental Panel on Climate Change (IPCC) constructed several emission trajectories of greenhouse gases needed to stabilize global temperatures and climate change impacts. It concluded that a stabilization of greenhouse gases at 400 to 450 ppm carbon dioxide-equivalent concentration is required to keep mean global warming below 2°C, which in turn is assumed to be necessary to avoid dangerous climate change.

California Governor Arnold Schwarzenegger issued Executive Order S-3-05 in June 2005, which established the following greenhouse gas emission reduction targets:

- 2010: Reduce greenhouse gas emissions to 2000 levels
- 2020: Reduce greenhouse gas emissions to 1990 levels
- 2050: Reduce greenhouse gas emissions to 80 percent below 1990 levels

AB-32 requires that CARB determine what the statewide greenhouse gas emissions level was in 1990, and approve a statewide greenhouse gas emissions limit that is equivalent to that level, to be achieved by 2020. CARB has approved a 2020 emissions limit of 427 metric tons of CO_2 equivalent. By January 2009, CARB must adopt mandatory reporting rules for significant sources of greenhouse gases and also a plan indicating how reductions in significant greenhouse gas sources would be achieved through regulations, market mechanisms, and other actions.

The California Environmental Protection Agency Climate Action Team (CAT) proposed early action measures to mitigate climate change to meet the Governor's climate reduction targets in the *Climate Action Team Report to Governor Schwarzenegger at the Legislature*, March 2006. This report proposes measures and strategies to help reduce climate change impacts and achieve the Governor's reduction targets proposed in Executive Order S-3-05. The Governor's reduction targets would be achieved by complying with the reduction strategies specified within the Climate Action Team Report to Governor Schwarzenegger at the Legislature. *Table 4.3-3*, *Applicable Global Climate Change Strategies*, provides a list and

analysis of recommended measures and strategies to help reduce global climate impacts that were provided by the CAT.

As shown in *Table 4.3-3*, the project would comply with the applicable CAT reduction strategies. The proposed project provides an energy efficient design with a computerized utility management system. Additionally, the proposed hotel condominium uses are in proximity to the various transit options including bus stops and gondola access. Proximity to such transit options would reduce trips, thereby reducing emissions. Based on an investigation of compliance with the CAT greenhouse gas reduction strategies, the proposed project would not result in significant emissions associated with greenhouse gas emissions and global climate change. Therefore, impacts would be less than significant.

Table 4.3-3
Applicable Global Climate Change Strategies

Strategies for Reducing Greenhouse Gas Emission[1]	Project Compliance With Reduction Strategy
Vehicle Climate Change Standards. AB 1493 (Pavley) required the state to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of climate change emissions emitted by passenger vehicles and light duty trucks. Regulations were adopted by the CARB in September 2004.	**Compliant**. Following a phase-in period, the majority of the vehicles that access the project would be expected to be in compliance with any vehicle standards that CARB adopts.
Other Light Duty Vehicle Technology. New standards would be adopted to phase in beginning in the year 2017 model year.	**Compliant**. Following a phase-in period, the majority of the vehicles that access the project would be expected to be in compliance with any vehicle standards that CARB adopts.
Diesel Anti-Idling. In July 2004, the CARB adopted a measure to limit diesel-fueled commercial motor vehicle idling.	**Compliant**. All vehicles, including diesel trucks accessing the project site, would be subject to the CARB measures and would be required to adhere to the 5-minute limit for vehicle idling.
Hydrofluorocarbon Reduction. 1) Ban retail sale of HFC in small cans; 2) Require that only low GWP refrigerants be used in new vehicular systems; 3) Adopt specifications for new commercial refrigeration; 4) Add refrigerant leak-tightness to the pass criteria for vehicular inspection and maintenance programs; 5) Enforce federal ban on releasing HFCs.	**Compliant**. This measure applies to consumer products. When CARB adopts regulations for these reduction measures, any products that the regulations cover will comply with the measures.
Heavy-Duty Vehicle Emission Reduction Measures. Increased efficiency in the design of heavy-duty vehicles and an education program for the heavy-duty vehicle sector.	**Compliant**. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Achieve 50 percent Statewide Recycling Goal and Zero Waste – High Recycling. 1) Design locations for separate waste and recycling receptacles. 2) Utilize recycled components in the building design.	**Compliant**. Pursuant to Assembly Bill 939, all development projects within the Town of Mammoth Lakes (including the proposed project) would be required to divert 50 percent of their solid waste stream.
Appliance Energy Efficiency Use. Use of energy efficient appliances (i.e., washer/dryers, refrigerators, stoves, etc.)	**Compliant**. In October 2006, the State of California adopted Appliance Efficiency Regulations which include standards for both Federally-regulated appliances and non-Federally-regulated appliances. These regulations would apply to the proposed project.

Table 4.3-3 (Continued)
Applicable Global Climate Change Strategies

Strategies for Reducing Greenhouse Gas Emission Reduction[1]	Project Conformance
Energy Efficient Building Standards. The CEC has been actively engaged in its "Building Energy Efficiency Standards in Progress" effort. The next phase of the project is to conduct public workshops on mark-ups of the "Express Terms" of the Standards, plus the supporting technical rules for software developers and the extensive technical data appendices that are required for showing compliance. The CEC intends to adopt these regulations in 2008. The GHG emissions reductions from this strategy are still to be determined (the GHG emissions reductions associated with ongoing energy efficient building standards are expected to be 3 $MMTCO_2E$ by 2020).	Compliant. The project would include energy efficient design measures such as a computerized utility management system. This system would be compatible with the proposed future geothermal heat source proposed for the Town. The energy management system would control the utility demands of unoccupied units by shutting off all lights and power sources, turning off refrigerators, and turning heat down.
Smart Land Use and Intelligent Transportation. Transportation systems encourage high-density residential and commercial mixed use.	Compliant. The proposed project would provide condominium hotel units in close proximity to local commercial retail and restaurant uses that serve the community. Additionally, the proposed project would reduce trips due to its proximity to various transit options (bus/trolley stops and gondola access).
Water Use Efficiency Features. To increase water use efficiency include use of both potable and non-potable water to the maximum extent practicable and use of low flow appliances (i.e., toilets, shower heads, washing machines, etc).	Compliant. The proposed project would be required to comply with California Health and Safety Code (HSC) section 17921.3 which sets efficiency standards for bathroom fixtures.
Forestation/Reforestation. Clustering residential development to preserve forest/woodland resources, increasing density, and preserving and restoring open space would comply with this strategy.	Compliant. The proposed project would be located on an already developed site in the Town of Mammoth Lakes. The proposed project would redevelop the Holiday Haus Motel and would not remove open space areas.
Achieve 50 percent Statewide Recycling Goal. In multi-family housing, separate recycling and waste receptacles should be planned.	Compliant. The Town of Mammoth Lakes is required to recycle 50 percent waste stream. Although the proposed project would not generate a significant amount of solid waste, the project would be required to recycle.

Notes:
1. Only the applicable strategies for reducing greenhouse gas emissions were included.

Source: California Environmental Protection Agency, C*limate Action Team Report to Governor Schwarzenegger and the Legislature*, March 2006.

Fire Access Road Alternative

Similar to the proposed project, the Fire Access Road Alternative would create cumulative short-term construction or long-term operational air quality impacts with incorporation of Mitigation Measures AQ-1 through AQ-6. Thus, the Fire Access Road Alternative would result in a less than significant impact with mitigation incorporated, as the proposed land uses would remain the same.

Mitigation Measures: Refer to Mitigation Measures AQ-1 through AQ-6 to reduce the project's cumulative contribution of criteria pollutants. No additional mitigation measures are required.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact with Mitigation Incorporated.

Sensitive populations are more susceptible to the effects of air pollution than is the general population. Land uses considered sensitive receptors include residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. The project site is surrounded to the north, east, and west by residential uses and transient lodging facilities. *Table 4.11-5*, *Sensitive Receptors*, in *Section 4.11*, *Noise*, provides a list of the location of the sensitive receptors closest to the project site.

As identified in *Section 4.3(b)*, project construction emissions would not exceed GBUAPCD thresholds nor would the proposed project expose surrounding sensitive receptors to substantial pollutant concentrations from construction or operational activities associated with the proposed project. With implementation of Mitigation Measures AQ-1 through AQ-6 impacts would be reduced to a less than significant level. Therefore, sensitive receptors would not be exposed to substantial pollutant concentrations. In addition, project-related emissions would be further reduced with implementation of the recommended mitigation.

Areas of vehicle congestion have the potential to create "pockets" of CO called "hot spots," which have the potential to exceed State standards. As noted previously, traffic generation associated with the proposed project would be nominal, and thus, would not be of sufficient volume to increase the intersection capacity utilization (ICU) of nearby intersections such that a CO hotspot analysis would be warranted.

Emissions Within Subterranean Parking Areas

Emissions from project operations would result primarily from mobile source emissions (e.g., new traffic trips). These mobile source emissions would be largely composed of carbon monoxide, which accumulates as vehicles queue within the structure to find a parking space. If the catalytic converter of a vehicle is not already warm from previous operation, the car is said to be in a "cold start" mode. A typical cold start would occur after the vehicle is parked in excess of eight hours overnight where the dewpoint could rise and lower the temperature. During a cold start, the catalytic converter is too cold for the chemical reaction that converts pollutants (e.g., carbon monoxide, hydrocarbons and nitrogen oxides) to water vapor, nitrogen and carbon dioxide. More technically, the rate of the chemical reaction is too slow at low temperatures to control the emissions. Thus, the emissions from the tailpipe are the same as the uncontrolled emissions from the engine during a cold start. However, per the International Mechanical Code, Section 403.5, Public Garages, mechanical ventilation systems are required to operate automatically upon detection of a concentration or carbon monoxide of 25 parts per million (ppm) by approved detection devices. The 25 ppm trigger is the maximum allowable concentration for continuous exposure in any eight-hour period according to the American Conference of Governmental Industrial Hygienists. Therefore, carbon monoxide concentrations within the underground parking facility would also be below the State's one-hour standard.

Potential impacts to air quality would be less than significant given the project compliance with required standards for construction activities, as well as operational activities and incorporation of Mitigation Measures AQ-1 through AQ-6.

Fire Access Road Alternative

Similar to the proposed project, the Fire Access Road Alternative would not expose sensitive receptors to substantial pollutant concentrations with mitigation measures incorporated. Thus, the Fire Access Road Alternative would result in a less than significant impact with mitigation incorporated, as the proposed land uses would remain the same.

Mitigation Measures: Refer to Mitigation Measures AQ-1 through AQ-6. No additional mitigation measures are required.

e) Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. The science of odor as a health concern is still new. Offensive odors can potentially affect human health in several ways. Typically, odorant compounds irritate the eyes, nose and throat, which can reduce respiratory volume. Secondly, the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

Land uses associated with odor complaints typically include agricultural uses, wastewater treatment plants, food processing plants, chemical plants, composting, refineries, landfills, dairies and fiberglass molding. The proposed project does not include any uses associated with odors. Thus, impacts related to short-term and long-term operation odors would be less than significant.

Fire Access Road Alternative

Similar to the proposed project, the Fire Access Road Alternative would not create objectionable odors that would affect a substantial number of people. Thus, the Fire Access Road Alternative would result in a less than significant impact, as the proposed land uses would remain the same.

Mitigation Measures: No mitigation measures are required.

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