
5.0 CUMULATIVE ANALYSIS

Section 15355 of the CEQA Guidelines defines the term cumulative impacts as ‘two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.’ Individually, the impacts of a project may be relatively minor, but when considered along with impacts of other closely related or nearby projects, including past, present, and reasonably foreseeable projects, the effects could be cumulatively significant.

This section contains an analysis of cumulative effects for each applicable resource category. The significance criteria are the same as they were for analyzing the individual effects of the Project.

PAST, PRESENT, AND REASONABLY FORESEEABLE PROJECTS

A list and description of cumulative projects was compiled by consulting with the Town, Inyo County, Mono County, and the Inyo National Forest staff. The projects included in the cumulative effects analysis are located within the Planning Area or the larger cumulative effects area for Biological Resources and Transportation and Circulation. Implementation of the Updated Plan and these related projects together have the potential to result in a significant impact to the environmental issue areas addressed in this EIR. Table 5-1 on page 5-2 provides a description of the related projects. The locations of the related projects are shown in Figure 5-1 on page ~~5-45~~ 5-3.

5.1 IMPACTS

Aesthetics, Light and Glare

For Aesthetics, Light and Glare the cumulative effects area is the Planning Area. The majority of the related projects within the planning area are geothermal projects. Given the topography of the area, the related projects would not result in a cumulatively significant aesthetics or light and glare impact.

Table 5-1**Related Projects**

Name	Location	Size	Description
Related Projects Within the Planning Area			
Sierra Business Park	3 miles south of intersection of SR 203 and opposite the Mammoth Yosemite Airport	36.7 acres	37 light industrial lots; continued operation of concrete batch plant
Casa Diablo Geothermal Development Projects	Near the intersection of U.S. Highway 395 and SR 203	15 acres	Existing plant consisting of 3 binary geothermal power plants and related wellfields run by MPLP
Upper Basalt Geothermal Exploration Project	West of U.S. Highway 395 and north of SR 203	< 10 acres	Exploration drilling project consisting of 5 small diameter holes and 4 large diameter wells constructed by MPLP
Basalt Canyon Slim Hole and Geothermal Well Exploration Projects	West of U.S. Highway 395 and north of SR 203	3.3 acres	2 exploration drilling projects consisting of 5 small diameter holes and 2 large diameter wells constructed by MPLP
Basalt Canyon Geothermal Project	Basalt Canyon to Casa Diablo	3.2 acres	Construction of geothermal pipeline that would connect wells in the Basalt Canyon Geothermal Well Exploration Project to the Casa Diablo Geothermal Development Project.
Rhyolite Plateau Geothermal Exploration Project		15 acres	2 exploration drilling projects consisting of 11 small diameter holes and 11 large diameter wells constructed by MPLP
Mammoth Rehab Fuelbreaks Project	Mammoth Creek Road between SR 203 and Mammoth Creek Park; Sherwin Creek Road from Sierra Meadows Ranch to Sherwin Creek Campground; Sherwin Creek Road to the motocross track; and the route between Sherwin Creek Road and Kerry Meadow (south of Snowcreek).	895 acres	Inyo NF is proposing to mow a system of fuelbreaks 300 feet wide, 150 feet on either side of the roads.
Addition Related Projects for Biological Resources and Transportation and Circulation			
Lake Ridge Ranch Estates	Crowley Lake, 12 miles south of Mammoth Lakes	79.5 acres	114 single-family residential lots
C & L Specific Plan	East of Lower Rock Creek in the community of Sierra Paradise	53.4 acres	53 single-family residential lots

Table 5-1 (Continued)

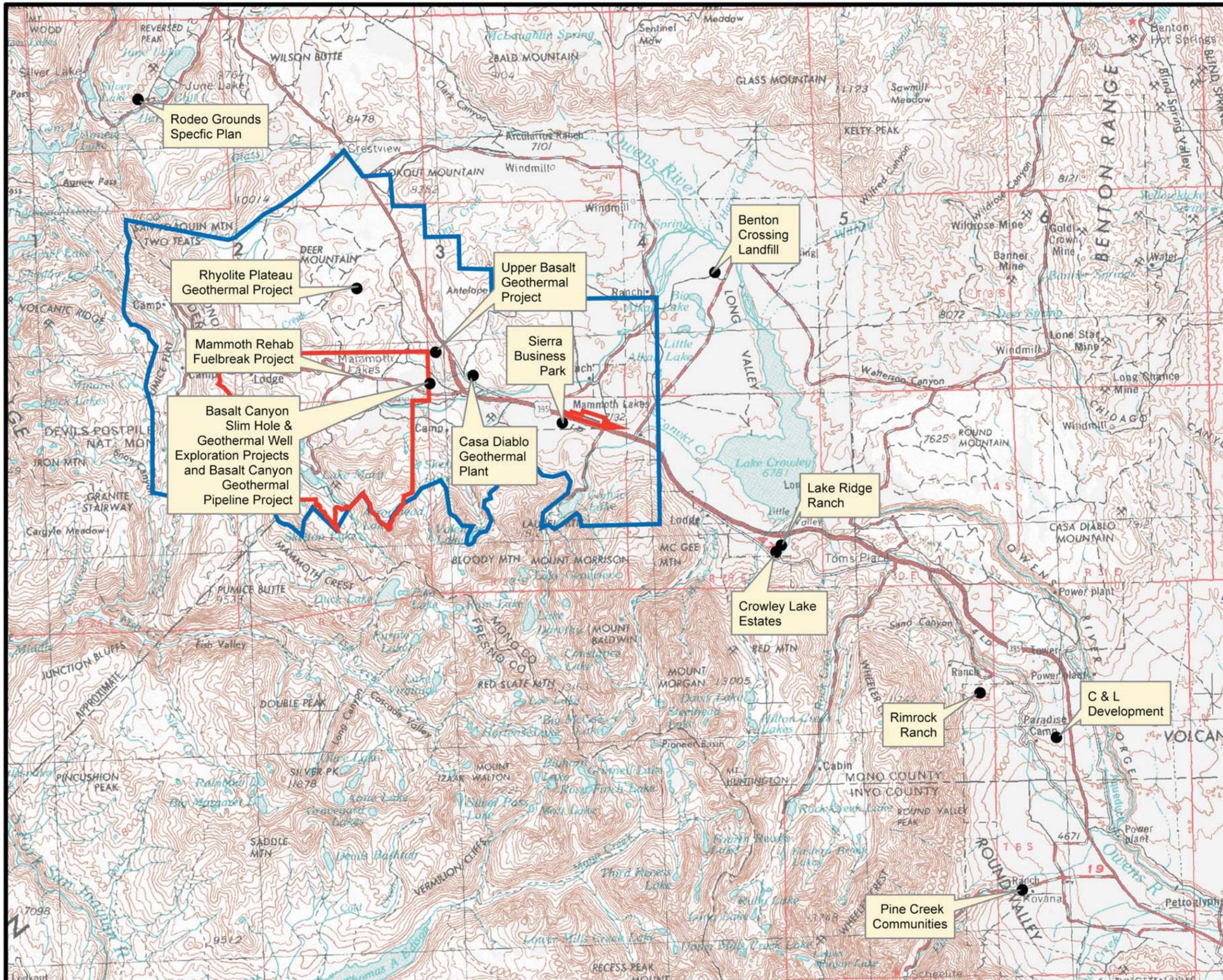
Related Projects			
Name	Location	Size	Description
Crowley Lake Estates Specific Plan	Crowley Lake, 12 miles south of Mammoth Lakes	9 acres	5 single-family residential lots; one commercial lot; one multi-family residential lot
Rimrock Ranch Specific Plan	Wheeler Crest, 25 miles south of Mammoth Lakes	180 acres	35 single-family residential lots
Benton Crossing Landfill Expansion	4.7 miles east of the intersection of U.S. Highway 395 and Benton Crossing Road in Long Valley	50 acres	Expand property boundaries and increasing disposal capacity
Pine Creek Communities Specific Plan	10 miles northwest of Bishop, CA	280 acres	189 single-family residential lots; closure of a 47-space mobile home project
Rodeo Grounds Specific Plan	Southwest of June and Gull Lakes off US 158	90 acres	499 multi-family and single family, condo resort hotel, 30,000 commercial.

Source: Town of Mammoth Lakes, 2005

Air Quality

~~With implementation of measures and mitigation measures, the Updated Plan and related projects would not be expected to cause an exceedance of the federal PM₁₀ standard. Nonetheless, the Mammoth Lakes portion of the GBVAB is designated as nonattainment for O₃ (State standard only) and a nonattainment area for PM₁₀ (State and federal standards). In addition, the State 24 hour PM₁₀ and 1 hour O₃ standard continue to be exceeded. Therefore, the increase in pollutant emissions associated with implementation of the Updated Plan and related projects would be considered cumulatively considerable and significant and unavoidable. The O₃ impact is primarily the result of pollution generated in the San Joaquin Valley, transported by air currents and winds over the Sierra Nevadas into the Planning Area during limited periods of the year and is not a condition substantially generated by Town activities. In fact, exceedances of the O₃ standard would likely occur without any contribution of emissions of O₃ precursors (nitrogen oxides and hydrocarbons) from Town activity. In addition this significant and unavoidable impact would also occur under the existing General Plan.~~

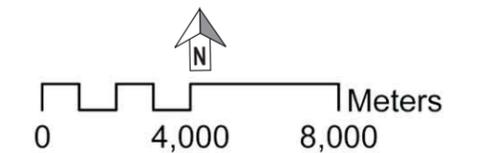
~~Table 5-2 on page 5-5 presents the modeled PM₁₀ emissions from the Updated Plan relative to current conditions (Year 2004) and the existing Plan (2024). The Updated Plan would result in a three percent increase in PM₁₀ emissions in comparison to the Existing General Plan and a 44 percent increase in PM₁₀ emissions in comparison to the Existing Conditions (2004). However, implementation measures and mitigation measures provided under Issue 4.2-2~~



Town of Mammoth Lakes

Explanation

- Municipal Boundary
- Planning Area
- Cumulative Effects Area for Biological Resources and Transportation



Base Map: Mariposa 1 x 2 degree sheet
 Source: Town of Mammoth Lakes

Figure 5-1 Location of Related Projects

Table 5-2**Comparison of Modeled PM₁₀ Emissions**

	Existing Conditions (2004)	Existing Plan[†] (2024)	Updated Plan[†] (2024)
Wood burning emissions (kg/day)	941	551	551
Vehicle-related emissions (kg/day)	1,843	3,377	3,455
Total emissions (kg/day)	2,784	3,888	4,007

[†]—Includes burn ban for EPA-approved stoves.

Source: *Enviroscientists, Inc., 2005.*

would ensure that the Updated Plan would meet the federal standards. Nonetheless, a 44 percent increase in PM₁₀ emissions in comparison to the Existing Conditions combined with the fact that the State 24-hour PM₁₀ standard has been violated every year that adequate records have been maintained would thus be considered cumulatively considerable.

The 14 identified related projects listed in Table 5-1 include various development projects encompassing residential, corporate, and industrial uses. Of these 14 identified projects, seven are located within the Town of Mammoth Lakes Planning Area, and seven are outside the Planning Area. All of the related projects are located in Mono County except for the Pine Creek Communities, which is located in Inyo County. All of the related projects are located within the Great Basin Valley Air Basin (GBVAB). The GBVAB is considered non-attainment for state ozone and PM₁₀ standards, and in attainment of all federal standards, except PM₁₀ in the Town of Mammoth Lakes.

The construction and implementation of these related projects could result in increased air pollutant emissions from direct and indirect sources, which may cause a cumulative impact to air quality. However, the Town has no control over the timing and sequencing of the related projects, and as such, any quantitative analysis that assumes multiple, concurrent construction projects would be entirely speculative, which is discouraged by CEQA.

Construction would contribute additional emissions of criteria pollutants and TACs from activities such as fuel burning in on- and off-road equipment, painting, and asphalt application, and fugitive sources of dust from earth disturbing activities. Construction of the related projects outside the Planning Area would contribute emissions of criteria pollutants to the air basin, but are unlikely to contribute to an increase in the ambient concentrations of the Town due to their locations relative to Town. The distance from Town to these projects range from two miles to 25 miles. In addition, all of the related projects outside of the Planning Area with the exception of the Rodeo Grounds development are at lower elevations and are located downwind of the Town during the prevailing winter time winds from the north and west. Construction of the Rodeo

Grounds development is unlikely to contribute to ambient particulate concentrations due to the existing topography in the region. The Town of Mammoth Lakes and the Rodeo Grounds development are separated by San Joaquin Mountain, June Mountain, and White Wing Mountain. Therefore, construction activities are unlikely to contribute cumulatively to local PM₁₀ concentrations. Construction of the related projects within the Planning Area may contribute to local ambient concentrations of particulate matter, but these would be considered temporary in nature, with heavy earthmoving occurring primarily in the summer months when ambient concentrations of PM₁₀ are considerably less than winter time levels, and unlikely to contribute to or cause exceedances of the federal PM₁₀ standard. Emissions of VOCs and NO_x emitted during construction are unlikely to contribute to ground level ozone concentrations in the GVBAB, due to the CARB's determination that the transport of ozone from the San Joaquin Valley is "overwhelming".

The operation of these related projects would cause increases in emissions from stationary sources (industrial processes, boilers, heaters, electrical power production, consumer goods, chemical usage, surface coatings, maintenance activities, etc.) and mobile sources (vehicle trips related to commuting from work and school, shopping, and recreational activities, earthmoving at the landfill, etc.) within the GVBAB. Stationary sources with the potential to impact air quality are regulated by the GBUAPCD and subject to emissions standards designed to minimize impacts to ambient air pollutant levels. As discussed in the Traffic cumulative analysis, the additional burden of most of these developments on traffic in the Town was addressed in the traffic model used to estimate VMT under build-out conditions. This estimated cumulative VMT was used to calculate the increase in emission of criteria and precursor pollutants, presented in Table 4.2-3. Therefore, the impact from implementation of the related projects is accounted for in the analyses contained in this EIR.

Impacts resulting from the allowed build-out under the Draft General Plan Update are considered significant and unavoidable with respect to State PM₁₀ and O₃ standards; therefore impacts are considered cumulatively significant for those State standards. Future emissions of PM₁₀ would be managed and mitigated so as to ensure that ambient levels in the Town of Mammoth Lakes remain below the federal PM₁₀ standard, and project-related impacts are considered less than significant. Since the related projects are unlikely to contribute to or cause exceedances of the federal PM₁₀ standard, the cumulative impact with respect to the federal standard is considered less than significant.

Biological Resources

For Biological Resources the cumulative effects area is bounded by the June Lakes area and Benton Hot Springs to the north, and the Tungsten Hills and the Pincushion Peak area to the south (Figure 5-1). The cumulative effects area for Biological Resources is larger geographically

than other issue areas to take into account all of the projects along the migration corridors for the Round Valley and Casa Diablo deer herds.

Vegetation

Implementation of the project would not be expected to significantly reduce or modify the existing vegetation community types because of the limited extent of development when compared to the regional setting. However, the removal of mature plant communities, either by development or human-caused fire, creates the potential for the introduction of noxious weeds, nonnative, or undesirable plants. This cumulative impact is considered potentially significant. The Updated Plan includes numerous policies and implementation measures that would serve to protect biological resources, including vegetation. For example, Implementation Measure I.2.A.a.4 provides the Town with authority to require a tree survey, including preservation and a replacement plan, prior to issuance of a grading permit for discretionary actions. Implementation Measure I.1.B.f.1 requires that site design make every feasible effort to preserve large specimen trees and pursue aggressive replanting with native trees. Measure I.1.B.d.5 requires a biological assessment for development projects. Such an assessment would identify any sensitive species. The measure also requires the protection or replacement of any identified species to mitigate any potential impacts. Therefore, the policies and implementation measures in the Updated Plan would reduce cumulative impacts to vegetation within the Planning Area to less than significant.

Wildlife

In general, the cumulative impacts to wildlife resources would be the direct impact of loss of habitat as a result of surface disturbance and the indirect results of increased population (e.g., vehicle mortality, noise, recreational use, human-caused fires, domestic pets). Increased human intrusion may displace wildlife species from critical or high quality habitats, travel corridors, nest sites, or areas immediately adjacent to project areas and roads. Implementation of the related projects in addition to the Updated Plan would not be expected to significantly increase habitat fragmentation due to their dispersed nature and the large amount of public land within the cumulative effects area.

Future proposed projects on federal lands (e.g., mines and geothermal) and on private lands (e.g., residential and commercial) would be subject to agency approval. The development that would occur as a result of the Updated Plan would be limited to within the UGB. However, the Updated Plan includes policies and implementation measures to protect wildlife within the Planning Area. Measures to protect wildlife include Measure I.1.B.d.4, which requires a biological assessment for development projects. In addition, Measure I.1.B.d.2 requires that preservation and conservation strategies be prepared to protect biological resources when discretionary development is proposed on lands with such resources. Also, as discussed in Section 4.3, Biological Resources, there are approved recovery and management plans for

several species in the region. Finally, many of the development projects would require environmental analysis, which would include the identification and mitigation of any potential significant impacts to wildlife resources on an individual and cumulative basis. Nonetheless, as described below, there is the potential for increased recreational use of the public lands which could have unidentified, but significant impacts on wildlife. Therefore, the Updated Plan in conjunction with the related projects may result in a significant impact on wildlife that is not fully mitigated by the measures in the plan.

Special Status Species

This discussion focuses on species that are either migratory, federally listed, petitioned for federal listing, or in the case of mule deer, a species of special concern to CDFG. Each of the following species was determined to potentially be adversely affected by the cumulative impacts of the projects within the cumulative effects area for Biological Resources: Sierra Nevada bighorn sheep, mule deer, sage-grouse, and Owens tui chub. The nature and significance of the impacts are discussed in the following sections.

Sierra Nevada Bighorn Sheep

The only sheep population within the cumulative effects area is the Wheeler Crest population, located approximately 15 miles southeast of the Town. The Rimrock Ranch, Pine Creek Communities, C & L Development, Crowley Lake Estates, and Lake Ridge Ranch development projects are located within five miles of the Wheeler Crest population.

The Project and the residential development projects proposed within the cumulative effects area would result in an increase in visitor use throughout the east slope of the Sierra Nevada Range. Indirect effects on Sierra Nevada bighorn sheep could include disturbance to sheep and avoidance of preferred use areas due to an increase in the number of tourists backpacking into the high elevations of the Sierra Nevada Range where the bighorn sheep occur. However, current Inyo National Forest Management Direction controls the number of overnight visitors entering the John Muir Wilderness portion of the Wheeler Crest. Therefore, a significant increase in visitation to the bighorn sheep range is not anticipated.

Protection measures contained in the Draft Recovery Plan for the Sierra Nevada Bighorn Sheep would lessen cumulative impacts on bighorn sheep. A large portion of the area used by the Wheeler Crest population is within the John Muir Wilderness Area. The USFS strictly controls the number of back-country permits that are issued for wilderness area travel. Furthermore, the USFS does not permit entry into some bighorn sheep use areas in the Sierra Nevada Range between July 1st and December 15th to reduce potential disturbance to sheep. The USFS addresses potential adverse effects to the Sierra Nevada bighorn sheep through its policies, regulations, and land use plans. Actions taken by the USFS would be in accordance

with the recovery objectives, recommended recovery actions, and downlisting criteria that are established in the interagency Draft Recovery Plan (USFWS 2003).

As indicated in Section 4.3, Biological Resources, the Updated Plan would not result in impacts to the bighorn sheep as the Wheeler Crest population is located on public lands managed by the Inyo National Forest, including a portion of the John Muir Wilderness. The General Plan of the Town does not propose any development in or adjacent to the bighorn sheep habitat and overnight access to that habitat is restricted by existing Inyo National Forest policy. Therefore, the potential cumulative impact to bighorn sheep is considered as less than significant.

Mule Deer

Cumulatively, the projects have the potential to partially obstruct or disrupt major deer migration corridors and holding areas. Incremental loss of habitat along the migration corridors would result from development, reduction of hiding cover, and increased harassment of deer by dogs, vehicles, noise, lighting, and human presence. Interference with established migratory corridors would be a potentially significant cumulative effect.

The migration corridors and holding areas for the Round Valley and Casa Diablo deer herds are described in Section 4.3, Biological Resources. The following projects are within the migration corridors or holding areas for the Round Valley Herd:

- Pine Creek Communities;
- C & L Development;
- Rimrock Ranch;
- Crowley Lake Estates;
- Lake Ridge Ranch;
- Casa Diablo Geothermal Plant;
- Basalt Canyon Slim Hole and Geothermal Well Exploration projects;
- Basalt Canyon Geothermal Pipeline Project; and
- Sierra Business Park.

With the exception of the proposed Hot Creek Development at the Mammoth Yosemite Airport, development associated with the project is located outside the deer migration corridors. However, human activities associated with the Project may influence deer use of adjacent corridors and holding areas. The CEQA and NEPA documents prepared for most of the cumulative projects concluded that those projects would not impact deer habitat or migratory corridor use. However, the Rimrock Ranch and the Pine Creek Communities projects would, as proposed, have significant impacts on the Round Valley Herd (CDFG Letter May 11, 2001; Inyo County Board of Supervisors 2004).

Depending on the scope and intensity of habitat alterations and disturbance factors in migration corridors, deer may continue use of existing trails, select alternate trails, or abandon use of the migration corridors. The proposed development within the cumulative effects area would not substantially disrupt deer movements between summer and winter ranges. The majority of the land within the cumulative effects area is under the jurisdiction of two federal agencies, the BLM and the USFS, and the LADWP. Cumulative development potential based upon the areas of the proposed development projects within the Round Valley herd winter and migration ranges is approximately ten square miles out of over 100 square miles of habitat.

The human population increase associated with the projects within the cumulative effects area would be expected to result in an increase in deer fatalities from vehicular traffic. The California Department of Transportation reported that an average of 17 deer were killed annually on U.S. Highway 395 from mile post zero to 26.5 for the period of 1990 and 2000 (Town 2001d).

A significant impact to mule deer has been established as a result for impacts associated with Rimrock Ranch and Pine Creek Communities projects, both of which are located near established deer migration corridors. As discussed in Section 4.3, the project area is removed from any migration corridor and would not directly impact the movement of deer herds. However, indirect impacts including an increased incidence of deer kills on U.S. Highway 395 would, in the cumulative context of other regional developments, be significant and unavoidable.

Sage-Grouse

The Long Valley sage-grouse population is within the South Mono Population Management Unit. Projects in the vicinity of known sage-grouse occurrences include the Sierra Business Park, MPLP geothermal projects, Lake Ridge Ranch, Rimrock Ranch, Benton Crossing Landfill, and the Mammoth Yosemite Airport component of the Project. The existing and potential risks for the South Mono Population Management Unit, which have been identified by the Bi-State Local Planning Group (2004) and which could be expected to result in cumulative impacts from the aforementioned projects include the following: recreation, poaching, fences and transmission lines, urbanization/changing land use, geothermal development, cheatgrass/invasive exotic plants, and road kill hazards. Due to the vulnerability of the isolated Long Valley populations, these cumulative impacts are potentially significant.

Sage-grouse populations in the South Mono Population Management Unit would be affected from an increase in recreational activities associated with the projects year round, but especially during the breeding and nesting seasons. Some critical sage-grouse habitats in the South Mono Population Management Unit are accessible for public recreation year round. This impact potentially affects sage-grouse habitat quality and quantity as well as the population (Bi-State Local Planning Group 2004).

Transmission lines provide perches for predatory birds which attack the sage-grouse. Several existing transmission lines impact sage-grouse habitat. A transmission line from Little Antelope area to the Glass Mountains goes through a lek area, brooding, nesting, and wintering habitats. A transmission line also passes through a sage-grouse use area on the south side of U.S. Highway 395. A local transmission line on Benton Crossing Road is potentially impacting sage-grouse in the area. Future geothermal development near the Town may expand transmission line corridors. Raptor perch inhibitors are being used on some transmission line poles within the Population Management Unit.

Several planning mechanisms are in place to mitigate impacts to sage-grouse. Approximately 97 percent of the South Mono Population Management Unit is publicly owned (Bi-State Local Planning Group 2004). The USFS and BLM administer most of these lands and have management plans for sage-grouse that guide actions on federal land. In addition, the CDFG is in the process of preparing a 'Species Conservation Plan for Greater Sage-Grouse in Mono County'. The Town, Mono County, USFS, USGS, BLM, LADWP, and NDOW are partners in the conservation planning effort. Finally, the Greater Sage-Grouse Conservation Plan for the Bi-State Plan Area of Nevada and Eastern California by the Bi-State Local Planning Group in conjunction with the Nevada Governor's Conservation Team (2004) identifies potential impacts and monitoring needs, and proposes mitigation measures for any impacts identified during monitoring that apply to sage-grouse populations within the cumulative effects area. These planning documents and management programs are designed to prevent substantial adverse effects to the sage-grouse. However, as a result of increased use of the sage grouse habitat for recreation by town residents, the potential for significant cumulative impacts would remain.

Owens Tui Chub

The projects within the cumulative effects area that are in the watershed above Hot Creek headsprings include the Sierra Business Park, the Casa Diablo Geothermal Plant, the Upper Basalt Geothermal Project, the Basalt Canyon Slim Hole and Geothermal Well Exploration Projects, the Basalt Canyon Geothermal Pipeline Project, the Mammoth Rehab Fuelbreak Project, and the Project. Activities that decrease available water at the Hot Creek headsprings or cause a significant change in the physical or chemical properties of the water within the designated critical habitat for the Owens tui chub would result in a significant cumulative impact.

Reduction in flows at the Hot Creek headsprings is thought to be attributable to reductions in the non-thermal contributions of water (USFWS 2001). Groundwater extraction upgradient of the Hot Creek headsprings may result in reduced flows. Several hydrogeologic evaluations have been conducted (Schimdt and Associates 1993; 1994; 1995; 1996; 1997; 1998; 1999; Wildermuth 1996; 2003). The results of the monitoring indicate that MCWD pumping did

not influence the Hot Creek headsprings. The USGS reviewed the monitoring data and believes that it is inconclusive and that additional information would be required in order to draw a definitive conclusion on the interaction between groundwater pumping and surface water resources (Farrar 1995; 1996; 1997). Although some uncertainty may exist, available information and expert opinion support the conclusion that there is no connection between the MCWD groundwater pumping and flow discharges at the Hot Creek headsprings.

Individual project proponents would be subject to state and federal regulations to protect surface and groundwater quality. Runoff prevention and drainage systems would be designed to protect surface and groundwater quality and reduce the entry of contaminants into the local aquifers and possibly the source waters for Hot Creek headsprings. Therefore, the cumulative effects of the projects listed above would not have a significant impact on the Owens tui chub or conflict with the provisions of the Owens Basin Wetland and Aquatic Species Recovery Plan (USFWS 1998).

Geology, Soils and Mineral Resources

The geographic area for the cumulative analysis associated with geology, soils and mineral resources would be the Planning Area. However, grading and excavation impacts, including the potential for unstable soils, erosion, and landslides to occur, as well as geologic hazards are typically confined to a very localized area. In addition, all projects would be required to comply with applicable state and local regulations regarding development associated with geotechnical hazards. The related projects in combination with the project would not result in cumulatively significant geology, soils, or mineral resources impacts.

Public Safety and Hazards

For Public Safety and Hazards the cumulative effects area is the Planning Area. The majority of the related projects within the planning area are geothermal projects. Development and the exposure of people to public safety and hazards issues would occur within the UGB. The distance between the related projects and the area in which people reside is substantial and therefore, the related projects would not significantly impact Town residents. The area outside of the UGB is generally not developed. However, the project would result in an increase in the use of lands within the Planning Area due to an increase in outdoor recreation. This increased outdoor recreational use arising from the project, in combination with the related projects, could result in cumulatively significant public safety and hazards impact associated with wildland fires.

Hydrology and Water Quality

For hydrology and water quality the cumulative effects area is the Mammoth Hydrologic Basin. The majority of the related projects within the planning area are geothermal projects that, while in the same watershed as the town, do not share the same water supply as the town (geothermal brine is non-potable and comes from different aquifers). Therefore, cumulative impacts to water supply are less than significant. All projects would be required to comply with applicable federal, state and local regulations regarding runoff and erosion control, hydrology, and water quality. The project would result in a less than significant impact to hydrology and water quality due to policies and implementation measures in the Updated Plan as well as applicable regulations at the federal, state and local levels. Therefore, the project would not contribute to a cumulatively significant impact with regard to hydrology and water quality.

Land Use Planning

For Land Use and Planning the cumulative effects area is the Planning Area. The majority of the related projects within the planning area are geothermal projects. The developed area within the Planning Area is limited to the UGB. Given that the related projects are outside the UGB and the Municipal Boundary, the project in conjunction with the related projects would not have a significant land use and planning impact.

Noise

All of the identified related projects have been considered for the purposes of assessing cumulative noise impacts. The potential for noise impacts to occur are specific to the location of each related project as well as the cumulative traffic on the surrounding roadway network. Due to the rapid attenuation characteristics of ground-borne vibration, there is no potential for a cumulative construction- or operational-period impact with respect to ground-borne vibration.

Of the related projects that have been identified within the study area, the Town has no control over the timing or sequencing of the related projects, and as such, any quantitative analysis that assumes multiple, concurrent construction projects would be entirely speculative. Construction-period noise for the Updated Plan and each related project (that has not yet been built) would be localized. In addition, it is likely that each of the related projects would have to comply with the applicable noise ordinance, as well as mitigation measures that may be prescribed pursuant to CEQA provisions that require significant impacts to be reduced to the extent feasible.

Regarding potential cumulative operational impacts, on-site uses (primarily geothermal projects) would be located at sufficient distances such that distance and topography such that

there is no potential for cumulative stationary source noise impacts. In addition, each of the related projects would have to comply with the applicable noise ordinance. No increase in traffic related noise levels within the Town are anticipated from the related projects. However, traffic from development associated with the Updated Plan combined with related project traffic could incrementally increase noise levels along Interstate Highway 395 within the Planning Area and result in a cumulative significant noise impact.

Traffic

For Transportation and Circulation the cumulative effects area is bounded by the June Lake area and Benton Hot Springs to the north, and the Tungsten Hills and the Pincushion Peak area to the south. The related projects are listed in Table 5-1 and shown in Figure 5-1.

Traffic volumes within the cumulative effects areas would continue to increase with the buildout of the project and the related projects. The traffic study prepared for the Updated Plan (see Appendix F) considered impacts from the Sierra Business Park in the traffic modeling described in Section 4.13. Buildout of the housing projects listed in Table 5-1 would provide an additional 396 single family residences and one multi-family unit. The traffic impacts from the additional development would be partly mitigated by the loss of 47 mobile home spaces. Cumulative traffic effects of the Rodeo Ground Specific Plan were not analyzed in detail because the actual project has yet to be finalized, firm unit projections are not available, as well as the relatively long physical and travel distance from this area to the Town and the general lack of economic connectivity between the two areas. Other projects listed in Table 5-1 are not considered to generate a substantial amount of additional traffic. The primary cumulative traffic impacts would be to U.S. Highway 395 which serves as the major traffic route in the area (Figure 5-1). At buildout of the project, U.S. Highway 395 south of Hot Creek Hatchery Road would operate at just 33 percent of capacity (2,700 vehicles per hour peak direction) on a peak winter Saturday afternoon. Therefore, cumulative impact from the project and the residential developments described in Table 5-1 would not be significant because the traffic generated by the development of the additional residential units would be an insignificant portion of the remaining capacity of U.S. Highway 395. The additional traffic burden of these developments on traffic in the Town was addressed in the traffic model as day-use skier and employee model input data.

The Benton Crossing Landfill would receive some portion of the trash generated by the new development within the cumulative effects area. The traffic impacts of transporting garbage from developments to the Landfill would vary depending on type of garbage service provided to the developments. The additional traffic to the Benton Crossing Landfill is not expected to be significant because of the relatively small number of additional residences.

Public Services and Utilities

The related projects within the Planning Area would not increase the demand for public services and utilities within the Planning Area. The related projects within the Planning Area would not result in an increase in population. Therefore, the project in combination with the related projects would not result in a cumulative impact to public services and utilities.

Recreation

The related projects within the Planning Area would not result in an increase in population as the projects would result in the development of non-residential floor area. In addition, employment for the projects would likely be people already residing in the area. As discussed in the Recreation Section of this document, the project would result in a significant impact on recreation due to the increase in population and the fact that additional park land would be necessary but is as of yet undefined. However, if any workers for the related projects were to reside within the UGB, the analysis for the project addresses the increase in demand that would occur. Therefore, the project in combination with the related projects would result in a less than significant impact with regard to recreation.

Population, Housing, and Employment

Section 4.9 provides an analysis of the potential impacts to population, housing, and employment associated with the implementation of the Updated Plan. The Updated Plan would not result in significant population, housing, or employment impacts. The related projects that are geothermal in nature within the Planning Area would not increase or impact population, housing and employment. Additional development associated with the Sierra Business Park would increase employment and impact population growth. The Sierra Business Park Specific Plan and Draft EIR (Bauer Planning and Environmental Services, Inc. 2000), estimated the total employment to be between 820 and 2,293 employees based on a maximum floor space of 573,250 square feet and light industrial, office, or retail uses. Some of the Sierra Business Park is already developed. The Sierra Business Park would likely provide job opportunities for residents in the region. Any housing demand that would occur as a result of town growth could be accommodated by the land use designations and policies proposed under the Updated Plan.

Cultural Resources

The geographic area for impacts to cultural resources is the Planning Area. With incorporation of mitigation measures, the project would result in less than significant impact with regard to cultural resources. While related projects within the Planning Area would have the potential to impact cultural resources, applicable federal and state regulations would provide

protection to cultural resources if they were discovered. Therefore, the project in combination with the related projects would result in a less than significant cumulative impact with regard to cultural resources.