CALIFORNIA ENVIRONMENTAL QUALITY ACT

INITIAL STUDY AND CHECKLIST

February 4, 2011

ENVIRONMENTAL SETTING AND PROJECT DESCRIPTION

Mammoth Pacific, LP (MPLP) operates the existing geothermal development complex northeast of the junction of US Highway 395 and State Route 203, and located about 2.5 miles east of the Town of Mammoth Lakes in Mono County, California (shown on Figure 1). MPLP proposes to replace the aging Mammoth Pacific I (MP-I) geothermal power plant with a more modern and efficient plant using advanced technology. The replacement plant will be called "M-1."

The existing MP-I plant and the replacement M-1 plant would each be located on a 90-acre parcel of private land owned by MPLP. The replacement M-1 plant would be built approximately 500 feet northeast of the existing MP-I plant. The approximate location and layout of the new M-1 plant is shown on Figure 2. The new M-1 plant and associated structures and equipment would occupy a little more than 3 acres. The existing entrances to the MPLP geothermal complex would provide access to the new M-1 plant site.

The MP-I plant was the first geothermal power plant to be built at the Mammoth Pacific Complex, commencing operation in 1984. It was one of the first geothermal power plants in the United States to use binary cycle technology (i.e., the use of a secondary motive fluid to extract heat from geothermal fluid to generate electricity). Binary technology has advanced significantly since the MP-I plant was constructed. The design capacity of the existing MP-I plant is 14 megawatts (MW). Electricity generated by the plant is sold to Southern California Edison. The MP-I plant itself (without surrounding supporting shops, pumps, wells, etc., none of which would be altered by the proposed project) occupies about 2.5 acres.

The M- 1 replacement plant would utilize Ormat Energy Converters (OEC). An OEC is proprietary modular binary geothermal power generation equipment, manufactured by Ormat Systems, Ltd., and is comprised of a vaporizer, turbine(s), a generator(s), air- cooled condenser (cooling system), preheater, pumps, and piping. The design capacity of the M- 1 plant would be approximately 18 MW (net). No new geothermal wells would be constructed for the replacement plant; it would use the same geothermal fluid from the existing geothermal wells that currently supply MP-I. The total brine flow for the MPLP complex would not increase beyond what is currently permitted. The only new pipeline needed would be an extension of the existing pipes to/from the MP-I plant site to the new M- 1 plant site.

The proposed OEC binary technology uses both high and moderate temperature geothermal resources to extract heat energy from geothermal fluid. With this process geothermal fluids are produced from production wells either by artesian flow or by pumping. Once delivered to the power plant, the heat in the geothermal fluid is transferred to the "motive" fluid in multiple stage non-contact heat exchangers. The geothermal heat vaporizes the motive fluid and turns the binary turbine. The vaporized motive fluid exits the turbine and is condensed in an air-cooled condenser system that uses large fans to pull air over the tubes carrying the motive fluid. The condensed motive fluid is then pumped back to the heat exchangers for re-heating and vaporization, completing the closed cycle. The cooled geothermal fluid from the heat exchangers is pumped under pressure to the geothermal injection wells. This process design results in a facility with no visible emissions and no consumptive use of geothermal or motive fluids (other than very minor loss of motive fluid via fugitive emissions).

The existing MP-I plant uses isobutane as the binary motive fluid. The new M-1 plant would use n-pentane as the binary motive fluid. Bulk quantities of n-pentane would be stored in pressure vessels and bulk storage containers on the M-1 power plant site. Numerous engineering, fire control and safety measures would be integrated into the

project to prevent releases of n-pentane, prevent fires, and to respond to and control fires and other emergencies. The M-1 plant motive fluid vapor condensate would be cooled in tube condensers by a dry air-cooling system that is more efficient than the existing MP-I plant.

A new 12.47 kV substation/switching station would be constructed adjacent to the M-1 plant and would be connected to an existing transmission line on the site via a new interconnection line. All of the proposed new geothermal facilities would be located on the same private parcel on which the existing MP-I plant is located.

During M-1 plant startup operations, the existing MP-I plant would continue to operate until the new M-1 plant becomes commercial, after which time MPLP would close and dismantle the old MP-I plant. The transition period during which both MP-I and M-1 operations would overlap may be up to a maximum of two years after the M-1 plant is commissioned. Thereafter, the MP-I power plant facilities would be removed from the site; plant foundations and above ground pipeline would be removed; and a retention pond on the MP-I site would be removed. The former MP-I site would then be graded and the pad covered with gravel to provide an all weather surface for continuing MPLP operations on the site.

The M-1 replacement plant would operate 24 hours per day, 7 days per week. Plant and well field operations would be integrated via a computer link to the existing power plant control room. The expected life of the proposed M-1 replacement power plant would be a nominal 30 years. The existing MPLP staff would continue to operate the replacement M-1 plant. No new operational staff would be needed for the M-1 plant. Up to 200 people may be temporarily employed during M-1 plant construction.

The project applicant is requesting a Use Permit from the County to implement the above-described project.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by the proposed project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages. As noted in this Initial Study, all "Potentially Significant Impacts" will be examined in further detail in the EIR.

☑ Aesthetics	☐ Greenhouse Gas Emissions	☐ Population/Housing
☐ Agriculture and Forestry Resources	☑ Hazards & Hazardous Materials	☐ Public Services
☑ Air Quality	☑ Hydrology/Water Quality	☐ Recreation
☑ Biological Resources	☐ Land Use/Planning	☐ Transportation/Traffic
☑ Cultural Resources	☐ Mineral Resources	☐ Utilities/Service Systems
☑ Geology/Soils	☑ Noise	☑ Mandatory Findings of Significance

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

❑ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

❑ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☑ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

❑ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

❑ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature _____ Date _____

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross- referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.
   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and
   b) the mitigation measure identified, if any, to reduce the impact to less than significance.

ENVIRONMENTAL CHECKLIST AND ANALYSIS:

1. Aesthetics. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Have a substantial adverse effect on a scenic vista?			✓	
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a scenic highway?	✓			
c. Substantially degrade the existing visual character or quality of the site and its surroundings?			✓	
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?		✓		

Discussion:

a) **Less Than Significant Impact.** Viewshed impacts are typically characterized by the loss and/or obstruction of existing scenic vistas or other major views in the vicinity of a site that are available to the general public. Within the Mammoth Lakes area, the most significant dominant visual resource is the eastern front of the Sierra Nevada, located to the south and west of the project site. Other important visual resources in the vicinity of the project site include the open rangeland of Long Valley to the southwest of the site across U.S. Highway 395, forested knolls to the east and north of the site, and portions of the Inyo National Forest that surround the site. The majority of the publicly available views from and across the project site are characterized by open rangeland and mountain features typical of transitional areas along the boundaries of the Sierra Nevada and Great Basin physiographic provinces. The elevation of the project site is approximately 7,300 feet above mean sea level (msl).

The project would alter the site by replacing an existing geothermal power plant with a graded equipment storage area and constructing a new replacement geothermal power plant in a new, partially undeveloped location approximately 500 feet to the northeast of the existing plant. The proposed site of the new plant is crossed by various transmission lines and has been disturbed by previous activity associated with construction and operation of the existing MP-I plant. The project would not include wet cooling towers, so there would be no vapor plume. The facility would be painted in a similar earth tone greenish color as the existing plant to help blend into the background. Given the location of the proposed M-1 facility adjacent to the existing off-site MP-II/PLES-I power plant and the presence of existing equipment, pipelines, and transmission lines on or across the site, the project would not introduce any new visual features to the immediate vicinity nor would it significantly alter the visual character of the site or substantially affect any existing scenic vistas when viewed from any public perspective. Although the temporary (up to two years) period during which the existing MP-I and proposed M-1 plant would be operating together would increase the overall development footprint on the project site, the screening provided by vegetation and topography would reduce the visibility of the structures from most of the heavily trafficked public vantage points in the vicinity. For this reason, impacts related to scenic vistas are considered less than significant and no further analysis of this issue is necessary.

b) **Potentially Significant Impact.** The segment of U.S. Highway 395 that runs in a north-south direction approximately one-half mile to the west of the project site is designated as a California Scenic Highway. The project site is partially located within the view corridor of U.S. 395. In addition, a designated Eastern Sierra Scenic Byway view point is located in the parking area on the south side of SR 203 on the east side of its interchange with US 395. The project site is intermittently visible from this parking area. Therefore, the proposed project would have the potential to substantially alter or degrade existing views available to travelers along this segment of U.S. 395. For this reason, impacts related to scenic resources visible from U.S. 395 will be evaluated in the EIR for the project.

c) **Less Than Significant Impact.** See Checklist Question 1(a), above. Portions of the project site, as well as some of the adjacent area, are currently developed with geothermal plants and associated infrastructure. Although the proposed project would include the development of a currently undeveloped (though largely disturbed) portion of the site with the new geothermal power plant, such construction would not significantly alter the existing visual character of the site and the immediate surrounding area. Given the existing visual and aesthetic characteristics of the site, the project is not expected to introduce any features that would substantially degrade the visual character of the site or its surroundings. Thus, no further analysis of this issue is necessary.

d) **Less Than Significant with Mitigation Incorporated.** The project site is located in a rural area with an ambient light environment that is characterized by near darkness at night. Lighting of the type that is associated with existing uses on portions of the project site would be included in the new geothermal power plant proposed as part of the project. Chapter 23 of the Mono County Land Development Regulations (contained within the Land Use Element of the General Plan) establishes regulations to maintain "dark skies" that are applicable to all development within the County. In compliance with these regulations, power plant lighting would be projected downward and shielded to mitigate nighttime visibility of the facilities. Over time, the loss of light sources associated with removal of the existing plant is expected to be balanced by the addition of new light sources associated with the replacement plant. However, during the interim transitional period when both plants are being operated, there could be an increase in the total amount of ambient light emanating from the site. Although compliance with the Mono County Outdoor Lighting Ordinance would be expected to reduce any adverse impact to a less than significant level, impacts related to light and glare will be evaluated in the EIR for the project.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
2.	**Agricultural & Forestry Resources.** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
b.	Conflict with existing zoning for agricultural use, or a Williamson Act Contract?				✓
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				✓
d.	Result in the loss of forest land or conversion of forest land to non-forest use?				✓
e.	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?				✓

Discussion:

a) **No Impact.** The Farmland Mapping and Monitoring Program (FMMP) designates the project site as "Not Mapped."[1] However, there is no agricultural land located on the project site. Therefore, the proposed project would not convert any agricultural land to non-agricultural use, and no further analysis of this issue is required.

b) **No Impact.** The project site is designated RE (Resource Extraction) in the Mono County General Plan. No agricultural uses are currently in existence on the site. Additionally, no portion of the project site is

[1] *California Division of Land Resource Protection, Farmland Mapping and Monitoring Program Overview, website: http://www.consrv.ca.gov/dlrp/FMMP/overview/survey_area_map.htm, map dated January 2009.*

currently under a Williamson Act Contract. Therefore, the project would not conflict with existing zoning for agricultural use or a Williamson Act Contract, and no further analysis of this issue is required.

c) **No Impact.** No forest land or timberland is located on the project site. Therefore, the project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production and no further analysis of this issue is required.

d) **No Impact.** No forest land is located on the project site. Therefore, the project would not result in conversion of forest land to non-forest use, and no further analysis of this issue is required.

e) **No Impact.** No agricultural or forest land uses are located on the project site. Therefore, the project would not result in conversion of Farmland to non-agricultural use or forest land to non-forest use, and no further analysis of this issue is required.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3.	**Air Quality.** Where available, the significance criteria established by the applicable air pollution control district may be relied upon to make the following determinations. Would the project:				
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 air basin is non-attainment (PM-10) 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?			✓	

Discussion:

a) **No Impact.** The project site is under the jurisdiction of the Great Basin Unified Air Pollution Control District (GBUAPCD). Because the majority of the area within the GBUAPCD is currently in attainment with respect to applicable state and federal air quality standards, no air quality management plan currently is required for the entire district. Instead, individual State Implementation Plans (SIPs) have been adopted for subareas within the GBUAPCD that are in non-attainment of the applicable air quality standard for one or more criteria pollutants. Although the Town of Mammoth Lakes is in non-attainment of the PM-10 standard (particulate matter), the adopted Mammoth Lakes SIP only covers areas within the municipal boundary of the Town of Mammoth Lakes. Thus, the project site is not included in any applicable air quality plan and no further analysis of this issue is required.

b) **Less Than Significant with Mitigation Incorporated.** The project applicant will be required to obtain an Authority to Construct for the new power plant from the GBUAPCD. Short-term construction activities and the long-term operation of the proposed project could result in the generation of criteria pollutant emissions having the potential to violate applicable air quality standards. However, it is anticipated that compliance with the terms of the required air permit from the GBUAPCD designed to control or minimize fugitive emissions during long-term operation of the facility will reduce this impact to a less than significant level. Additional mitigation for construction-related fugitive emissions from the site would be expected to reduce construction impacts to a less than significant level also. The EIR will address the potential for the proposed project to result in significant impacts related to violation of air quality standards or substantial contribution to an existing or projected air quality violation.

c) **Less Than Significant with Mitigation Incorporated.** As noted above, the GBUAPCD is currently in non-attainment for particulate matter 10 (PM-10). However, the designated non-attainment areas are limited to specific locations within the overall air basin. The Town of Mammoth Lakes, located approximately 2.5 miles to the west of the project site, is one of these designated non-attainment areas for PM-10. The emissions associated with short-term construction and/or long-term operation of the proposed project could contribute to cumulative air quality impacts related to PM-10. However, it is anticipated that compliance with the terms of the required air permit as well as the implementation of standard mitigation measures designed to control or minimize fugitive emissions both during construction and long-term operation of the project will reduce this impact to a less than significant level. The EIR will address the potential for the proposed project to contribute to a cumulatively considerable net increase of PM-10.

d) **No Impact.** Certain land uses are generally considered to be more sensitive to air emissions than others. These so-called sensitive receptors are typically defined as residences, schools, playgrounds, childcare centers, athletic facilities, long-term health care facilities, rehabilitation centers, convalescent centers, and retirement homes. No such land uses are located within 500 feet of the project site; thus, no further analysis of this issue is required.

e) **Less Than Significant Impact.** Land uses associated with odor complaints typically include agricultural facilities (farming and livestock), wastewater treatment plants, food processing plants, chemical plants, composting facilities, refineries, landfills, dairies, and fiberglass molding facilities. The proposed project does not include any of these uses and would not create objectionable odors that would affect a substantial number of people. Therefore, project impacts related to odors would be less than significant, and no further analysis of this issue is required.

4. **Biological Resources.** Would the project::	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		✓		

b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		✓		
c.	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		✓		
d.	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		✓		
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		✓		
f.	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓

Discussion:

a) **Less Than Significant with Mitigation Incorporated.** Vegetation on the undeveloped portion of the project site currently consists of undisturbed sagebrush and bitterbrush with scattered Jeffrey pine as well as disturbed areas that are either devoid of vegetation or covered with invasive, weedy plant species including cheat grass. Wildlife observed in the vicinity of the site include lizard, common raven, mountain chickadee, red-tailed hawk, two butterfly species, deer, and rabbit. Although no special status species have been observed on the project site during recent field investigation, the potential exists for them to occur within the surrounding area. However, it is anticipated that mitigation measures will be able to reduce any potential impact to a less than significant level. For this reason, impacts pertaining to special status species will be evaluated in the EIR for the project.

b) **Less Than Significant with Mitigation Incorporated.** No evidence of either vegetation or hydrologic regimes associated with riparian corridors has been found on the project site. However, the project site is tributary to Mammoth/Hot Creek approximately one mile to the south. Thus, any potential spills or releases at the site would have a limited potential to impact riparian habitat. However, it is anticipated that gate valves and other spill control features to be included in the project or required as mitigation, as well as compliance with the required Spill Prevention Control and Countermeasure Plan for the project, would reduce this potential impact to a less than significant level. However, this potential impact will be evaluated in the EIR for the project.

c) **Less Than Significant with Mitigation Incorporated.** See Checklist Question 4(b), above. Based upon preliminary investigation, a limited potential exists for jurisdictional waters as defined by the U.S. Army Corps of Engineers and/or the Regional Water Quality Control Board to be present either on the site or

nearby. Although it is anticipated that any potential impacts would be able to be mitigated to a less than significant level, potential project impacts to any such features will be evaluated in the EIR.

d) **Less Than Significant with Mitigation Incorporated.** The previously disturbed project site contains no on-site waterways capable of supporting a migratory fish or wildlife species. However, the Long Valley area is a known wildlife migration corridor. Given the proximity of the site to known wildlife corridors, the potential for the project to interfere with the movement of wildlife will be evaluated in the EIR. It is anticipated that any potential impacts would be able to be mitigated to a less than significant level.

e) **Less Than Significant with Mitigation Incorporated.** Mono County does not have any countywide tree protection or wildlife habitat protection ordinances that apply to the project site. However, the project site is located within the Hot Creek Buffer Zone identified in the Conservation/Open Space Element of the Mono County General Plan for the purpose of protecting the hydrologic and biologic resources within the Hot Creek corridor. Under Objective B, Policy 1 of the Conservation/Open Space Element, development of geothermal resources within the Hot Creek Buffer Zone is allowed for projects in the vicinity of Casa Diablo, which includes the proposed project. Even so, this issue will be discussed in further detail in the EIR for the project.

f) **No Impact.** The project site is not located within the area addressed by an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Thus, no impact would occur and this issue does not require further discussion.

5. Cultural Resources. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?				✓
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?		✓		
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		✓		
d. Disturb any human remains, including those interred outside of formal cemeteries?		✓		

Discussion:

a) **No Impact.** The western portion of the project site is currently developed with the existing MP-I geothermal plant and associated infrastructure. This facility was constructed in 1984 and is therefore not eligible for identification as a California Point of Historical Interest (PHI) or California Historical Landmark (CHL), or for listing in the California Register of Historic Places (CR), National Register of Historic Places (NR), or California State Historic Resources Inventory (HRI). Thus, no further evaluation of this issue is required.

b) **Less Than Significant with Mitigation Incorporated.** The project site is located in close proximity to previously recorded archaeological site CA-MNO-559/628/449. A recent archaeological investigation of the site revealed the presence of a single, low density dispersed lithic scatter on the property and

determined that the remains do not meet any of the criteria for listing on the California Register of Historic Resources. Therefore, there is little potential for the project to cause a substantial adverse change to an archaeological resource pursuant to §15064.5. However, standard mitigation concerning the potential discovery of cultural materials during construction will be applied to the project and this issue will be fully addressed in the EIR for the project.

c) **Less Than Significant with Mitigation Incorporated.** No unique geologic features are present on the project site. The majority of the project site has been previously disturbed and no paleontological resources are known to exist on the property. However, mitigation will be identified to address the possible discovery of such resources during project construction. It is anticipated that such mitigation will be sufficient to reduce the potential impact to a less than significant level. However, this issue will be addressed in the EIR.

d) **Less Than Significant with Mitigation Incorporated.** The project site is not occupied by a cemetery, and has not been identified as the location of human remains. In addition, portions of the site have been subjected to substantial previous alteration including grading, cutting and filling, and the construction of improvements. Accordingly, it is not anticipated that human remains would be encountered during the construction phase of the proposed project. While no significant impacts are anticipated, the EIR will review this potential impact and prescribe appropriate mitigation.

6. Geology & Soils. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.		✓		
ii. Strong seismic ground shaking?		✓		
iii. Seismic-related ground failure, including liquefaction?		✓		
iv. Landslides?			✓	
b. Result in substantial soil erosion or the loss of topsoil?		✓		
c. Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?		✓		
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating		✓		

	substantial risks to life or property?			
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?			✓

Discussion:

a.i) **Less Than Significant with Mitigation Incorporated.** Although the project site is not located within an Alquist-Priolo Fault Zone, it is located within a seismically active area associated with the Long Valley caldera. Several known faults are located in close proximity to the project site. Methods of mitigating this potential impact have been identified in the preliminary geotechnical investigation for the project and are anticipated to be able to reduce this impact to a less than significant level. Analysis of this issue is required in the project EIR.

a.ii) **Less Than Significant with Mitigation Incorporated.** The project site is located in the Long Valley caldera along the geomorphic boundary between the Great Basin and Sierra Nevada, which is a seismically active area. Thus, the project site could experience strong ground shaking during a seismic event. Pursuant to existing law and applicable regulations, design and construction of the proposed project will be required to incorporate measures to ensure state-of-the-art seismic protection. These measures include compliance with the Mono County Uniform Building Code (2010 UBC), the County's building permit requirements, and site-specific engineering recommendations based upon the recommendations of a licensed geotechnical engineer and a geotechnical report approved by the Mono County Community Development Department. A preliminary geotechnical report has been prepared and will be presented and evaluated in the project EIR.

a.iii) **Less Than Significant with Mitigation Incorporated.** Liquefaction is the process in which loose granular soils below the groundwater table temporarily lose strength during strong ground shaking as a consequence of increased pore pressure and subsequently reduced effective stress. Significant factors that affect liquefaction include groundwater level, soil type, particle size and gradation, relative density, confining pressure, and intensity and duration of shaking. Due to the seismically active nature of the area, liquefaction represents a potential hazard for the proposed project. Methods of mitigating this potential impact have been identified in the preliminary geotechnical investigation for the project and are anticipated to be able to reduce this impact to a less than significant level. These methods will be presented and evaluated in the project EIR.

a.iv) **Less Than Significant Impact.** The project site contains relatively gentle slopes and is not located in an area with landslide potential. Therefore, no further analysis of this issue is necessary.

b) **Less Than Significant with Mitigation Incorporated.** Construction of the proposed project would increase the amount of exposed soil on the project site, which could lead to increased soil erosion and/or topsoil loss for the duration of construction activities. Compliance with standard mitigation measures would be expected to reduce this impact to a less than significant level. The undeveloped portion of the project site is currently characterized, in part, by exposed soil within disturbed areas. Following project construction, both the new M-1 plant and a new gravel equipment storage pad on the site of the existing MP-I plant would occupy the site, which would be essentially graded flat. This being the case, opportunities for long-term soil erosion and/or topsoil loss from the site would be more limited following project construction than under existing conditions and impacts resulting from long-term project operation would be less than significant.

c) **Less Than Significant with Mitigation Incorporated.** Pursuant to existing law and applicable regulations, design and construction of the proposed project will be required to incorporate measures to protect against geologic instability risks. These measures include compliance with the 2010 UBC, the County's building permit requirements, and site-specific engineering recommendations based upon the recommendations of a licensed geotechnical engineer and a geotechnical report approved by the Mono County Community Development Department. A preliminary geotechnical report has been prepared and will be presented and evaluated with respect to this issue in the project EIR.

d) **Less Than Significant with Mitigation Incorporated.** Expansive soils are present on the project site under the near-surface soil layers. Methods of mitigating this potential impact have been identified in the preliminary geotechnical investigation for the project and are anticipated to be able to reduce this impact to a less than significant level. These methods will be presented and evaluated in the project EIR.

e) **No Impact.** The project site is located in a rural area of unincorporated Mono County that is not served by a municipal wastewater collection, conveyance, and treatment system. However, no additional wastewater would be generated by the project as no new wastewater-generating facilities would be built and all construction personnel would use portable chemical sanitary facilities. Thus, no impact would occur and no further discussion of this issue is necessary.

7. Greenhouse Gas Emissions. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
b. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			✓	

Discussion:

a) **Less Than Significant Impact.** Short-term construction activities and long-term operation of the proposed project could result in the generation of small amounts of both indirect and direct greenhouse gas emissions. Long-term greenhouse gas emissions would be reduced as compared to existing conditions at the project site and, therefore would not represent a significant impact to the environment. Therefore, no additional analysis of this issue is necessary.

b) **Less Than Significant Impact.** The proposed project would not change the use of the project site compared to existing conditions. Therefore, the project would not create any conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Thus, no impact would occur and no additional analysis of this issue is necessary.

8. Hazards & Hazardous Materials. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?		✓		
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		✓		
c. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				✓
d. Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?		✓		
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?			✓	
f. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				✓
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				✓
h. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			✓	

Discussion:

a) **Less Than Significant with Mitigation Incorporated.** The proposed project includes the replacement of the existing MP-I geothermal power plant with a new facility. Small quantities of hazardous materials would continue to be used and stored on the project site with development of the proposed project. These materials include both isobutene and isopentane to be used as the motive fluid in the existing and proposed replacement plants, respectively. Bulk quantities of these materials would be stored in pressure vessels and bulk storage containers on the site. Numerous engineering, fire- control and safety measures would be integrated into the project to prevent releases of hazardous materials, prevent fires, and to respond to and control fires and other emergencies. The power plant site would be designed and constructed to prevent spills from leaving the site and endangering adjacent properties and waterways, and to prevent runoff from any source being channeled or directed in an unnatural way so as to cause erosion, siltation, or other

detriments. A system of pressure and flow sensing devices and regular inspection of all lines, capable of detecting leaks and spills, would be instituted and maintained. A Spill Prevention Control and Countermeasure Plan and Risk Management Plan will be prepared for the power plant site. It is anticipated that these measures will reduce potential project impacts to a less than significant level. The EIR will evaluate this potential project impact and identify necessary mitigation.

b) **Less Than Significant with Mitigation Incorporated.** See response to Checklist Question 8(a).

c) **No Impact.** No schools are either located or proposed to be located within one-quarter mile of the project site. Therefore, no impact would occur and further investigation is not warranted.

d) **Less Than Significant with Mitigation Incorporated.** The project site is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 due to the current storage of materials needed for operation of the existing MP-I plant. However, because the proposed project would simply continue the existing use of the site and would include a system of pressure and flow sensing devices, regular inspection of all lines, and creation of a Spill Prevention Control and Countermeasure Plan and Risk Management Plan, impacts are anticipated to be less than significant with appropriate mitigation. This issue will be discussed in the EIR for the project.

e) **Less Than Significant Impact.** The project site is located approximately one mile northwest of the public Mammoth-Yosemite Airport. However, the project would involve the replacement of an existing geothermal power plant with a similar facility approximately 500 feet to the northeast. Neither the existing facility nor the replacement plant include any features that could be considered to represent a safety hazard to people working in the project area when considered in combination with planes landing or taking off from the Mammoth-Yosemite Airport. Thus, no further analysis of this issue is required.

f) **No Impact**. The project site is not located within the vicinity of a private airstrip. Therefore, the project would not result in a safety hazard associated with a private airstrip. No further analysis of this issue is required.

g) **No Impact.** Because the proposed project consists of the replacement of an existing geothermal power generating facility with a new plant in the same general location, the project would not be expected to impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Although the existing MP-I and proposed M-1 plants would be in simultaneous operation for an initial period of up to two years, no alterations to existing emergency response or evacuation plans would be necessitated. It is anticipated that any future incidents at the project site would continue to be addressed by the appropriate first responder. Thus, no further analysis of this issue is required.

h) **Less Than Significant Impact.** The project site is located in a largely undeveloped area but is proximate to other geothermal facilities as well as the Mammoth-Yosemite Airport. Although the surrounding Inyo National Forest lands are subject to periodic wildland fires, the presence of the proposed project would not increase the risk of such events, nor would it place residents or a greater number of employees at risk from wildland fires. Although the proposed M-1 replacement plant would cover a larger footprint on the site and would require a larger amount of flammable material for operation than the existing MP-I plant, the incorporation of fire prevention and suppression measures into the design of the replacement plant as well as the mandatory preparation of a Spill Prevention Control and Countermeasure Plan and Risk Management Plan for the site would render this impact less than significant. Thus, no further discussion of this issue is required.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
9.	**Hydrology & Water Quality**. Would the project:				
a.	Violate any water quality standards or waste discharge requirements?		✓		
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			✓	
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river in a manner which would result in substantial erosion or siltation on- or off-site?		✓		
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on-or off-site?		✓		
e.	Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?			✓	
f.	Otherwise substantially degrade water quality?			✓	
g.	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				✓
h.	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				✓
i.	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				✓
j.	Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?				✓

Discussion:

a) **Less Than Significant with Mitigation Incorporated.** Implementation of the proposed project could affect the quality of runoff from the project site. During construction, sediment is typically the constituent of greatest potential concern. The greatest risk of soil erosion during the construction phase occurs when site disturbance peaks due to grading activity and removal and re-compaction or

replacement of fill areas. (Sediment is not typically a constituent of concern during the long-term operation of developments similar to the proposed project because sites are usually paved or covered with gravel, and proper drainage infrastructure has been installed.) Other pollutants that could affect surface water quality during the project construction phase include petroleum products (gasoline, diesel, kerosene, oil and grease), hydrocarbons from asphalt paving, paints and solvents, detergents, fertilizers, and pesticides (insecticides, fungicides, herbicides, rodenticides). Once the project has been constructed, site runoff might include all of the above contaminants, as well as trace metals from plant and parking area runoff. Liquid product spills occurring at the project site could also enter stormwater runoff.

Because the proposed project would disturb more than one acre during construction, applicable laws and regulations require that, prior to obtaining a grading permit, the project applicant must obtain coverage under the National Pollution Discharge Elimination System (NPDES) General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (State Water Resources Control Board Order No. 2009-0009-DWQ; NPDES No. CAS000002; effective July 1, 2010). This General Permit regulates discharges of pollutants in stormwater from construction sites that disturb one or more acres of land surface. Through compliance with the General NPDES Permit, project impacts related to water quality would be reduced to a less than significant level. However, additional analysis of this issue will be included in the project EIR.

b) **Less Than Significant Impact.** The project site is currently partly developed with the existing MP-I plant and, as such, contains impervious surfaces that convey runoff away from the site. However, the proposed project has the potential to increase the amount of impervious surface area on the site. This would increase the percentage of runoff that would be directed to on-site drainage infrastructure and then away from the site. Because the site does not drain to a storm drain system, runoff from the site would continue to infiltrate into the soil once it is directed either away from the site or into on-site stormwater treatment BMPs. Thus, construction of the proposed project would not interfere with or reduce the overall amount of groundwater recharge at the site.

The proposed replacement M-1 plant would use both high and moderate temperature geothermal resources to extract heat energy from geothermal fluid. No new geothermal wells would be constructed for the replacement plant; instead, it would utilize the same geothermal fluid from the existing geothermal wells that currently supply the existing MP-I plant on the site. The total brine flow would not increase beyond what is currently permitted. Because the new M-1 plant would also consist of a closed loop system, with geothermal injection wells essentially replacing the drawn geothermal fluid used in the plant, no net impact would occur to groundwater levels or supplies. Thus, project impacts related to groundwater would be less than significant and no further analysis of this issue is required.

c) **Less Than Significant with Mitigation Incorporated.** The project site is currently partially developed and, as such, contains impervious surfaces that convey runoff away from the site. However, the proposed project has the potential to increase the amount of impervious surface on the site as well as the amount of runoff that would be directed either off-site or to on-site stormwater treatment BMPs. Following removal of the existing MP-I plant, a large area of permeable gravel capable of infiltrating runoff would also be created on the site. There are no natural drainage features located on the project site. Through compliance with the General NPDES Permit, project impacts related to the alteration of existing drainage patterns on the site and resulting erosion or siltation would be reduced to a less than significant level. Therefore, project impacts related to this issue would be less than significant. However, additional analysis of this issue will be included in the project EIR.

d) **Less Than Significant with Mitigation Incorporated.** The project site is currently partially developed and, as such, contains impervious surfaces that convey runoff away from the site. However, the proposed

project has the potential to increase the amount of impervious surface on the site as well as the amount of runoff that would be directed either off-site or to on-site stormwater treatment BMPs. Following removal of the existing MP-I plant, a large area of permeable gravel capable of infiltrating runoff would also be created on the site. There are no natural drainage features located on the project site. Through compliance with the General NPDES Permit, project impacts related to the alteration of existing drainage patterns on the site and resulting flooding impacts would be reduced to a less than significant level. Therefore, project impacts related to this issue would be less than significant. However, additional analysis of this issue will be included in the project EIR.

e) **Less Than Significant Impact.** With respect to polluted runoff, see Checklist Question 9(a), above. With respect to the project's potential to exceed the capacity of existing or planned stormwater drainage systems, as discussed above in Checklist Question 9(d), the proposed project has the potential to change the direction, rate, and amount of surface runoff from the project site by introducing a greater amount of impervious surface area to the site. The project site does not currently drain to an off-site storm drainage system, nor would it do so following project construction. The post-construction BMP requirements in the General NPDES Permit require that the pre-project water balance (the volume of rainfall that becomes runoff) be replicated for most high-frequency storm events. The on-site stormwater drainage system will be required to achieve this performance standard. Thus, the project would have a less than significant impact on the capacity of existing or planned stormwater drainage systems and no further analysis of this issue is required.

f) **Less Than Significant Impact.** See Checklist Question 9(a), above.

g) **No Impact.** The project site is not located within a 100-year or 500-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, nor does the project include housing. Therefore, the project would not place housing within a 100-year or 500-year flood hazard area, and no further discussion of this issue is required.

h) **No Impact.** See Checklist Question 9(g), above.

i) **No Impact.** No dams or levees are located on or in proximity to the project site, nor is the site located in any sort of identified flood hazard area. Thus, no further discussion of this issue is required.

j) **No Impact.** Seiches are standing waves created by seismically induced ground shaking (or volcanic eruptions or explosions) that occur in large, freestanding bodies of water. A tsunami is a series of waves that are caused by earthquakes that occur on the seafloor or in coastal areas. The project site sufficiently far removed from such large bodies of water that it would not be subject to inundation by seiche or tsunami. The project area is moderately sloping and does not contain any steep hillside terrain; therefore, there is no potential for the project site to be inundated by a mudflow. Thus, no further discussion of this issue is required.

10. **Land Use and Planning.** Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Physically divide an established community?				✓
b. Conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				✓
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?				✓

Discussion:

a) **No Impact.** The project site is not located within an established community and consists primarily of the replacement of an existing geothermal power facility. Therefore, the proposed project would not physically divide an established community, and no further discussion is necessary.

b) **No Impact.** The project site is designated Resource Extraction (RE) in the Mono County General Plan. The RE land use designation specifically allows for the exploration, drilling, and development of geothermal resources under a Use Permit. The proposed project would not alter the use of the site; thus, it would remain consistent with the site's land use designation. Relevant potential environmental impacts resulting from the project will be addressed in other sections of the EIR as discussed in this Initial Study, including potential conflicts with other adopted plans, policies, or regulations. No further discussion of the project's land use planning consistency is necessary.

c) **No Impact.** See Checklist Question 4(f), above.

11. **Mineral Resources.** Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a. Result in the loss of availability of a known mineral resource that would be or value to the region and the residents or the state?			✓	
b. Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?			✓	

Discussion:

a) **Less Than Significant Impact.** The project site is not known to be the likely source for any mineral resources other than geothermal features that are of value to the region, residents, or the state. Furthermore, as the site is currently developed with a geothermal heat source power facility, the proposed project would not substantially alter its status with respect to the availability of other mineral

resources. Thus this impact would be less than significant and no further discussion of the issue is required.

b) **Less Than Significant Impact.** The project site is located within a locally important geothermal resource area as referenced in the Land Use Element of the Mono County General Plan (Objective C, Policy 4). No other important mineral resource recovery areas that include the project site are delineated in the General Plan or any other land use plan. Because the project site is currently developed with a geothermal heat source power facility, the proposed project would not substantially alter its status with respect to the availability of this resource. Thus, this impact would be less than significant and no further discussion of the issue is required.

12. **Noise**. Would the project result in:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?		✓		
b. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?		✓		
c. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				✓
d. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		✓		
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			✓	
f. For a project within the vicinity of a private airstrip would the project expose people residing or working in the project area to excessive noise levels?				✓

Discussion:

a) **Less Than Significant with Mitigation Incorporated.** The proposed project consists of the replacement of the existing MP-I geothermal power generating facility with a new facility approximately 500 feet to the northeast. The existing MP-I plant became operational in 1984 and currently generates an ambient noise level of approximately 67 dBA at 400 feet from the plant. The replacement M-1 plant is estimated to generate an ambient noise level of less than 62 dBA at 400 feet from the plant. Therefore, the new plant would be quieter than the existing plant (approximately 5 dBA lower, which is an audible decrease) upon its replacement. During the interim transition period of up to 24 months during which both plants would be operating simultaneously, ambient noise levels in the vicinity could be somewhat higher than under either existing conditions or future conditions with the new M-1 plant only. This potential impact

will be evaluated in the EIR and appropriate mitigation measures identified, if warranted, to reduce this impact to a less than significant level.

No residential or commercial land uses are located within at least one mile of the project site. The nearest off-site structure to the proposed project would be the adjacent MP-II/PLES-I power plant, located immediately to the east of the proposed M-1 plant location. The County Noise Ordinance (Chapter 10.16 of the Mono County Code) requires that exterior noise levels at heavy industrial sites must not exceed 75 dBA for more than 30 minutes in any given hour of a full 24-hour day. Given the principles of noise attenuation with distance from a source and both the existing and projected ambient noise levels associated with the existing MP-I plant and the proposed M-1 plant on the project site, it is not anticipated that the project would expose persons to or generate noise levels in excess of standards established in the County Noise Ordinance or the Noise Element of the Mono County General Plan.

b) **Less Than Significant with Mitigation Incorporated.** Construction of the proposed project would include the use of typical construction equipment such as jackhammers, pneumatic tools, saws, and hammers, all of which would generate some groundborne vibration and groundborne noise during certain phases such as demolition and grading. However, it is not anticipated that the project will have a significant construction noise impact due to the intervening distance between the project site and the nearest residential and commercial/business properties. The nearest residences to the site are some employee residences at Hot Creek Hatchery, located approximately three miles southeast, with the nearest residential neighborhood being located off of Meridian Boulevard in the Town of Mammoth Lakes, approximately 2.25 miles to the west. The nearest commercial properties to the site are a County building approximately 1.25 miles to the east and the Mammoth Community Water District offices approximately two miles to the west. The County Noise Ordinance does not otherwise limit noise associated with temporary construction activities. However, this issue will be evaluated in the EIR for the project.

c) **No Impact.** As noted above under Checklist Question 12(a), the replacement M-1 facility is expected to generate less noise than the existing MP-I facility at the site. As a result, following the removal of the existing MP-I facility, ambient noise levels experienced at the site would be lower than under existing conditions. Therefore, no impact would occur and no further analysis of this issue is required.

d) **Less Than Significant with Mitigation Incorporated.** As noted above under Checklist Question 12(a), the replacement M-1 facility and the existing MP-I plant would be operated simultaneously during a transitional period of up to 24 months. During this time period, ambient noise levels experienced at the site would be greater than under existing conditions. However, as also noted above, the simultaneous operation of both plants would not expose residences or businesses to nor generate noise levels in excess of standards established in the County Noise Ordinance or the Noise Element of the Mono County General Plan. However, this issue will be evaluated in the EIR for the project.

e) **Less Than Significant Impact.** The project site is located approximately one mile northwest of the public Mammoth-Yosemite Airport. However, the project would involve the replacement of an existing geothermal power plant with a similar facility approximately 500 feet to the northeast, with no anticipated increase in the number of on-site employees. Neither the existing facility, the replacement plant, nor the two operating simultaneously during the temporary transition period would expose workers at the project site to excessive noise levels generated by routine operation of the airport. Thus, no further analysis of this issue is required.

f) **No Impact.** The project site is not located within the vicinity of a private airstrip. Therefore, the proposed project would not expose persons to excessive noise levels associated with a private airstrip. No further analysis of this issue is required.

13. Population and Housing. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				✓
b. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				✓
c. Displace substantial numbers of people necessitating the construction of replacement housing elsewhere?				✓

Discussion:

a) **No Impact.** The proposed project would not induce direct population growth as no new homes or businesses would be added to the site, nor would new employees be generated upon project completion. Although up to 200 construction-related employees could be required by the project, the temporary nature of the work would make it highly unlikely that potential employees would choose to relocate to the area from outside the region. Thus, the project would not contribute to substantial population growth either directly or indirectly and no further analysis of this issue is required.

b) **No Impact.** No housing currently exists on the project site. No further analysis of this issue is required.

c) **No Impact.** See Checklist Question 13(b) above.

14. Public Services.	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire protection?			✓	
ii. Police protection?			✓	

iii. Schools?				✓
iv. Parks?				✓
v. Other public facilities?				✓

Discussion:

a.i) **Less Than Significant Impact.** The proposed project would replace the existing MP-I geothermal power generation facility with the new M-1 facility. Because the new M-1 plant would cover a larger physical footprint and require larger quantities of flammable materials than the existing MP-I facility, there is the potential for a modest increase in the need for fire protection or emergency planning services to result from implementation of the project. However, this would be a less than significant impact and no further analysis of this issue is required.

a.ii) **Less Than Significant Impact.** The proposed project would replace the existing MP-I geothermal power generation facility with the new M-1 facility. Because the new M-1 plant would cover a larger physical footprint and require larger quantities of flammable materials than the existing MP-I facility, there is the potential for a modest increase in the need for police protection services to result from implementation of the project. However, this would be a less than significant impact and no further analysis of this issue is required.

a.iii) **No Impact.** The proposed project would replace the existing MP-I geothermal power generation facility with the new M-1 facility. No additional employees would be added as a result of the plant replacement and, thus, no potential school students would be generated through implementation of the project. No further analysis of this issue is required.

a.iv) **No Impact.** The proposed project would replace the existing MP-I geothermal power generation facility with the new M-1 facility. No additional employees would be added as a result of the plant replacement and, thus, no additional demand for parks would be created by the replacement of the existing plant. No further analysis of this issue is required.

a.v) **No Impact.** The proposed project would replace the existing MP-I geothermal power generation facility with the new M-1 facility. No additional employees would be added as a result of the plant replacement and, thus, no additional demand for libraries, snow removal, or other public services would be created by the replacement of the existing plant. No further analysis of this issue is required.

15. Recreation.	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				✓
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the				✓

	environment?			

Discussion:

a) **No Impact.** The proposed project would replace the existing MP-I geothermal power generation facility with the new M-1 facility. No additional employees would be added as a result of the plant replacement and, thus, no additional demand for or use of regional parks or other recreational areas such as the Inyo National Forest would be created by the replacement of the existing plant. No further analysis of this issue is required.

b) **No Impact.** See Checklist Question 15(a), above.

		Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
16.	**Transportation/Traffic**. Would the project:				
a.	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?				✓
b.	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?				✓
c.	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				✓
d.	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				✓
e.	Result in inadequate emergency access?				✓
f.	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				✓

Discussion:

a) **No Impact.** The proposed project would replace the existing MP-I geothermal power generation facility with the new M-1 facility. The land uses at the project site would remain the same as under existing conditions. No additional employees would be added as a result of the plant replacement and, thus, no additional long-term vehicle traffic to or from the project site would be created by the replacement of the existing plant. No further analysis of this issue is required.

b) **No Impact.** See Checklist Question 16(a), above. The proposed project would not change either the type or the intensity of use of the site. Thus, the project would not conflict with policies or standards contained in the Mono County General Plan Circulation Element/Regional Transportation Plan. No further analysis of this issue is required.

c) **No Impact.** See Checklist Question 16(a), above. The proposed project would not change either the type or the intensity of use of the site. The replacement M-1 plant would reach a maximum height of approximately 39 feet above the ground. Given that the project site is approximately one mile from the Mammoth-Yosemite Airport, the height of the replacement M-1 plant would not result in any changes to air traffic patterns. No further analysis of this issue is required.

d) **No Impact.** The proposed project would not change road patterns or site access in the vicinity of the site, nor would it introduce any new land uses that could create incompatibilities in terms of roadway utilization by vehicles. No further analysis of this issue is required.

e) **No Impact.** See Checklist Question 16(d), above.

f) **No impact.** See Checklist Question 16(b), above.

17. Utilities & Service Systems. Would the project:	**Potentially Significant Impact**	**Less Than Significant with Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				✓
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				✓
c. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				✓
d. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			✓	
e. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				✓
f. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			✓	
g. Comply with federal, state, and local statutes and regulations related to solid waste?			✓	

Discussion:

a) **No Impact.** See Checklist Question 6(e), above.

b) **No Impact.** See Checklist Question 6(e), above, with respect to wastewater. No additional water consumption at the site would occur with operation of the proposed project. Water necessary for construction of the project would be drawn from water tanks delivered to the construction area by private contractor. No permanent water delivery infrastructure would be required by the proposed project. Thus, no impact would occur and no further analysis of this issue is necessary.

c) **No Impact.** See Checklist Question 9(e) above. No permanent off-site stormwater drainage infrastructure would be required by the proposed project. Thus, no impact would occur and no further analysis of this issue is necessary.

d) **Less Than Significant Impact.** See Checklist Question 17(b), above. Construction of the proposed project may temporarily increase the demand for potable water at the project site. However, this water would be supplied to the site via water tanks or water trucks by private construction contractors and would have a less than significant impact on existing water supply entitlements and resources. Thus, no further analysis of this issue is necessary.

e) **No Impact.** As discussed above in Checklist Question 6(e), the proposed project would not generate any additional wastewater compared to existing uses at the project site. Thus, no impact to available wastewater treatment plant capacity would result and no further analysis of this issue is required.

f) **Less Than Significant Impact.** The proposed project would remove the existing MP-I plant from the site. The process of removing the existing plant following construction of the replacement M-1 facility will generate a considerable amount of solid waste material, much of which would be recycled. Although a small portion of this material could be sent to local or regional landfills, this would represent a small fraction of the existing landfill waste stream and would therefore be considered a less than significant impact. No further discussion of this issue is required.

g) **Less Than Significant Impact.** The construction and operation of the proposed project would be required to adhere to all applicable federal, State, and local statues and regulations related to solid waste. Therefore, project impacts regarding compliance with federal, State, and local statutes and regulations related to solid waste would be less than significant, and no further discussion of this issue is required.

18. Mandatory Findings of Significance.	**Yes**	**No**
a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	✓	
b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	✓	
c. Does the project have environmental effects which will cause substantial adverse effects		✓

on human beings, either directly or indirectly?		

Discussion:

a) **Yes.** As noted in this Initial Study, implementation of the proposed project could have the potential to degrade the quality of the environment. The EIR will address potential impacts with respect to relevant issues and will identify mitigation measures and alternatives, as well as unavoidable adverse environmental effects, if any. This Initial Study also identifies issue areas where potential environmental effects are less than significant, or will be mitigated to a less-than-significant level by applicable laws and regulations; such issues will not be further studied in the EIR. The following issue areas will be addressed in the EIR:

- Aesthetics
- Air Quality
- Biological Resources
- Cultural Resources
- Geology/Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Noise

b) **Yes.** A list of other projects with the potential to generate cumulatively considerable impacts in conjunction with the proposed project that have either been proposed or are currently under construction in the vicinity of the project site will be presented in the EIR. Cumulatively considerable impacts associated with the proposed and related projects will be evaluated in the EIR.

c) **No.** As noted throughout this Initial Study, implementation of the proposed project would not change the existing land use at the project site, nor would it result in a permanent increase in the intensity of use of the site. Thus, the project would not create substantial adverse effects on human beings, either directly or indirectly.

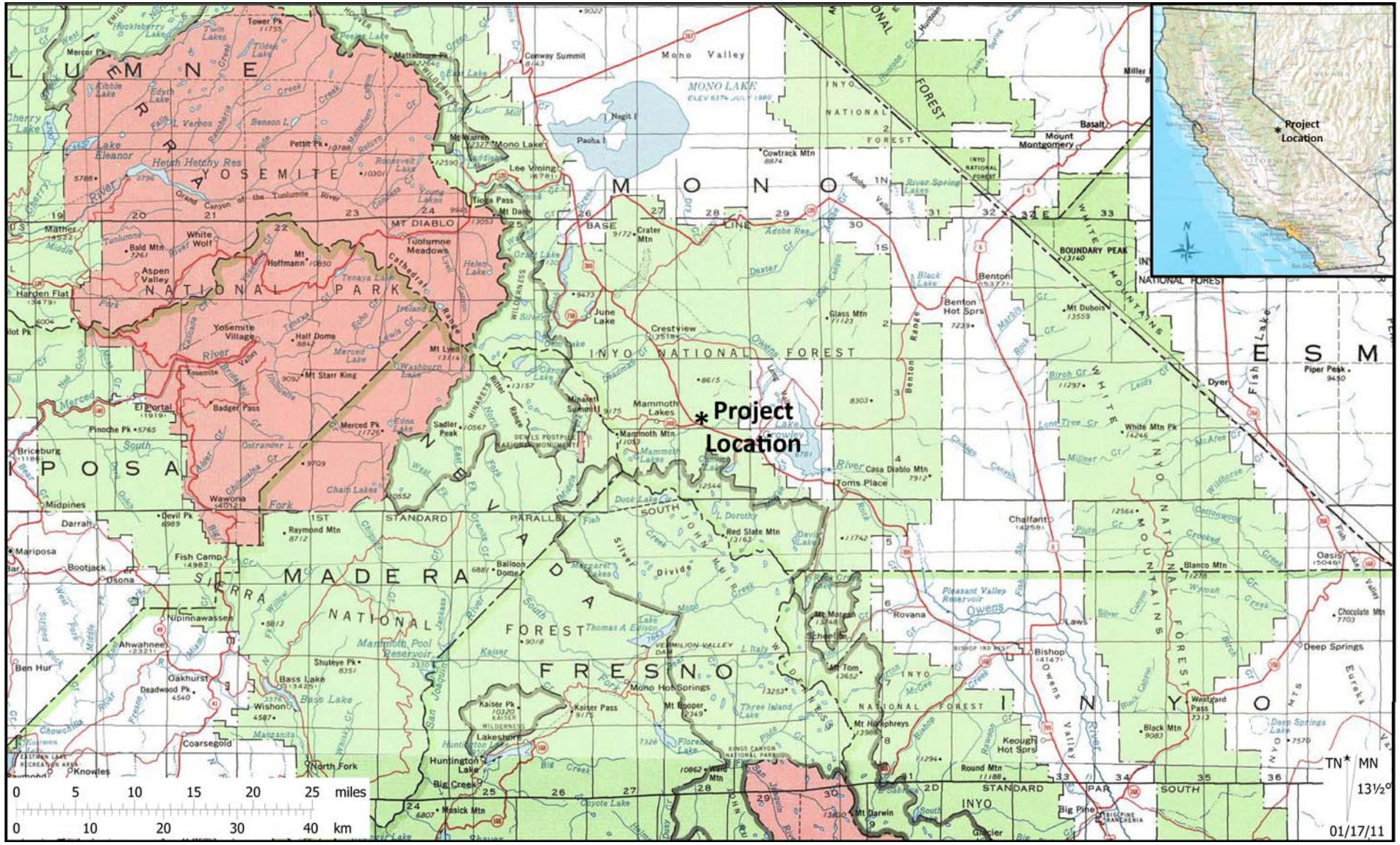

Figure 1: Project Location -- Mammoth Pacific I (MP-I) Replacement Project

Figure 2: Proposed M-I Plant Facilities on Aerial Image (GoogleEarth® - May 25, 2009) -- Mammoth Pacific I Repowering Project