



AGENDA

BOARD OF SUPERVISORS, COUNTY OF MONO

STATE OF CALIFORNIA

Regular Meetings: The First, Second, And Third Tuesday of each month. Location of meeting is specified at far right.

Regular Meeting

MEETING LOCATION County Courthouse, Bridgeport, CA 93517

November 13, 2012

TELECONFERENCE LOCATIONS: 1) First and Second Meetings of Each Month: Mammoth Lakes CAO Conference Room, 3rd Floor Sierra Center Mall, 452 Old Mammoth Road, Mammoth Lakes, California, 93546; 2) Third Meeting of Each Month: Mono County Courthouse, 278 Main, 2nd Floor Board Chambers, Bridgeport, CA 93517. Board Members may participate from a teleconference location. Note: Members of the public may attend the open-session portion of the meeting from a teleconference location, and may address the board during any one of the opportunities provided on the agenda under Opportunity for the Public to Address the Board.

NOTE: In compliance with the Americans with Disabilities Act if you need special assistance to participate in this meeting, please contact the Clerk of the Board at (760) 932-5534. Notification 48 hours prior to the meeting will enable the County to make reasonable arrangements to ensure accessibility to this meeting (See 42 USCS 12132, 28CFR 35.130).

Full agenda packets are available for the public to review in the Office of the Clerk of the Board (Annex I - 74 North School Street, Bridgeport, CA 93517), and in the County Offices located in Minaret Mall, 2nd Floor (437 Old Mammoth Road, Mammoth Lakes CA 93546). Any writing distributed less than 72 hours prior to the meeting will be available for public inspection in the Office of the Clerk of the Board (Annex I - 74 North School Street, Bridgeport, CA 93517). **ON THE WEB:** You can view the upcoming agenda at www.monocounty.ca.gov. If you would like to receive an automatic copy of this agenda by email, please send your request to Lynda Roberts, Clerk of the Board : lroberts@mono.ca.gov.

UNLESS OTHERWISE SPECIFIED BY TIME, ITEMS SCHEDULED FOR EITHER THE MORNING OR AFTERNOON SESSIONS WILL BE HEARD ACCORDING TO AVAILABLE TIME AND PRESENCE OF INTERESTED PERSONS. PUBLIC MAY COMMENT ON AGENDA ITEMS AT THE TIME THE ITEM IS HEARD.

9:00 AM

Call meeting to Order

Pledge of Allegiance

OPPORTUNITY FOR THE PUBLIC TO ADDRESS THE BOARD on items of public interest that are within the subject matter jurisdiction of the Board. (Speakers may be limited in speaking time dependent upon the press of business and number of persons wishing to address the Board.)

Approximately thru 10:00 a.m. **CLOSED SESSION**

BOARD OF SUPERVISORS

- 1a) **Closed Session - Conference with Legal Counsel** - CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION. Significant exposure to litigation pursuant to subdivision (b) of Government Code section 54956.9. Number of potential cases: one.
- 1b) **Closed Session - Conference with Legal Counsel** - CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION. Significant exposure to litigation pursuant to subdivision (b) of Government Code section 54956.9. Number of potential cases: one. Facts and circumstances: Claim for Damages by Inland Aquaculture Group.
- 1c) **Closed Session - Conference with Legal Counsel** - CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION. Significant exposure to litigation pursuant to subdivision (b) of Government Code section 54956.9. Number of potential cases: one. Facts and circumstances: dispute regarding Conway Ranch grant compliance.
- 1d) **Closed Session--Human Resources** - CONFERENCE WITH LABOR NEGOTIATORS. Government Code Section 54957.6. Agency designated representative(s): Marshall Rudolph, Brian Muir, and Jim Arkens. Employee Organization(s): Mono County Sheriff's Officers Association (aka Deputy Sheriff's Association), Local 39--majority representative of Mono County Public Employees (MCPE) and Deputy Probation Officers Unit (DPOU), Mono County Paramedic Rescue Association (PARA), Mono County Public Safety Officers Association (PSO), and Mono County Sheriff Department's Management Association (SO Mgmt). Unrepresented employees: All.

OPPORTUNITY FOR THE PUBLIC TO ADDRESS THE BOARD on items of public interest that are within the subject matter jurisdiction of the Board. (Speakers may be limited in speaking time dependent upon the press of business and number of persons wishing to address the Board.)

2) **APPROVAL OF MINUTES**

None

3) **BOARD MEMBER REPORTS**

The Board may, if time permits, take Board Reports at any time during the meeting and not at a specific time.

Approximately 10 Minutes **COUNTY ADMINISTRATIVE OFFICE**

- 4) CAO Report regarding Board Assignments (Jim Arkens)
RECOMMENDED ACTION: Receive brief oral report by County Administrative Officer (CAO) regarding his activities.

10:00 a.m. **DEPARTMENT REPORTS/EMERGING ISSUES** Approximately 15 minutes (PLEASE LIMIT COMMENTS TO FIVE MINUTES EACH)

Approximately 5 minutes for Consent Items

CONSENT AGENDA

(All matters on the consent agenda are to be approved on one motion unless a board member requests separate action on a specific item.)

CLERK OF THE BOARD

- 5a) **No Consent Items -**

REGULAR AGENDA

CORRESPONDENCE RECEIVED (INFORMATIONAL)

All items listed are available for review and are located in the Office of the Clerk of the Board

- 5b) **Suddenlink Letter with Rate Changes** - Letter from Suddenlink dated October 19, 2012 informing the

Board about rate adjustments, effective December 2012.

BOARD OF SUPERVISORS

- 6a)** **Report on Bighorn Sheep Recovery Program** (Dr. Thomas R. Stephenson) - Review of the Sierra Nevada Bighorn Sheep Recovery Program from 1999 to June 30, 2011. Dr. Stephenson will present strategies to increase population and identify program deficiencies. Supervisor Hansen is sponsoring this item.

45 minutes

Recommended Action: None. Informational only.

Fiscal Impact: None.

LUNCH

OPPORTUNITY FOR THE PUBLIC TO ADDRESS THE BOARD on items of public interest that are within the subject matter jurisdiction of the Board. (Speakers may be limited in speaking time dependent upon the press of business and number of persons wishing to address the Board.)

DISTRICT ATTORNEY

- 7a)** **Approval to Advertise for a Deputy District Attorney I/II Position.** (Tim Kendall/DA) - Jeremy Ibrahim has submitted a letter to terminate his contract as Deputy District Attorney I with Mono County effective December 1st 2012. We are seeking approval from the Board to advertise and filling of a Deputy District Attorney I/II.

10 minutes

Recommended Action: Approval to advertise to fill the position for a Deputy District Attorney I/II.

Fiscal Impact: Cost for FY 12/13 for a Deputy District Attorney I is \$87,687 of which \$54,915 is salary, \$10,331 is the County PERS contribution and \$22,442 is the cost of benefits. The cost is included in the approved budget. Full year cost is \$150,321 of which \$94,140 is salary, \$17,709 is the County PERS contribution and \$38,472 is the cost of benefits.

Cost for FY 12/13 for a Deputy District Attorney II is \$93,391 of which \$59,087 is salary, \$11,126 is the County PERS contribution and \$23,178 is the cost of benefits. The cost is included in the approved budget. Full year cost is \$160,099 of which \$101,292 is salary, \$19,073 is the County PERS contribution and \$39,734 is the cost of benefits.

FINANCE

Additional Departments: Public Works, Community Development

- 8a)** **Clean Air Project Program Block Grant Funds** (Mary Booher) - Presentation by Mary Booher regarding Clean Air Project Program Block Grant Funds.

15 minutes

Recommended Action: Consider potential projects and select desired project for implementation with Great Basin Unified Air Pollution Control District (GBUAPCD) Clean Air Project Program (CAPP) Block Grant Funds. Provide any desired direction to staff.

Fiscal Impact: \$59,680 of funds for a project in the County that meets the criteria established by the CAPP grant program.

PUBLIC WORKS - ROAD DIVISION

- 9a)** **Review of Snow Removal Priorities** (Jeff Walters) - Each year the Roads Division of Public Works provides the Board of Supervisors with a list of the snow removal policies, procedures and priorities for county-maintained roads.

15 minutes

Recommended Action: 1. Receive staff report regarding current snow removal priorities and recommended changes to those priorities. 2. Provide direction to staff regarding modifications to current snow removal priorities. 3. Consider and potentially adopt Resolution No. R12-____, "A Resolution of the Mono County Board of Supervisors Re-Establishing Snow Removal Policies,

Procedures, and Priorities for County-Maintained Roads.” 4. Provide any desired direction to staff.

Fiscal Impact: None.

9b)

20 minutes

Proposed Fuel Reduction Initiatives (Jeff Walters) - Mono County's vehicles, machinery and equipment use over 200,000 gallons of fuel on average each year. Mono County has many fuel reduction initiatives already in place and continues to develop and implement others in an effort to reduce county fuel use.

Recommended Action: Receive staff report regarding current and proposed fuel reduction initiatives. Provide any desired direction to staff.

Fiscal Impact: Proposed initiatives may result in a reduction in county fuel consumption.

COMMUNITY DEVELOPMENT - PLANNING DIVISION

Additional Departments: Economic Development Department

10a)

**PUBLIC
HEARING 2:30
p.m.
60 minutes**

California Unions for Responsible Energy appeal of the Planning Commission approval of the Mammoth Pacific I Replacement Project (Courtney Weiche) - Public hearing regarding appeal of Planning Commission approval of Conditional Use Permit No. 12-004 and Final Environmental Impact Report for the Mammoth Pacific I Replacement Project filed by California Unions for Reliable Energy (CURE).

Recommended Action: Conduct a public hearing to receive all relevant information in considering the appeal filed by CURE and either affirm, affirm in part (i.e., modify), or reverse the Planning Commission's actions.

[[If the Board affirms, or affirms in part, the Planning Commission's actions, then it should: Adopt "Resolution Denying Appeal of CUP 12-004 and FEIR Adoption for the Mammoth Pacific Replacement Project Filed by California Unions for Reliable Energy (CURE); Certifying and Adopting the FEIR for the Project; and Affirming the Planning Commission's Approval of CUP 12-004.]]

Fiscal Impact: The cost of the appeal is being borne by the applicant.

Additional Departments: Economic Development

10b)

**PUBLIC
HEARING
60 minutes**

Laborers Int'l Union of North America appeal of Planning Commission's approval of Mammoth Pacific I Replacement Project (Courtney Weiche) - Public hearing regarding appeal of the Planning Commission approval of the Final Environmental Impact Report, Clarifying General Plan Amendment 12-003(b) [sic], Conditional Use Permit 12-004, Variance 12-002, Reclamation Plan 12-001, and Notice of Decision for the Mammoth Pacific Replacement Project filed by Laborers International Union of North America, Local 783 (LIUNA).

The LIUNA appeal, too large to attach with the packet can be viewed by going to <http://www.monocounty.ca.gov/bos/event/board-supervisors-5>. Once there, click on the link for the appeal which is listed with the agenda for 11/13/12.

Recommended Action: Conduct a public hearing to receive all relevant information in considering the appeal filed by LIUNA and either affirm, affirm in part (i.e., modify), or reverse the Planning Commission's actions.

[[If the Board affirms, or affirms in part, the Planning Commission's actions, then it should: Adopt the "Resolution Denying Appeal of Planning Commission Approval of CUP 12-004, Variance 12-002, Reclamation Plan 12-001, FEIR Findings and Adoption, Notice of Determination and General Plan Amendment [sic] for the Mammoth Pacific Replacement Project Filed by Laborers International Union of North America, Local 783 (LIUNA); Certifying and Adopting the FEIR for the Project; and Affirming the Planning Commission's Project Approvals."]]

Fiscal Impact: All costs associated with appeal are borne by the applicant.

10c)

**PUBLIC
HEARING
30 minutes**

Geothermal Setback - General Plan Clarifying Amendment 12-003(b) (Courtney Weiche) - Proposed Resolution adopting General Plan Amendment 12-003 (b) to clarify the County's intent and interpretation of General Plan Chapter 15, section 15.070(B)(1)(d) and a provision within the Conservation and Open Space Element pertaining to setbacks from a mapped blue line or dotted blue line water course within the Hot Creek Buffer Zone for geothermal development.

Recommended Action: Adopt proposed Resolution. Provide any desired direction to staff.

Fiscal Impact: None are anticipated.

COUNTY COUNSEL

Additional Departments: Community Development Department

11a)

5 minutes

Foster - Deed Restriction and Agreement (Stacey Simon) - Proposed Deed Restriction and Agreement with Robert Foster, pertaining to owner-initiated deed restriction on Parcel Number 016-176-007 in June Lake. This is a related item to the proposed General Plan Amendment which would change the land use designation for this parcel to Commercial Lodging-High.

Recommended Action: Approve County entry into proposed Deed Restriction and Agreement and authorize Chair to execute, and the Clerk to record, said Agreement on behalf of the County. Provide any desired direction to staff.

Fiscal Impact: None.

COMMUNITY DEVELOPMENT - PLANNING DIVISION

12a)

**PUBLIC
HEARING**
30 minutes

Foster - General Plan Amendment 12-003 (a) (Courtney Weiche) - Public hearing regarding General Plan Amendment 12-003 (a) to change land use designation of APN 015-060-047 from Single Family Residential to Commercial Lodging- High, subject to restrictions contained in Conditional Use Permit 12-003.

Recommended Action: Adopt proposed resolution #R12-_____, approving GPA 12-003(a). Provide any desired direction to staff.

Fiscal Impact: None.

COMMUNITY DEVELOPMENT - BUILDING DIVISION

13a)

20 Minutes

Limited Density Owner Built Rural Dwellings (Tom Perry, Brent Calloway) - Proposed ordinance adopting chapter 15.50 of the Mono County Code pertaining to Limited Density Owner-Built Rural Dwellings.

Recommended Action: Introduce, read title, and waive further reading of proposed ordinance. Provide any desired direction to staff.

Fiscal Impact: None.

ADJOURNMENT

§§§§§



OFFICE OF THE CLERK
OF THE BOARD OF SUPERVISORS

REGULAR AGENDA REQUEST

Print

MEETING DATE	November 13, 2012	DEPARTMENT	Board of Supervisors
ADDITIONAL DEPARTMENTS			
TIME REQUIRED		PERSONS APPEARING BEFORE THE BOARD	
SUBJECT	Closed Session - Conference with Legal Counsel		

AGENDA DESCRIPTION:

(A brief general description of what the Board will hear, discuss, consider, or act upon)

CONFERENCE WITH LEGAL COUNSEL – ANTICIPATED LITIGATION. Significant exposure to litigation pursuant to subdivision (b) of Government Code section 54956.9. Number of potential cases: one.

RECOMMENDED ACTION:

FISCAL IMPACT:

CONTACT NAME:

PHONE/EMAIL: /

SUBMIT THE ORIGINAL DOCUMENT WITH
ATTACHMENTS TO THE OFFICE OF
THE COUNTY ADMINISTRATOR
PRIOR TO 5:00 P.M. ON THE FRIDAY
32 DAYS PRECEDING THE BOARD MEETING

SEND COPIES TO:

MINUTE ORDER REQUESTED:

☐ YES ☒ NO

ATTACHMENTS:

[Click to download](#)

No Attachments Available

History

Time	Who	Approval
11/7/2012 1:05 PM	County Administrative Office	Yes
11/7/2012 11:48 AM	County Counsel	Yes
11/7/2012 4:10 PM	Finance	Yes



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OF THE BOARD OF SUPERVISORS

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RECOMMENDED ACTION:

FISCAL IMPACT:

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REGULAR AGENDA REQUEST

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PHONE/EMAIL: /

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11/7/2012 11:48 AM	County Counsel	Yes
11/7/2012 4:09 PM	Finance	Yes



OFFICE OF THE CLERK
OF THE BOARD OF SUPERVISORS

REGULAR AGENDA REQUEST

Print

MEETING DATE November 13, 2012

DEPARTMENT Board of Supervisors

**ADDITIONAL
DEPARTMENTS**

TIME REQUIRED

SUBJECT Closed Session--Human Resources

**PERSONS
APPEARING
BEFORE THE
BOARD**

AGENDA DESCRIPTION:

(A brief general description of what the Board will hear, discuss, consider, or act upon)

CONFERENCE WITH LABOR NEGOTIATORS. Government Code Section 54957.6. Agency designated representative(s): Marshall Rudolph, Brian Muir, and Jim Arkens. Employee Organization(s): Mono County Sheriff's Officers Association (aka Deputy Sheriff's Association), Local 39--majority representative of Mono County Public Employees (MCPE) and Deputy Probation Officers Unit (DPOU), Mono County Paramedic Rescue Association (PARA), Mono County Public Safety Officers Association (PSO), and Mono County Sheriff Department's Management Association (SO Mgmt). Unrepresented employees: All.

RECOMMENDED ACTION:

FISCAL IMPACT:

CONTACT NAME: Jim Arkens

PHONE/EMAIL: 760-932-5413 / jarkens@mono.ca.gov

SUBMIT THE ORIGINAL DOCUMENT WITH
ATTACHMENTS TO THE OFFICE OF
THE COUNTY ADMINISTRATOR
PRIOR TO 5:00 P.M. ON THE FRIDAY
32 DAYS PRECEDING THE BOARD MEETING

SEND COPIES TO:

MINUTE ORDER REQUESTED:

☐ YES ☒ NO

ATTACHMENTS:

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No Attachments Available

[History](#)

Time	Who	Approval
9/28/2012 10:01 AM	County Administrative Office	Yes
11/6/2012 4:04 PM	County Counsel	Yes
9/28/2012 10:02 AM	Finance	Yes



OFFICE OF THE CLERK
OF THE BOARD OF SUPERVISORS

REGULAR AGENDA REQUEST

Print

MEETING DATE	November 13, 2012	DEPARTMENT	Clerk of the Board
ADDITIONAL DEPARTMENTS			
TIME REQUIRED		PERSONS APPEARING BEFORE THE BOARD	
SUBJECT	No Consent Items		

AGENDA DESCRIPTION:

(A brief general description of what the Board will hear, discuss, consider, or act upon)

RECOMMENDED ACTION:

FISCAL IMPACT:

CONTACT NAME:

PHONE/EMAIL: /

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MINUTE ORDER REQUESTED:

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No Attachments Available

History

Time	Who	Approval
11/7/2012 12:15 PM	Clerk of the Board	Yes



OFFICE OF THE CLERK
OF THE BOARD OF SUPERVISORS

REGULAR AGENDA REQUEST

Print

MEETING DATE	November 13, 2012	DEPARTMENT	Clerk of the Board
ADDITIONAL DEPARTMENTS			
TIME REQUIRED		PERSONS APPEARING BEFORE THE BOARD	
SUBJECT	Suddenlink Letter with Rate Changes		

AGENDA DESCRIPTION:

(A brief general description of what the Board will hear, discuss, consider, or act upon)

Letter from Suddenlink dated October 19, 2012 informing the Board about rate adjustments, effective December 2012.

RECOMMENDED ACTION:

FISCAL IMPACT:

CONTACT NAME: Shannon Kendall

PHONE/EMAIL: x5533 / skendall@mono.ca.gov

SUBMIT THE ORIGINAL DOCUMENT WITH
ATTACHMENTS TO THE OFFICE OF
THE COUNTY ADMINISTRATOR
PRIOR TO 5:00 P.M. ON THE FRIDAY
32 DAYS PRECEDING THE BOARD MEETING

SEND COPIES TO:

MINUTE ORDER REQUESTED:

☐ YES ☒ NO

ATTACHMENTS:

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[suddenlink](#)

History

Time	Who	Approval
10/30/2012 12:42 PM	Clerk of the Board	Yes

October 19, 2012



Clerk of the Board – County of Mono
Lynda Roberts
P.O. Box 715
Bridgeport, CA 93517

RECEIVED

OCT 29 2012

OFFICE OF THE CLERK

Dear Lynda Roberts:

As in prior years, customers who subscribe to a bundled package of multiple services with a guaranteed rate will keep that rate until its anniversary date.

Effective December 2012, local adjustments will be limited to the following items, and communicated to our customers, as required.

Item	Monthly Adjustment
Basic TV	\$2.50
HBO	\$1.00
SD (Non-DVR) Receivers	\$1.00
Broadcast Station Surcharge	\$0.50
High-Speed Internet	\$1.00

Taxes, fees, and surcharges will be adjusted accordingly.

While we pledge to hold prices as low as possible, these adjustments are necessary due to the rising cost of TV programming, equipment, insurance, network expenses for Internet service, and other factors.

In addition, we have bundled packages of two or more services that can help many customers off-set these adjustments and potentially save money. More than six out of 10 Suddenlink customers have already taken advantage of such offers, bundling services with us – and we will continue to communicate those options to our customers.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jason Oelkers".

Jason Oelkers
530.550.3922



OFFICE OF THE CLERK
OF THE BOARD OF SUPERVISORS

REGULAR AGENDA REQUEST

Print

MEETING DATE	November 13, 2012	DEPARTMENT	Board of Supervisors
ADDITIONAL DEPARTMENTS			
TIME REQUIRED	45 minutes	PERSONS APPEARING BEFORE THE BOARD	Dr. Thomas R. Stephenson
SUBJECT	Report on Bighorn Sheep Recovery Program		

AGENDA DESCRIPTION:

(A brief general description of what the Board will hear, discuss, consider, or act upon)

Review of the Sierra Nevada Bighorn Sheep Recovery Program from 1999 to June 30, 2011. Dr. Stephenson will present strategies to increase population and identify program deficiencies. Supervisor Hansen is sponsoring this item.

RECOMMENDED ACTION:

None. Informational only.

FISCAL IMPACT:

None.

LUNCH

OPPORTUNITY FOR THE PUBLIC TO ADDRESS THE BOARD on items of public interest that are within the subject matter jurisdiction of the Board. (Speakers may be limited in speaking time dependent upon the press of business and number of persons wishing to address the Board.)

CONTACT NAME: Shannon Kendall

PHONE/EMAIL: x5533 / skendall@mono.ca.gov

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SEND COPIES TO:

MINUTE ORDER REQUESTED:

☐ YES ☒ NO

ATTACHMENTS:

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 [BHS Staff](#)

 [Report Part One](#)

 [Report Part Two](#)

History

Time	Who	Approval
10/28/2012 3:03 PM	County Administrative Office	Yes
11/6/2012 4:07 PM	County Counsel	Yes
10/22/2012 2:26 PM	Finance	Yes



BOARD OF SUPERVISORS COUNTY OF MONO

**TIM HANSEN
SUPERVISOR – DISTRICT
FOUR**

P.O. BOX 287
LEE VINING, CA 93541
(760) 932-5532 OFFICE
(760) 937-3290 CELL
(760) 932-5531 FAX
THANSEN@MONO.CA.GOV

October 19, 2012

Memo to Shannon Kendall
Re: November 13th, 2012 BOS Meeting
Sierra Nevada Bighorn Sheep Recovery Program

Agenda Description:

Dr. Thomas R. Stephenson will present a review of the Sierra Nevada Bighorn Sheep Recovery Program from 1999, when Sierra Nevada bighorn sheep were placed on the federal endangered species list, to June 30, 2011. Since 1999, Sierra bighorn numbers have increased from just over 100 animals to about 400. He will present the strategies used to increase population, and identify program deficiencies.

Recommended Action:

Review 2010-2011 SNBS Recovery Program Report: “A Decade in Review”.
Discuss past and future impacts, existing activities including recreational and agricultural uses, and program success.
Facilitate possible discussion with other governmental agencies and livestock operators. Discuss further actions to reach recovery goals.

Contact Name:

Tim Hansen
(760) 937-3290
thansen@mono.ca.gov

Sierra Nevada Bighorn Sheep Recovery Program

For more information on Sierra Nevada bighorn sheep, please visit:
www.dfg.ca.gov/snbs.

2010-2011 Annual Report of the Sierra Nevada Bighorn Sheep Recovery Program: A Decade in Review



www.dfg.ca.gov/snbs

2010-2011 Annual Report of the Sierra Nevada Bighorn Sheep Recovery Program: A Decade in Review

Thomas R. Stephenson¹, John D. Wehausen², Alexandra P. Few¹, David W. German¹, Dennis F. Jensen¹, Derek Spitz¹, Kathleen Knox¹, Becky M. Pierce¹, Jeffrey L. Davis³, Jeff Ostergard³, and Jonathan Fusaro¹

¹ *California Department of Fish and Game, Sierra Nevada Bighorn Sheep Recovery Program,*

² *University of California, White Mountain Research Station,* ³ *United States Department of Agriculture, Animal and Plant Health Inspection Services, Wildlife Services*

Acknowledgements

Numerous personnel contributed to recovery efforts and data collection including Vern Bleich, Mary Conner, Heather Johnson, Maya Leonard-Cahn (now Kane), Lacey Greene, Vicki Davis, Mark Kiner, Kelsey Ellis, Mike Dodd, Kevin Monteith, Joy Erlenbach, Ryan Spaulding, Katie Nelson, Josh Schmallenberger, Ken Moore, Cody Schroeder, Lori Bowermaster, Ali Feinberg, Greg Foote, Jeff Villepique, Sarah Mussulman, helicopter pilots Steve DeJesus, Rick Swisher and Mark Shelton, and fixed-wing aircraft pilots Gary Schales and Geoff Pope. Photographs were provided by nonprogram personnel include Steve Yeager, Art Lawrence, and Tim Glenner. The recovery effort is funded primarily by the California Department of Fish and Game. Funding also was acquired through U. S. Fish and Wildlife Service Section 6 grants to support recovery activities. The Bureau of Land Management, Inyo National Forest, Humboldt-Toiyabe National Forest, Yosemite National Park, Sequoia-Kings Canyon National Parks, and the Yosemite Conservancy supported various field efforts. Additional funding was acquired to support graduate research through Canon and the P.E.O. Scholars Program. The Sierra Nevada Bighorn Sheep Foundation and the California Wild Sheep Foundation provided important supplemental funding when needed.

Literature Citation Should Read As Follows:

Stephenson, T. R., et al. 2010-2011 Annual Report of the Sierra Nevada Bighorn Sheep Recovery Program: A Decade in Review. California Department of Fish and Game. January 2012.

An electronic version of this monitoring report also will be made available at <http://www.dfg.ca.gov/snbs/Literature.html>

Results reported here are preliminary and, in some cases, represent findings of collaborators; please do not cite without consulting the authors.

To learn more, please visit www.dfg.ca.gov/snbs.

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Summary

This report presents a review of the Sierra Nevada Bighorn Sheep Recovery Program from 1999, when Sierra Nevada bighorn sheep were placed on the federal endangered species list, to June 30, 2011. For a detailed summary of recovery actions carried out and data collected from 2010-2011 see Appendices C and D.

Since 1999, Sierra bighorn numbers have increased from just over 100 animals to about 400. The current reproductive base of almost 200 females over 1 year old is about two-thirds of the numerical recovery goal of 305 females (Figure 1). Of the 12 herd units required for recovery (USFWS 2007), only 4 remain vacant as of the 2010-2011 reporting year.

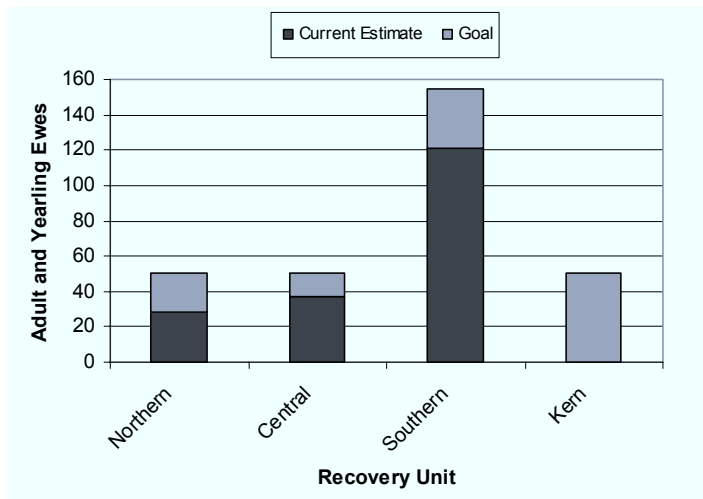


Figure 1. Proximity to downlisting criteria for each Sierra Nevada bighorn sheep recovery unit based on number of adult ewes over 1 year old.

Herds that grew substantially since listing (Wheeler Ridge, Mount Langley, Sawmill Canyon, and Mount Baxter) tended to have the highest growth rates early in the decade. During periods of high growth, survival rates of adult females generally exceeded 90%. Periods of slowed population growth were accompanied by more variable and poorer adult female survival and declining recruitment of yearling females. Mountain lion predation was the highest known cause of mortality and was concentrated in herds in proximity to dense mule deer winter ranges (Johnson 2010a).

The Recovery Program is directed by the Recovery Plan for Sierra Nevada bighorn sheep drafted in 2001 (USFWS 2007) which presents the conservation strategies that

California's Department of Fish and Game (DFG) has employed over the last decade. The Recovery Plan has a 20-year implementation schedule beginning when the plan was released in 2007. The stated goal for downlisting is 2017. Considerable progress has been made in implementing the Recovery Plan conservation strategies. These strategies focus on 1) increasing the number and distribution of bighorn sheep through augmentations and habitat enhancement projects and 2) reducing threats that limit their survival by managing predators and reducing the proximity of domestic sheep grazing allotments. Based on the first strategy, we implemented three translocations to augment small herds. Additionally, we planned prescribed burns and initiated two to enhance the quality of habitat for bighorn sheep. Following the second strategy, we removed mountain lions when they posed an imminent threat to bighorn sheep, and land management agencies worked to shift grazing away from areas near bighorn recovery units.

After reviewing 11 years of progress, we are optimistic that we could meet the goals for downlisting to threatened status within the next decade, barring any catastrophes. If we are to meet this ambitious timeline, key recovery strategies need to continue. Implementing translocations for reintroductions to vacant herd units is essential to achieve the distribution required to meet recovery goals. This necessitates adaptive management and a predator management program to protect herds used as a source of translocation stock so that reintroductions and augmentations can occur.

For more information on Sierra Nevada bighorn sheep, please visit our new website at www.dfg.ca.gov/snbs.

The Last Decade: From Listing toward Recovery

In 1999 Sierra Nevada bighorn sheep (*Ovis canadensis sierrae*), a genetically and morphometrically distinct subspecies of bighorn (Wehausen et al. 2005), were granted emergency endangered status under the federal Endangered Species Act (ESA). In the same year they were also upgraded from threatened to endangered under the California Endangered Species Act (CESA). Early in 2000 these bighorn sheep were granted full federal endangered status. Following the 1999 endangered listings, the California Legislature asked the California Department of Fish and Game (CDFG) to administer a funded recovery program for bighorn sheep. CDFG has remained the lead agency implementing this recovery effort.

The first task undertaken by this program was the drafting of a recovery plan for Sierra Nevada bighorn sheep, which was completed in 2001 and released by the U.S. Fish and Wildlife Service in 2007. As the document guiding the recovery effort, this plan identifies key issues, sets recovery goals, and lists recommended recovery actions. Federal endangered status was sought for Sierra Nevada bighorn sheep because of a dangerously low population size and the inadequacy of existing regulatory mechanisms relative to two concerns: negative effects of mountain lion predation, and the threat of a major respiratory disease epizootic that could result from contact with domestic sheep grazed on public lands adjacent to bighorn sheep ranges.

The Recovery Plan for Sierra Nevada bighorn sheep identifies 16 historic herd units (populations) and groups these into 4 recovery units (metapopulations; Figure 2). Bighorn in the Sierra reside almost entirely

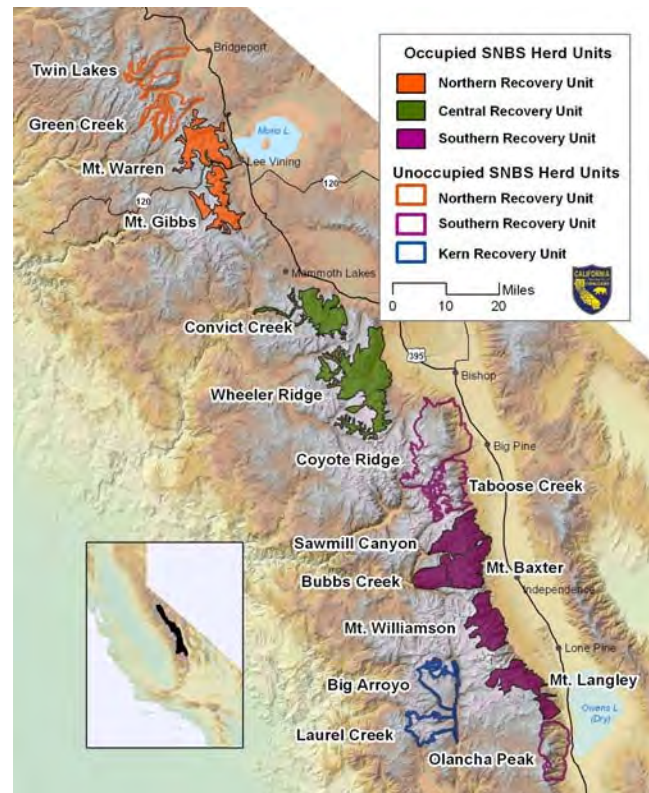


Figure 2. Locations of 16 historic herd units in 4 Recovery Units. All occupied herd units are required for recovery (USFWS 2007) except Bubbs Creek. Four vacant herd units (Olancho Peak, Laurel Creek, Big Arroyo, and Taboose Creek) must be reoccupied to meet recovery goals.

in multiple National Parks and National Forests, but herd units are adjacent to land with many other public and private owners. Two herd units in the Northern Recovery Unit, Mount Gibbs and Mount Warren, lie partially within the boundaries of Yosemite National Park. All of the occupied herd units in the Southern Recovery Unit lie at least partially within Sequoia and Kings Canyon National Parks. All low-elevation winter ranges are on the Inyo National Forest. Downlisting and delisting criteria specify herd units that need to be occupied (Figure 2) as well as minimum numbers of females required in each recovery unit (Figure 1). Issues identified for management actions include predation, bighorn use of low elevation winter ranges, domestic sheep grazing, and reintroduction

of bighorn to unoccupied herd units. The Recovery Plan also calls for the development of regular demographic data on bighorn sheep herds and identified areas of desired research (USFWS 2007).

The Recovery Plan states that “recovery of bighorn sheep in the Sierra Nevada will require an adaptive approach, one in which decisions made will depend on current information about key resources. An adaptive approach to management will require development or continuation of existing research.” The program is identifying resource selection patterns across the Sierra Nevada, determining patterns of genetic variation across the subspecies, modeling the risk of disease transmission from domestic sheep and goats, quantifying the effects of natural and prescribed fire on bighorn forage and habitat use, monitoring mountain lion movements, predation rates, and population numbers, implementing and monitoring translocation efforts, and modeling bighorn sheep response to various management actions. We use information acquired through these studies to direct recovery activities.

This year marks 11 years since full federal endangered status was granted. This report traces trajectories of Sierra Nevada bighorn sheep herds over that time period, reviews accomplishments of the Recovery Program, and outlines future management

actions needed. Beginning in the early 1980s, monitoring reports were written summarizing demographic information on bighorn sheep herds in the Sierra Nevada. Those reports have been produced on an annual basis for the past decade. Summaries of demographic data and important events from those reports can be found in Appendices A and B. Detailed information for the past year can be found in Appendices C and D.

Monitoring Bighorn Populations

We have attempted to collect annual demographic data for all occupied herds in an effort to track population trends. This has not always been successful for all occupied herds every year. However, there have been enough years in which adequate information exists for every herd to track the overall population trend. Counts have focused on females because they are the reproductive base of the population; consequently, there are even fewer years in which it has been possible to develop a defensible size estimate for the entire population (i.e., including rams).

We have followed two approaches in determining sizes of herds. First are minimum counts, the basis of recovery goals. Bighorn sheep in the Sierra Nevada offer a rare situation wherein focused efforts at the right time can produce relatively complete counts of all females and associates up to herds that number 30–35 ewes. Occasionally, males can be counted by a similar method. The addition of telemetry collars has increased the frequency of relatively complete minimum counts and the population size at which relatively complete counts can be obtained. Second has been the use of collared bighorn to generate mark-resight (MR) population estimates, which are presented in this report with 95% confidence intervals in



parentheses. Where MR estimates and minimum counts occur in the same herd in the same year, minimum counts are evaluated for their completeness by comparing to MR estimates. Also, counts from subsequent years and known mortalities occurring between counts are used to evaluate previous counts.

As the Recovery Plan recognizes, the capture of Sierra Nevada bighorn sheep and the deployment of collars are essential for implementing the recovery of this federally endangered species (USFWS 2007). One emphasis of this Recovery Program has been the deployment of telemetry collars on bighorn sheep, including both traditional VHF collars and GPS collars that record multiple GPS locations daily. In addition to their use for MR population estimates and minimum counts, collars have provided important information relative to a variety of questions. First, collars shed light on spatial patterns of habitat use by sheep. This information has led to refinement of herd unit boundaries and has helped document population substructuring (different home range patterns) between sexes (Schroeder et al. 2010) and within sexes, seasonal migratory patterns, and occasional extreme movements that have bridged herd units or taken animals outside of herd unit boundaries. Second, collars can be used to measure survival rates by sex and herd and to assess cause-specific mortality. Telemetry collars include mortality sensors that make it possible for some mortalities to be investigated soon after death, when the cause of mortality is often more evident. This has been particularly useful for identifying deaths due to predation, physical injury (e.g., falls, avalanches), and malnutrition. Third, collared females provide an opportunity to measure reproductive success through repeated observations of known individuals. Finally, captures necessary to deploy collars have



provided an essential opportunity to conduct disease surveillance and determine the nutritional condition and reproductive status of individuals within populations. Data obtained from collared bighorn sheep have been and will continue to be used to guide recovery actions.

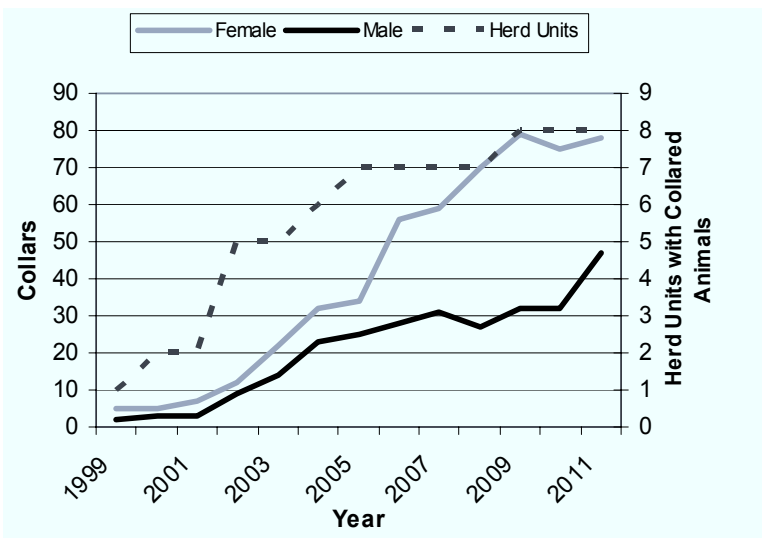


Figure 3. Collar history for Sierra Nevada Bighorn Sheep Program during 1999-2011.

During January 1999 to June 2011, we deployed a total of 212 GPS collars and 239 VHF collars from 258 captures, representing 180 individual animals; a VHF and a GPS collar are deployed on most captured bighorn. To date, no more than 79 females and 47 males have carried collars at any one time (Figure 3). We take great care during captures to minimize the risk of injury and mortality to Sierra bighorn. During 258 captures of which 249 were by helicopter net-gun, 8 direct mortalities occurred over an 11 year period; 2 additional animals died of unknown causes and were scavenged within 2 weeks of moving away from their release site. Thus far, we have retrieved GPS data from 159 collar deployments on 124 different animals. Additional GPS collars remain deployed. Efforts are currently underway to use these data to understand habitat selection, identify the disease risk posed by adjacent domestic sheep allotments, and determine optimal locations for future reintroductions and augmentations.

Following listing, most captures focused on collaring bighorn sheep in herd units adjacent to active domestic sheep allotments in an effort to assess the risk of disease transmission. Consequently, Wheeler Ridge and Mount Warren were the focus of collaring efforts during 1999–2005 with most captures occurring on lower-elevation winter ranges. Beginning in 2005, most captures occurred during autumn on alpine ranges to avoid disturbing bighorn on their winter ranges. Collars are currently deployed in all occupied herd units except the newly colonized Convict Creek herd.

Bighorn Sheep Population Dynamics

Populations change over time due to the difference between gains from successful reproduction (recruitment) and immigration and losses due to mortality and emigration.

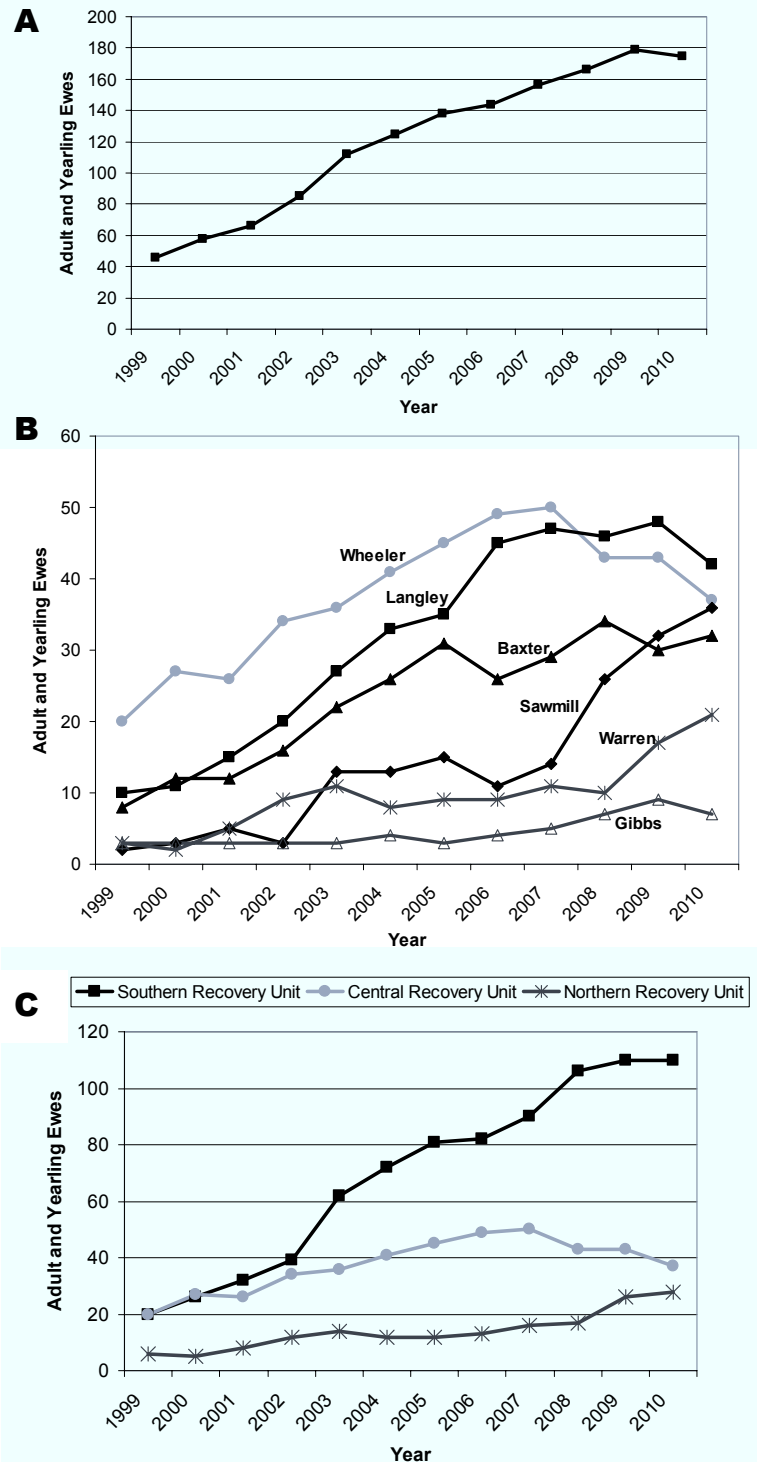


Figure 4. Population trajectories for adult and yearling ewes during 1999–2010 based on a combination of minimum counts, mark-resight estimates, and reconstructed data. All data for the Mount Baxter herd is derived from winter counts except for data from 2002 which are from a summer count. **A.** Total population trajectory for 6 herds in the Sierra (Mount Langley, Mount Baxter, Sawmill Canyon, Wheeler Ridge, Mount Gibbs, and Mount Warren) with annual population estimates. **B.** Population trajectories by herd unit. **C.** Population trajectories by recovery unit.

Because immigration and emigration are rare events in bighorn sheep herds and involve few sheep, they can be largely ignored in considerations of population dynamics. Consequently, we first consider overall population dynamics, and then mortality and recruitment patterns that influence those dynamics.

Population Changes over Time

The total population of bighorn sheep in the Sierra Nevada has made large gains since listing. The number of females has nearly quadrupled from a low of about 50 in 1995 (USFWS 2007) to almost 200, but has shown no gains for the past year (Figure 4A and Appendix A). Within that larger pattern, however, are a variety of trends at the level of individual herd units, varying from herds that have remained static at low numbers to herds that have grown dramatically and are largely responsible for the overall gains (Figure 4B). For a more detailed description of demographic trends within individual herds, see Appendix B.

Overall population gains for Sierra Nevada bighorn have been driven primarily by 3 of 5 occupied herd units in the Southern Recovery Unit (SRU) and one herd in the Central Recovery Unit (CRU), whereas the 2 herds (Mount Gibbs and Mount Warren) making up the Northern Recovery Unit (NRU) have shown only modest increases in population growth (Figure 4B and C). The increase in total ewes in the Northern Recovery Unit in 2009 (Figure 4C) was largely caused by the translocation of 6 ewes that spring and an increase in our ability to detect animals that had recently expanded their range in the Mount Warren herd (Figure 4B). Population size in recent years correlates well with the extent of the habitat bighorn use. The largest populations in the SRU are using a combined 381 km², whereas herds in the

CRU and NRU are using 126 km² and 107 km², respectively.

In recent years Mount Langley and Wheeler Ridge accounted for about half of the total population, and the Mount Baxter and Sawmill Canyon herd units together account for another third of the total population (Figure 4B). These 4 herds are intended to serve as sources of stock for translocations to augment small existing herds and to reintroduce bighorn to historic ranges; therefore, maintaining healthy demographic trends in these populations is critical for recovery. The Mount Langley and Wheeler Ridge herd units have not grown since 2007 (Figure 4B), and the population growth rate indicates a clear decline over time (Figure 5). The Mount Baxter herd has not gained any females for 5 years (Figure 4B) and numbers less than half its size in the late 1970s. In contrast, in the past year the adjacent Sawmill Canyon herd has been found to be almost 3 times the size recorded 3 years ago (Figure 4B). This increase can be attributed in part to greatly improved data collection made possible by the deployment of more collars in this herd. Notwithstanding

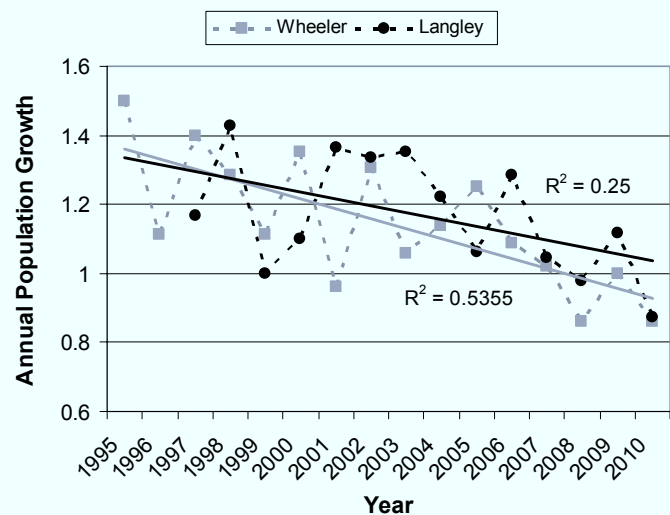


Figure 5. Population growth rate (lambda measured as N_{t+1}/N_t) for the Mount Langley and Wheeler Ridge herds during 1995–2010.

this apparent increase, the total adult and yearling females in the 2 recovery units containing source populations for translocations, the SRU and CRU, exhibit a lack of gains over the last 2 to 3 years (Figure 4C). The next two sections explore the recruitment and mortality patterns underlying these recent dynamics.

Cause-Specific Mortality and Survival

Sensitivity analyses of Sierra Nevada bighorn sheep demographic parameters showed that changes in adult female survival will have the largest impact on population growth (Johnson et al. 2010c), as with other large ungulates. It is therefore important to understand the factors affecting adult survival, which vary spatially within the Sierra Nevada. Here we examine natural causes of mortality determined by investigation of freshly-dead female bighorn. Over the past 11 years these causes included snow avalanches (hereafter referred to as avalanches), physical injury from rock fall or falling from cliffs, mountain lion predation, bobcat predation (1 instance), coyote predation (1 instance), and unknown (Figure 6A).

Because the change in the number of females determines the rate of population growth, limiting female mortality is an important management goal. From 1999 to 2010, 70 female mortalities from natural causes have been recorded; 51 of these females were radio-collared. The cause-specific mortality analysis presented here (Figure 6A) is limited to radio-collared females to avoid bias toward mountain lion predation in the uncollared subpopulation, as tracking of collared lions makes lion predation easier to detect than other causes of death among uncollared bighorn.

Southern Recovery Unit

In the SRU, mountain lion predation is

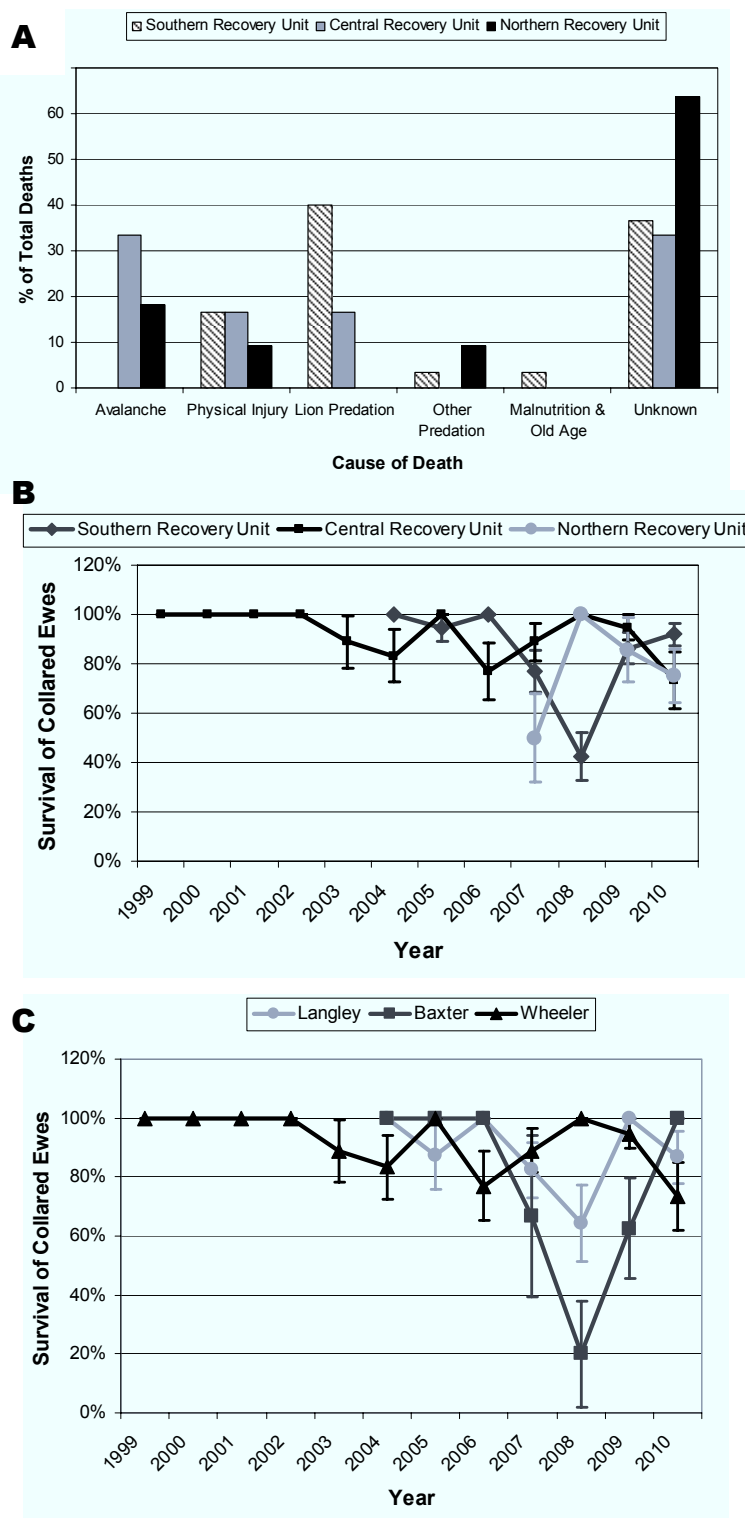


Figure 6. Cause-specific mortalities and survival of collared ewes from 1999–2010. **A.** Cause-specific mortalities of collared ewes by recovery unit. **B.** Annual Kaplan-Meier survival rates of collared ewes for 1999–2010 by recovery unit. **C.** Annual Kaplan-Meier survival rates of collared ewes for 1999–2010 for three herds.

the largest known cause of death among ewes (Figure 6A), accounting for 40% (12 out of 30) of the total mortalities. Most lion kills occurred in the Mount Baxter and Sawmill Canyon herds, but several also occurred in the Mount Langley and Mount Williamson herds. This is a conservative estimate of mountain lion predation because many carcasses investigated were not intact enough to be assigned a cause of death and were included in the unknown category.

The annual survival rate of collared ewes is inversely related to mortalities for a given year. In the SRU annual survival rates of collared ewes have varied between 42 and 100% (Figure 6B). The survival rate declined precipitously in 2007 and 2008 (Figure 6B). This rapid decline in survival was caused largely by an increase in mountain lion predation. Out of 12 known mountain lion kills of collared ewes in the SRU between 1999 and 2010, 8 occurred during 2007 and 2008. Among 18 collared and uncollared ewes in the SRU killed by mountain lions between 1999 and 2010, 13 were killed during 2007 and 2008. In those 2 years, 11 of the 13 lion kills in the SRU occurred in the Mount Baxter and Sawmill Canyon herds, and in 2008 the annual survival rate of collared ewes at Mount Baxter declined to 20% (Figure 6C). In those 2 winters, 5 different mountain lions were known to use the Baxter-Sawmill winter range for varying lengths of time. It appears that this predation has prevented growth of the Mount Baxter herd in recent years (Figure 4B). During 2008 and 2009, lion trackers working for USDA Wildlife Services selectively killed 9 lions in the SRU that targeted bighorn sheep as prey. This management effort likely prevented a decline in these populations.

Because many of the herds in the SRU (Mount Langley, Mount Baxter, and Sawmill Canyon) will serve as source

populations for future reintroductions and augmentations, manageable causes of mortality must be reduced. In a nutritionally-limited population in which predation replaces other forms of mortality such as starvation, mountain lion predation can be compensatory, leading to no net loss in numbers. In populations that are not nutritionally limited, predation can be additive, resulting in additional mortalities. Because translocations remove animals from source populations, thereby reducing competition for forage, predation losses are not likely to be compensatory. Instead, those losses will limit availability of bighorn for translocations.

Central Recovery Unit

In the CRU, Wheeler Ridge is the only herd with long-term demographic data. Here, survival of collared ewes has varied between 73 and 100% with an average annual survival rate of 93% (Figure 6B). Avalanches have caused the majority of collared ewe mortalities (33.3% of 12 mortalities, Figure 6A). Within the last decade, all 10 avalanche mortalities of collared and uncollared bighorn (6 ewes, 3 rams, and 1 juvenile) occurred in 3 separate avalanches in the 2010-2011, winter resulting in a significant decline in annual female survival for that year (Figure 6B). Avalanche deaths from prior decades occurred in 1980 and 1995 (Appendix B) and indicate that avalanches, which are larger and more frequent in heavy snow years, regularly kill bighorn in this herd.

When cause of mortality is analyzed for both collared males and females, the largest cause of death at Wheeler Ridge is mountain lion predation (32%, 10 of 31 collared bighorn mortalities, data not shown). Detected mountain lions kills in this herd have been predominantly rams. This is in contrast to predation in the SRU where

mountain lion predation has been biased toward ewes (60% of 30 lion kills detected are ewes in the SRU; 21% of 33 lion kills detected are ewes at Wheeler Ridge). Although Wheeler Ridge is a source population for translocations, mountain lion control need not be as aggressive if predation continues to be focused on rams. It is important to monitor mountain lion activity in this area and respond if necessary to prevent heavy predation of females. Conservative predator management is only possible if bighorn survival is monitored intensively and with a high level of confidence.

Northern Recovery Unit

The NRU is currently composed of 2 small herds (Mount Gibbs and Mount Warren) with very different dynamics. The collared ewes at Mount Gibbs, which winter almost exclusively on high-elevation (>11,000 feet) windswept ridges, had a 100% survival rate regardless of winter severity (Appendix B). In stark contrast, the survival rate of ewes in the Mount Warren population varied between 20 and 100% (Appendix B). Overall survival in the NRU has varied between 50 and 100% with an average survival rate of 78% (Figure 6B). Because these herds winter at high elevation, mortalities often cannot be investigated quickly enough to determine a cause of death. Thus, 64% of these mortalities are attributed to an unknown cause.

A significant source of mortality in this herd is avalanches (18% of 11 collared ewe mortalities). As at Wheeler Ridge, all avalanche deaths in the last decade occurred in the 2010–2011 winter. The carcasses of 2 collared ewes were recovered in avalanche paths. Three additional collared ewes died in the 2010–2011 winter, but the cause of death could not be determined. The 2010–

2011 heavy winter resulted in a loss of one-third of the ewes observed the previous year. The 180% winter of 2010–2011 explains the temporal variation in avalanche deaths (Figure 19).

Reproduction and Recruitment

The recruitment rate must increase to maintain the population at a given size as the survival rate declines. Specifically, models show that high recruitment rates (female yearling:ewe >0.2) are required for bighorn when survival falls below 87% (data not shown). While the total number of ewes in the Sierra has increased dramatically in the last decade (Figure 4A), the total number of ewes in 3 herds, Mt. Langley, Mt. Baxter, and Wheeler Ridge, important sources for translocations, has not grown in the last 3 to 5 years (Figure 4B). Unlike the population at Mount Baxter where mountain lion predation resulted in a decrease in ewe survival (Figure 6C), for several years the survival rates of the Mount Langley and Wheeler Ridge populations do not show a consistent decline (Figure 6C). However, population growth rates at Mount Langley and Wheeler Ridge indicate a clear decrease over time (Figure 5) suggesting that inadequate conception, fecundity (births), or



lamb survival is causing a decline in recruitment (the replacement rate of the reproducing segment of the population) and population growth. Pregnancy rates of adult females measured throughout the recovery area during captures were between 80 and 90%, indicating that conception rates are not limiting population growth. Below we will discuss fecundity and recruitment patterns that contribute to population growth at Wheeler Ridge and Mount Langley, the 2 herds with the best long-term data.

Both Wheeler Ridge and Mount Langley have experienced periods of decreased fecundity and recruitment while the total population increased (Figures 7 and 8). This suggests that population density contributed to a decline in fecundity and recruitment. There are three possible density-dependent mechanisms that may account for this decline. First, herbivores typically show decreases in recruitment followed by decreases in fecundity as the availability of nutrients decreases with increasing population density (Bonenfant et al. 2009). Second, predation (e.g., by coyotes, golden eagles, bobcats, and mountain lions) on juveniles (lambs and yearlings) can increase with population density (a Type II functional response; Mills 2007), resulting in decreased fecundity and recruitment. Third, predation can lead to indirect effects on bighorn such as decreased foraging efficiency leading to reduced fecundity or recruitment (Bourbeau-Lemieux et al. 2011). At present we have no reliable way to detect predation on juvenile bighorn (evidence for hypothesis 2) as none are collared; thus we will examine evidence for nutritional deficiencies (hypothesis 1) and indirect effects of predation (hypothesis 3) on fecundity and recruitment.

Wheeler Ridge

At Wheeler Ridge fecundity, best estimated as the lamb to ewe ratio, declined

from 2000 to 2006 (Figure 7A), and recruitment, best estimated as the yearling to ewe ratio, declined similarly (Figure 7B). Interestingly, this pattern of decline occurred while the population was steadily increasing (Figure 7C), suggesting that population density contributed to a decline in fecundity and recruitment. The threshold of body fat required to maintain pregnancy is near 10% and probably does not vary among herds. Lactating ewes at Wheeler Ridge captured in the fall average 12% body fat and non-lactating ewes average 17% body fat, suggesting that adult ewes are not nutritionally limited. During the first half of the decade, mountain lions were present at

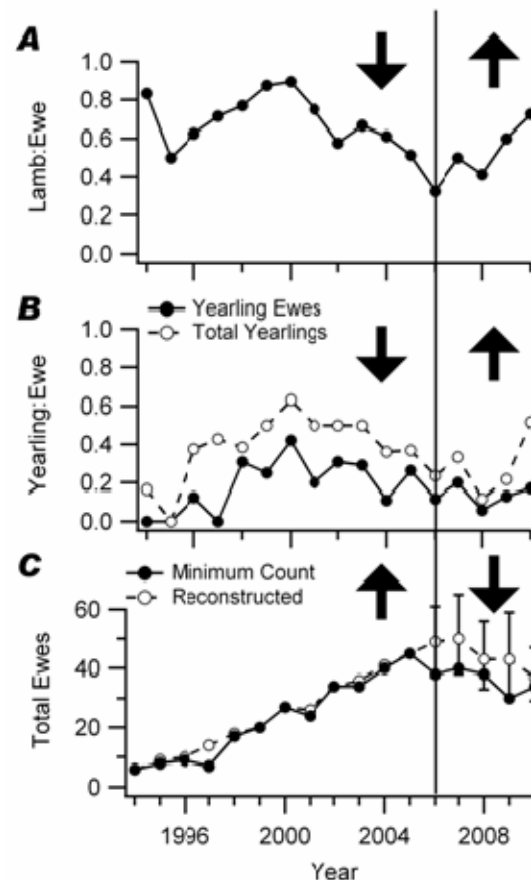


Figure 7. Annual demographic data for Wheeler Ridge from 1994–2010 collected during winter counts. **A.** Fecundity by year measured as the number of observed lambs:adult ewes. **B.** Recruitment by year measured as the number of observed yearlings:adult ewes. **C.** Adult and yearling ewes by year. Arrow indicates population trend.

Wheeler Ridge in higher numbers than they have been since (Figures 13 and 14), suggesting that predation may have affected fecundity and recruitment.

Fecundity and recruitment have increased since 2006 and 2008, respectively (Figures 7A and B). This upward trend may reflect an increase in available forage caused by a range expansion (see Geographic Distribution and Natural Range Expansions below), an increase in the use of low-elevation winter range, or an increase in the amount of precipitation (Figure 19). Alternatively, population growth earlier in

the decade or the decline in mountain lions in the area (Figures 13 and 14) may have led to more efficient vigilance behavior and thus more efficient foraging. It remains to be seen whether this increase in recruitment will result in population growth (Figure 7C).

Mount Langley

The data from Mount Langley are somewhat more variable, but a clear decline in fecundity can be seen in the first half of this decade (Figure 8A) as the population increased (Figure 8C). Whether this was caused by density-dependent changes in forage availability or by predation is not clear. Body condition data collected during fall captures suggest that lactating ewes in this population are not nutritionally limited (15% body fat), similar to ewes at Wheeler Ridge. However, the declines in fecundity and recruitment in 2008 (Figure 8A and B) are likely multiyear effects of the 2006–2007 winter, which was the driest in the last 4 decades. For bighorn a significant effect of that winter was decreased nutrient availability the following summer, because forage growth is so dependent on soil moisture from snow melt. Although the dry 2006–2007 winter did not affect the fecundity or recruitment recorded in 2007, it likely caused the decrease in fecundity and recruitment measured in 2008 (Figure 8A and B). Presumably the 2006–2007 winter affected the ability of ewes either to become pregnant, to carry a pregnancy to term, or to nurse newborn lambs the following year, resulting in a lower lamb to ewe ratio for 2008 (Figure 8A). A decline in body fat to 10.7% in lactating ewes in the fall of 2007 supports this hypothesis. This dry winter also likely affected the survival of lambs in 2007 such that the ratio of yearlings to ewes decreased in 2008 (Figure 8B). The same decline in fecundity and recruitment, although much smaller in magnitude, can be seen at Wheeler Ridge in 2008, suggesting

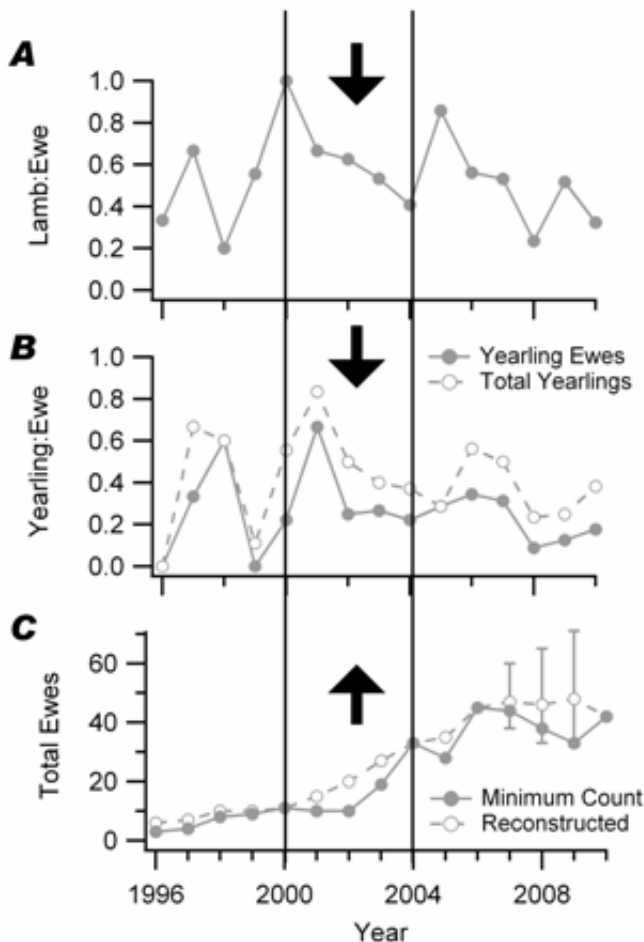


Figure 8. Annual demographic data for Mount Langley from 1996–2010 collected during summer counts. **A.** Fecundity by year measured as the number of observed lambs:adult ewes. **B.** Recruitment by year measured as the number of observed yearlings:adult ewes. **C.** Adult and yearling ewes by year. Arrow indicates population trend.

that the drought had repercussions across the Sierra. The effects of this dry winter indicate that under extreme conditions these small, endangered populations may experience nutritional limits on reproduction.

Summary

In summary, it appears that predation and stochastic weather events such as avalanches account for much of the spatial and temporal variation in survival rates. Mountain lion predation is a significant cause of ewe mortality in the SRU, but avalanche is the most significant natural cause of ewe mortality in the CRU and NRU. Reproduction and recruitment in the 2 largest herds, Wheeler Ridge and Mount Langley, have declined with increasing population size, suggesting that density-dependent mechanisms may affect small endangered populations. The static population growth at Mount Baxter or the potential population decline at Wheeler Ridge over the last 4 years (Figure 4B) may also reflect emigration events leading to natural colonization of adjacent habitat (see below).

Geographic Distribution and Natural Range Expansions

Sierra Nevada bighorn sheep are alpine specialists. They are adapted to life at elevations above tree-line (>11,000 feet) for much of the year. Essentially all Sierra bighorn spend most of the summer in the alpine, where they find forage that grows sparsely over much of the landscape but also in lush meadows. As winter snows arrive, most animals migrate to lower-elevation (<9,000 feet) winter ranges some time after December to avoid snow and find forage that greens up earlier at lower elevations. We observed increasing use of low-elevation winter range at Wheeler Ridge in

the late 1990s, at Mount Baxter on Sand Mountain in 2003, and at Mount Langley in 2004. At Wheeler Ridge and Mount Langley, this expanded habitat use coincided with periods of increased fecundity and recruitment (Figures 7 and 8), suggesting the additional forage on low-elevation winter range enhanced reproductive output. Some herd units have minimal access to low-elevation winter range; these animals spend almost 12 months per year in the alpine environment. In particular, the Mount Gibbs and Convict Creek herds are living in the alpine year-round and spending the winter on snow-free wind-scoured ridges. Natural colonizations and range expansions have occurred in recent years, and some bighorn are persisting in environments where they are primarily using alpine winter ranges.

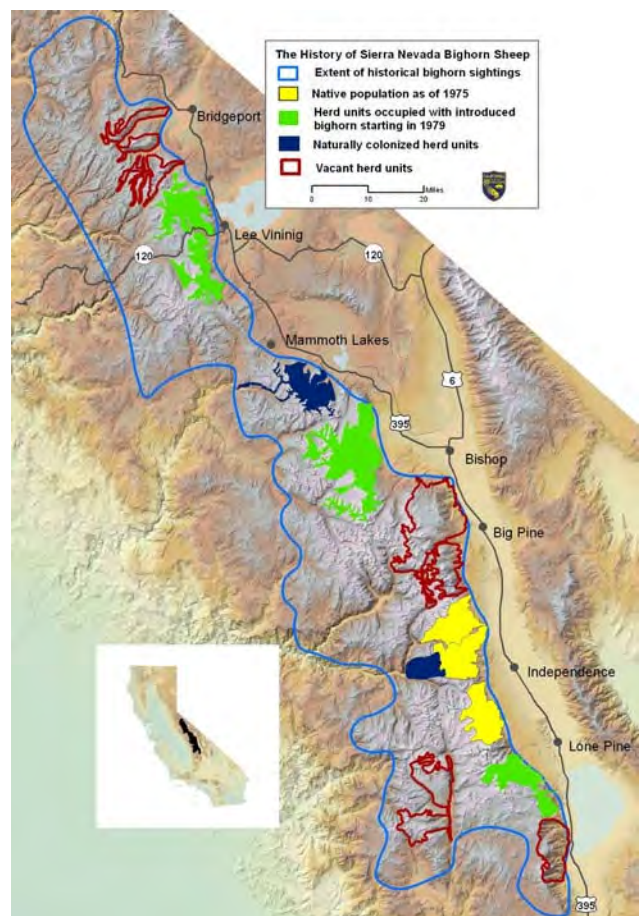


Figure 9. Temporal changes in the distribution of Sierra Nevada bighorn during 1975-2011. Herd units identified in the Recovery Plan are shown.

Historically, bighorn sheep occupied a broad region of the central and southern Sierra Nevada (note area outline in blue in Figure 9). Much of the historic range included groups of bighorn sheep that likely wintered in areas with little to no low-elevation winter range. GPS collar data collected in the last decade has shown that bighorn persist in the Sierra without low-elevation winter range by using high, windswept ridges and mid-elevation winter ranges.

The Recovery Plan for Sierra Nevada bighorn sheep identifies 16 areas across the Sierra Nevada that were likely occupied by separate bighorn herds during the last 2 centuries from Twin Lakes near Bridgeport to Olancha Peak south of Lone Pine. Of those 16 herd units, occupation of 12 is required before Sierra Nevada bighorn can be removed from the endangered species list. In the 1970s, only 3 herd units were occupied. Translocation efforts by DFG between 1979 and 1988 resulted in the establishment of 4 additional herds (Figure 9) and provided a geographic distribution sufficient to protect this unique subspecies should one population experience a disease outbreak. In the last decade natural range expansions have resulted in a multiyear occupation of an additional 2 herd units (Bubbs Creek and Convict Creek), 1 of which is required for delisting.

Long-distance movements of rams, particularly during the rut, are a mechanism mediating genetic diversity within otherwise small, geographically-isolated populations prone to erosion of genetic diversity by genetic drift. However, these movements are transient and are not considered range expansions. For a population to expand its range, a reproducing population (ewes and rams) must take up residence in a new location. In the last 11 years, the Sierra

Nevada Bighorn Sheep Recovery Program has documented 6 range expansions from the Mount Baxter, Wheeler Ridge, and Mount Warren populations, challenging the long-held belief that bighorn populations are poor colonizers of available habitat (Geist 1971).

In August 2002 a local mountain guide, S.P. Parker, observed 11 bighorn sheep including ewes and lambs at the base of Charlotte Dome west of the crest along Bubbs Creek in Kings Canyon National Park. Further exploration revealed ample sign (Figure 10). These sheep are likely descendants from a subpopulation of the Mount Baxter herd using Kearsarge Peak, last documented in 1995. A continuous ridge system from Kearsarge Peak to Mount Gardiner probably served as the migration corridor allowing this colonization event. The new population, the Bubbs Creek herd, has persisted. Recent data from satellite-linked GPS collars on Bubbs Creek rams

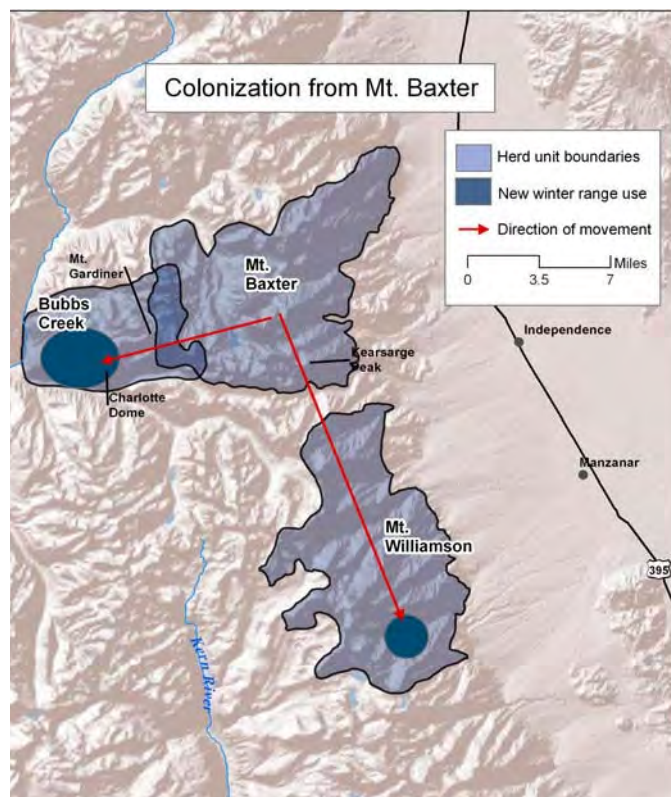


Figure 10. Colonization and range expansions from Mount Baxter.

during the rut suggest that these bighorn contribute to a large metapopulation including the Mount Baxter and Sawmill Canyon herds.

A large movement by 2 VHF-collared ewes from the Mount Baxter herd last winter demonstrates the mechanism by which ewes can colonize adjacent habitat. Genetic analyses confirmed that 2 groups from Mount Baxter containing at least 5 bighorn moved 18 miles south from Mount Baxter to winter in the Mount Williamson herd unit in 2010–2011 (Figure 10). At least 1 of the ewes appears to have returned to Mount Baxter. The outcome of such long-distance explorations likely depends on a number of factors including the vacancy and quality of the new habitat. Historically, long migratory routes may have existed across the Sierra; however, these learned behaviors are not present in populations established by recent translocations. The Mount Baxter herd is 1 of 3 original herds, and it is possible these sheep are again using the range as their ancestors once did.

Evidence of range expansion of bighorn in the Sawmill Canyon herd has also been documented. In 2009 on multiple occasions, 1 collared ewe moved north over Taboose Pass into the Taboose Creek herd unit. Because no ground observations were made, it is unclear how many bighorn were in the group that made these excursions.

Further north, bighorn from the Wheeler Ridge herd have also been exploring. In July 2007, a GPS-collared ewe revealed use of an area at 12,500 feet called Granite Park (Figure 11). This area is adjacent to an area of prior use, but our observations suggest that this movement reflects a range expansion. The Granite Park ewes often remain at high elevation throughout the winter using patches of wind-blown, snow-

free habitat, a behavioral strategy previously undocumented in a herd that is known for its use of high-quality, low-elevation winter range. Unfortunately, this subpopulation of the Wheeler Ridge herd may have perished in a large avalanche in Morgan Creek during last year's heavy winter. Whether this behavioral strategy will persist in the Wheeler Ridge herd remains to be seen.

In August 2009, fecal pellets and fresh tracks were observed near Mount Stanford north of Wheeler Ridge in the Convict Creek herd unit, an area then thought to be unoccupied. Genetic analysis of these fecal samples indicated use by 3 bighorn ewes. In January 2011, backcountry skiers reported a group of 7 bighorn on Esha Peak in the Convict Creek herd unit. Photos revealed that the group contained 3 adult ewes, 3 lambs, and a yearling ram. The same group

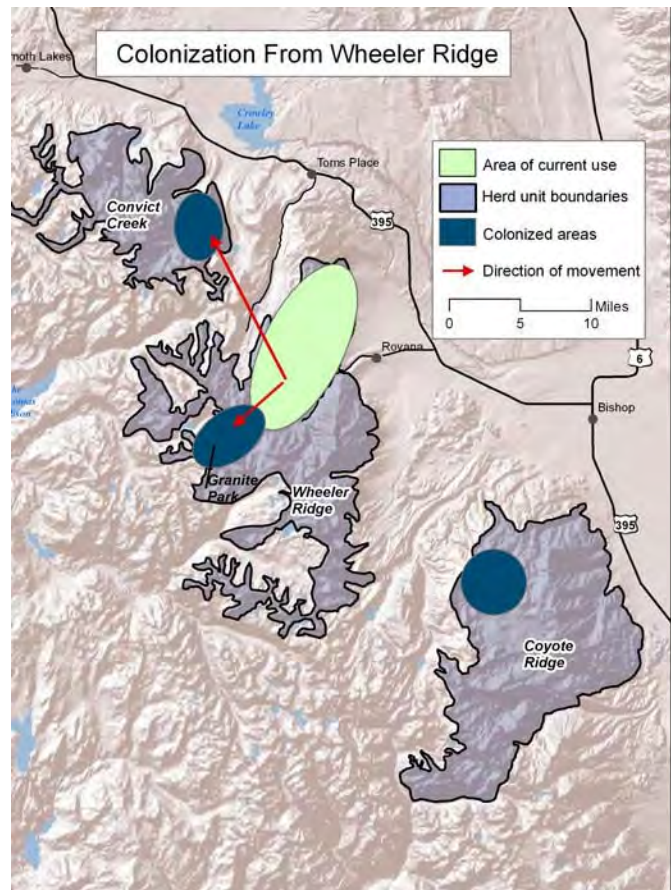


Figure 11. Colonization and range expansions from Wheeler Ridge.

was observed again in June with 2 newborn lambs, and fecal samples were collected. Genetic analysis will determine whether these are the same 3 ewes observed 2 years prior near Mount Stanford. These sheep are likely immigrants from Wheeler Ridge, where population growth may have slowed in part due to these dispersal events (Figure 11).

In July 2009, 2 ewes were photographed on Coyote Ridge. Subsequent surveys of the area have not revealed evidence of use. Either our attempts to find these bighorn have been unsuccessful or this was a failed colonization attempt by bighorn from Wheeler Ridge or from Sawmill Canyon, 26 miles south. Future surveys will continue to search for evidence of colonization of this herd unit.

The most northern herd unit, Mount Warren, was established by a translocation to Lee Vining Canyon in 1986. Despite fluctuations in size, the herd has moved north in a series of range expansions. Bighorn were first observed using the north side of Lundy Canyon and Dunderberg Peak in 2003. These range expansions suggest that bighorn in the Mount Warren herd are optimizing their habitat use as they discover surrounding areas. Unfortunately, their movements north are bringing them closer to domestic sheep grazing allotments. If bighorn in the Mount Warren herd continue to move north, the risk of disease transmission will increase.

Temporary expansions and long-term colonizations are signs of functional metapopulations. As connectivity increases between herds in the Sierra, there is greater potential for the spread of a disease that would devastate Sierra Nevada bighorn sheep increases. To protect this unique subspecies from such a threat, we are

planning translocations to reintroduce Sierra Nevada bighorn to 2 herd units in the remote Great Western Divide within Sequoia and Kings Canyon National Parks.

These range expansions and colonizations have helped to expand our understanding of Sierra Nevada bighorn behavior and habitat, demonstrating that multiple types of winter habitat can be used successfully. High-elevation windswept ridges in Mount Warren and Convict Creek, relatively forested mid-elevation slopes at Bubbs Creek, and the more traditional low-elevation slopes along the eastern Sierra at Mount Baxter and Wheeler Ridge are utilized by Sierra bighorn as winter range. As additional suitable habitat is identified both by bighorn and by our habitat models, the distribution of bighorn throughout the Sierra will expand.

Mountain Lion Ecology and Management

The predator monitoring effort associated with the Recovery Program is designed to understand the relationship among Sierra bighorn and predators in the recovery area. The Recovery Plan (USFWS 2007) identifies mountain lions as a primary threat to recovery, and the California Fish and Game Code authorizes the removal of mountain lions that pose an imminent threat to bighorn sheep. The Recovery Plan recommends discontinuing predator management during a monitoring period once downlisting goals are met.

The Recovery Program has implemented an adaptive management strategy with regard to mountain lion predation. During the first 2 years of the program, when bighorn numbers were dangerously low, a lion considered to be a threat was removed before the lion was known to kill bighorn.

Three lions were killed during this time. As bighorn populations increased in size, we attempted to prevent lion predation by intervening before a lion killed a bighorn. In the SRU in spring 2002, we started harassing collared lions near bighorn in an attempt to move the lions away from bighorn. As there was no known predation in the Southern Recovery Unit (SRU) from 1999 to 2003, we studied bighorn/lion interactions in a relatively unperturbed system. As bighorn populations further increased, bighorn/lion interactions also increased and lion predation was detected. In 2003, active lion management became necessary in the Central Recovery Unit (CRU). In February 2006 in the SRU, we readopted the strategy of removing lions that posed an imminent predation threat in order to support bighorn recovery.

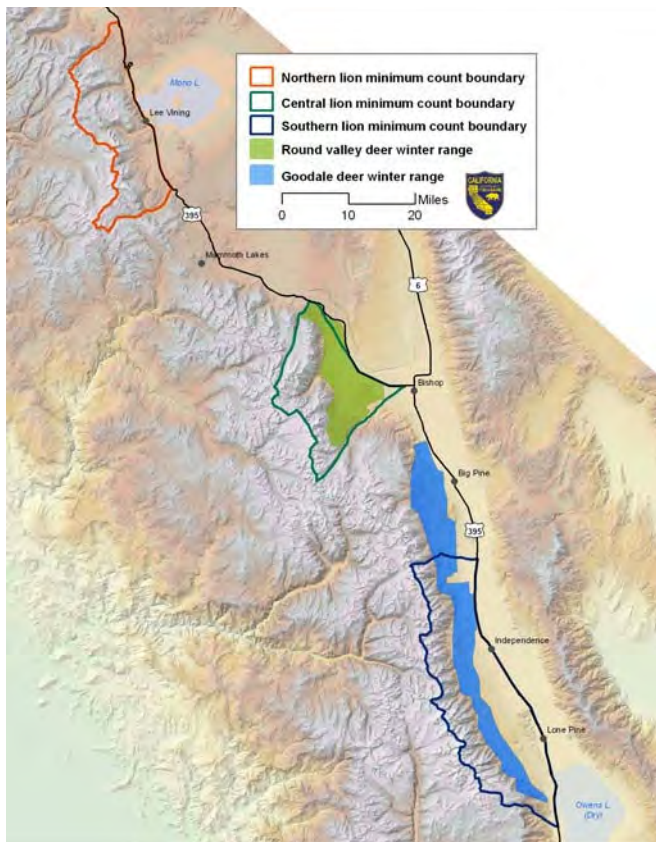


Figure 12. Polygons used to determine minimum counts for mountain lions in the eastern Sierra Nevada during 1999-2011. Mule deer winter ranges represent the primary prey base for mountain lions.

In all 3 occupied recovery units, we monitored mountain lions in and adjacent to bighorn habitat to identify individuals that posed an imminent threat. Mountain lions were monitored by experienced trackers who located, collared, and tracked individuals using hounds. Since 2000, 91 individual mountain lions have been handled in or adjacent to the 3 occupied recovery units. Most were captured and collared, but some were kittens too small to collar, and some were killed immediately and never marked because they posed an imminent threat to bighorn. The number of individual adult mountain lions being tracked on bighorn winter ranges fluctuated but generally increased throughout the last decade and peaked in 2008-2009.

We estimated the minimum number of adult, subadult, and dispersing mountain lions in and adjacent to the 3 occupied bighorn recovery units. We determined a minimum count (Figure 13) based on the number of unique lions that were identified within 3 geographic polygons that include occupied herd units in the 3 recovery units (Figure 12). Using physical evidence (McBride et al. 2008), 71 different adult,

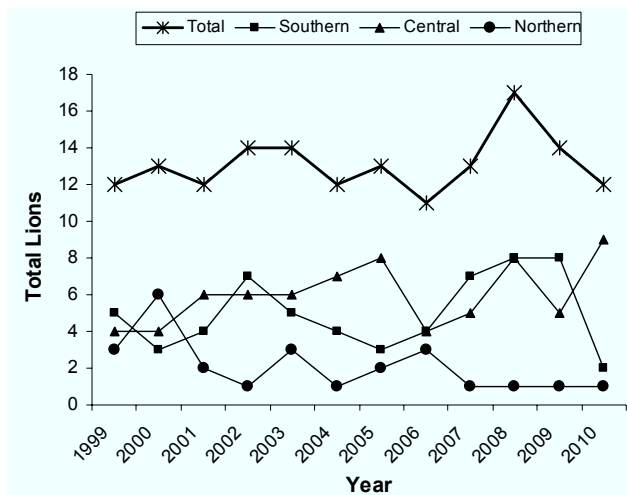


Figure 13. Mountain lion annual minimum counts (July 1 to June 30) in Owens Valley adjacent to Sierra Nevada bighorn sheep low elevation winter range during 1999-2011.

sub-adult, and dispersing lions were included in the minimum count. Kittens were not included. Sixty-seven lions were handled, 3 additional sub-adults were included based on tracks documented early in the program, and 1 adult male has not yet been collared. Eight of these lions used more than 1 recovery unit in the same year; these lions are counted only in the recovery unit they used most in a given year.

The minimum count was developed by continually attempting to capture and collar every lion within each area. This effort entailed tracking with hounds and identifying all lions within each recovery unit. When we encountered tracks of unmarked lions, we pursued them until they were captured or until they left the area (dispersers).

The minimum count of mountain lions was greatest in 2008-2009 when it reached a maximum of 17 (Figure 13) in the polygons defined in Figure 12. Minimum lion counts

ranged from 1 to 9 adult, sub-adult, and disperser individuals per year in proximity to each recovery unit.

In addition to the minimum count of lions per Recovery Unit, we documented the number of collared adult mountain lions that traveled within the bighorn herd units. Using polygons of the herd units (Figure 2), we plotted location data from collared lions for the months of November through April. A sum of the number of adult mountain lions that registered at least one location on any winter range was calculated. For the Mount Warren and Mount Gibbs ranges, summer locations were also included. Uncollared lions that were killed or had a confirmed location within a polygon were also included (Figure 14). The level of mountain lion use of herd units was consistent with the incidence of predation on bighorn sheep. For example, abundant lion use of herd units in 2008 coincided with heavy predation, particularly in the SRU.

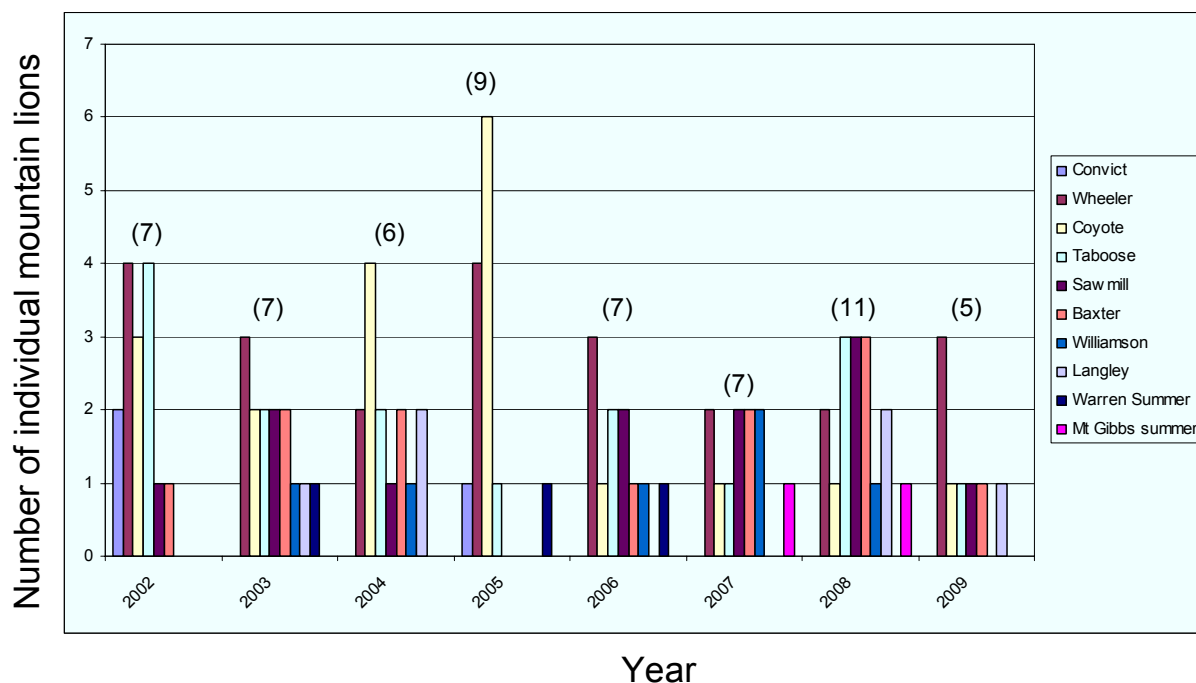


Figure 14. Number of individual adult lions using bighorn sheep ranges from November through April and all months for Mt. Warren and Mt. Gibbs ranges, in each year. The same lion could be counted on different ranges in the same year. Total number of different mountain lions for each year in parentheses.

In general, mountain lions occupied suitable habitat in the majority of the eastern Sierra Nevada and the Owens Valley in proximity to the recovery area for Sierra bighorn. The Round Valley and Goodale mule deer winter ranges supported higher lion populations near the CRU and SRU, respectively. In contrast, the Northern Recovery Unit was not immediately adjacent to the winter range for the Mono Basin mule deer herd that winters at lower elevations in Nevada. Areas of higher lion use tended to be concentrated around mule deer winter ranges (Johnson 2010a). Male home ranges were larger than those of females. Some lions used 2 recovery units in the same year (Figure 15). Figure 15 illustrates the variation in annual range use by mountain lions that wore GPS collars from July 2008 to June 2009. The figure does not represent all lions because not all lions wore GPS collars, but it provides an idea of mountain lion behavior, habitat use, and range use overlap with bighorn sheep and other lions.

Sierra bighorn herd units in the Central and Southern Recovery Units that overlapped with mule deer winter ranges tended to experience higher lion use and heavier predation by mountain lions (Figure 13 and Figure 6A). We observed the heaviest predation on bighorn sheep by mountain lions in the Wheeler Ridge and Mount Baxter herd units, herds that are adjacent to the large Round Valley and Goodale deer winter ranges, respectively. Of mountain lions that were documented to use occupied bighorn habitat repeatedly during 2000-2010, 43% were associated with predation on bighorn sheep. This is likely a conservative estimate of predation rates for mountain lions living in bighorn sheep range because GPS collars were not consistently deployed in all herds until recent years.

In the SRU, VHF collars were replaced

with GPS collars on some lions known to kill bighorn starting in 2005. Lions that were not removed after they killed a bighorn were documented to kill additional bighorn. An extreme example of this is lion 95. Lion 95 killed 1 bighorn in March 2007. We replaced his VHF with a GPS collar a few days later. Lion 95 killed a minimum of 5 additional bighorn between February and June 2008. From fall 2006 through spring 2010 in the SRU, 75% of the known resident adult lions were clearly linked to bighorn kills; the other 25% (2) of lions were not directly associated with bighorn kills, but did use bighorn winter range.

Sixty-two bighorn mortalities were identified as probable or certain mountain lions kills in the last 11 years. Bighorn preyed upon by mountain lions were located

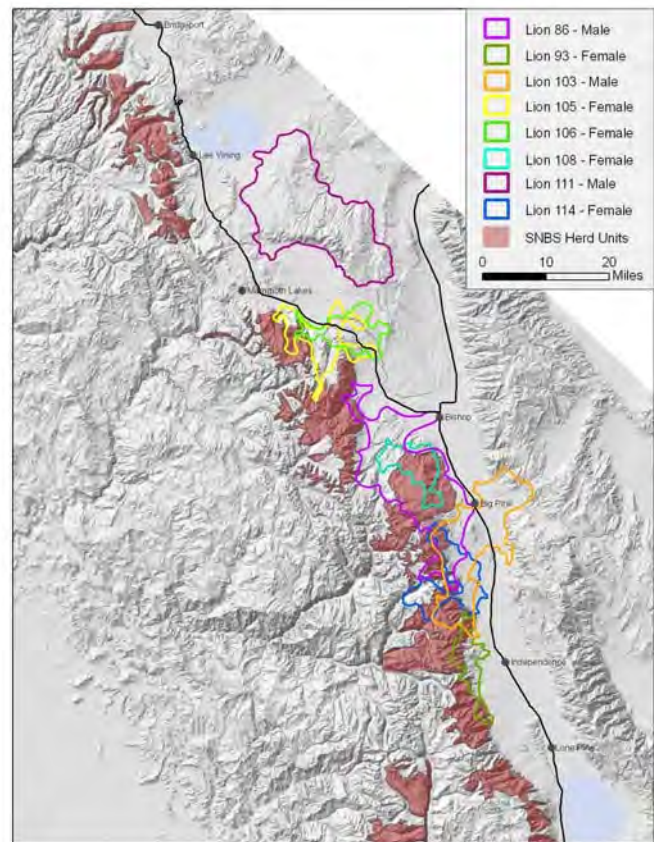


Figure 15. Mountain lion activity areas adjacent to Sierra Nevada bighorn sheep low elevation winter range identified by GPS collar data during July 2008 to June 2009.



by following lion tracks with the use of hounds, by investigating clusters from GPS collars on mountain lions, by investigating mortality signals from sheep collars, and by discovering bighorn mortalities during bighorn population surveys. Since bighorn were listed in 1999, 22 mountain lions were killed to protect them; 18 had preyed upon bighorn. Four were killed because their location data indicated a significant threat to bighorn. Of these, 3 were males removed early in the program (1999-2001), and 1 was a female removed in 2010.

Following heavy predation in the SRU in 2007 and 2008, all lions that demonstrated a threat to bighorn sheep were eventually

removed. Nine lions had killed bighorn, and 1 was deemed a threat because of proximity to bighorn. Most removals occurred in 2009. The following year, 2 lions were detected in the SRU, and no lion-killed bighorn mortalities were identified.

The number of known lion deaths per year, including those removed for recovery and those that died of natural causes, road kills, etc., varied between 2 and 11 during 1999-2010 (Figure 16). In all years except 2009, lions died primarily from a variety of natural and human causes not associated with predator removals for bighorn recovery. Although removals for recovery increased in 2009, the total number of annual mortalities was similar to the long-term annual average of lion deaths when adjusted for population size. Mountain lion removal to protect bighorn sheep accounted for 31% of the known lion deaths. Killing mountain lions to protect bighorn sheep is the greatest single cause of mortality of mountain lions in the recovery area (Figure 17).

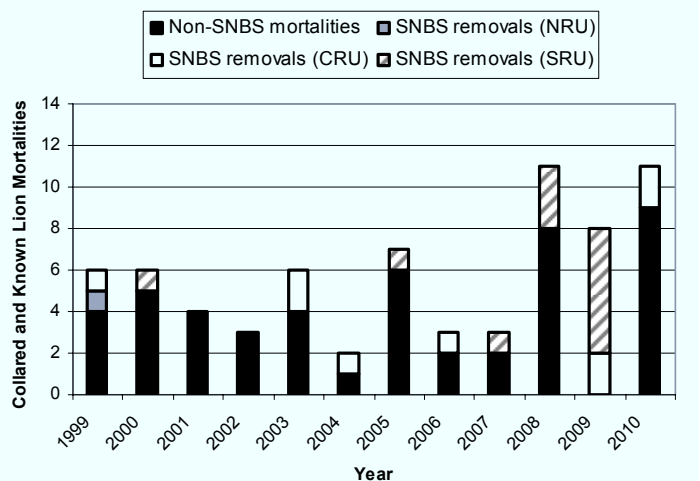


Figure 16. Known mortalities of collared and uncollared lions in the recovery program region by year and cause.

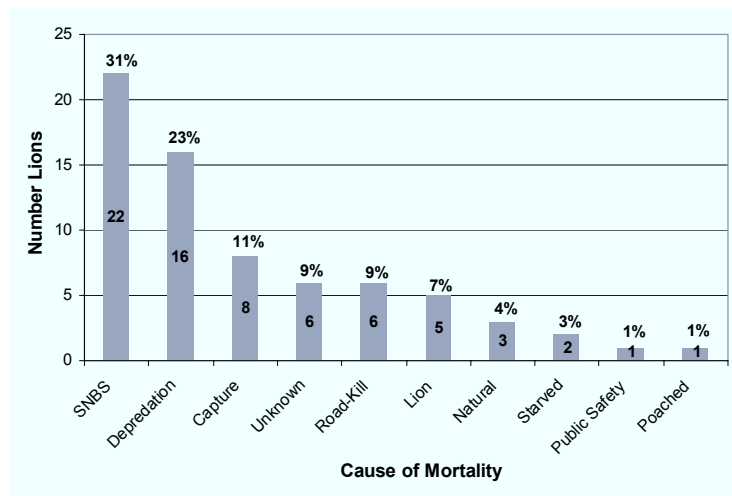


Figure 17. Cause-specific mortality of mountain lions in and adjacent to the recovery area during 1999-2010.

The mountain lion population in California is estimated at 4,000-6,000 animals (Updike 2003). This estimate has a wide range of uncertainty, but illustrates that lions interacting with Sierra bighorn represent a small fraction (<1%) of the overall lion population in the state. The occupied portion of the recovery area for Sierra Nevada bighorn sheep represents about 2% of the habitat for mountain lions in the Sierra Nevada. Although predator management influences the number of mountain lions in localized areas, the effects are not expected to have a negative influence on the larger lion population given the size of the population statewide.

Disease Risk

There is a long history of bighorn sheep die-offs following contact with domestic sheep, and a great deal of research under controlled conditions in captivity has repeatedly found the same result (Lawrence et al. 2010, Wehausen et al. 2011). This evidence was the basis of concern in the Recovery Plan about domestic sheep grazing near bighorn sheep herd units, and a major reason for listing these bighorn as

endangered. At the time of listing there were numerous domestic sheep allotments in proximity to existing bighorn sheep herds, including several in the Mono Basin, 1 near the north end of Wheeler Ridge, and a driveway up the Owens Valley through which 6,000 domestic sheep in groups of 1,000 were driven north during springs with good forage growth. In the quarter century prior to endangered listing, stray domestic sheep had been found in bighorn sheep habitat ranging from the Mount Baxter herd north of Independence to the Mount Gibbs herd unit (in Yosemite National Park) and the Mount Warren herd unit north of Lee Vining Creek.

Following emergency federal endangered listing in 1999, the Inyo National Forest (INF) convened an interdisciplinary team to investigate and make recommendations on domestic sheep allotments near Sierra Nevada bighorn herds

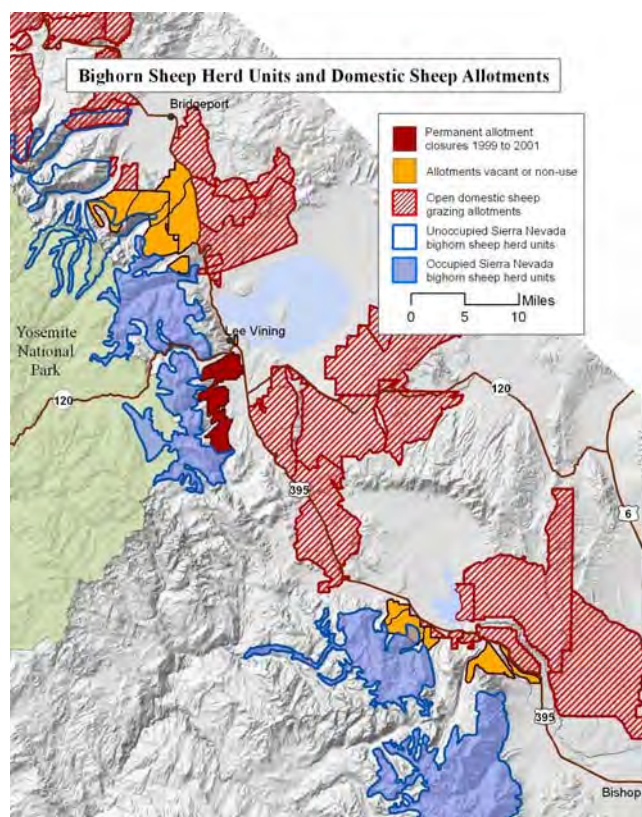


Figure 18. Domestic sheep grazing allotments in proximity to Sierra Nevada bighorn sheep herd units.

on lands administered by INF, Los Angeles Department of Water and Power (LADWP), and other agencies. Those allotments varied greatly in risk from grazing in fenced irrigated pastures in the Mono Basin to allotments in which sheep were moved through higher vegetation with poor visibility in relatively steep terrain on slopes immediately below bighorn ranges. Two such allotments in the Mono Basin were considered a very high risk with no mitigation options. Mitigation measures such as extra fencing and regular counts were proposed for other allotments. LADWP instead chose to terminate all domestic sheep grazing permits on their lands considered in that review, and INF closed the 2 allotments in the Mono Basin that could not be mitigated. This ended the Owens Valley driveway and most domestic sheep grazing in the Mono Basin west of Highway 395.

As part of the 1999 domestic sheep grazing review, allotments further north on lands administered by the Humboldt-Toiyabe National Forest were investigated. Because at that time no bighorn sheep were known to use habitat north of Mill Creek in Lundy Canyon, an agreement was made that an allotment near Lundy Canyon would be closed if bighorn sheep expanded their range across Lundy Canyon. Such an expansion was documented in 2003 and has led to a protracted review process and to multiple agencies vacating allotments. Through that process it was discovered that an allotment at the mouth of Lundy Canyon exists through a permit with Mono County, and discussions are occurring to address this risk.

Deployment of standard VHF and GPS collars on bighorn sheep males by the Recovery Program documented some long distance movements (>53 km) that raised concerns about the risks posed by more

distant domestic sheep allotments to the north. The Recovery Program has been very active in dealing with this issue, developing a formal risk assessment relative to this question and convening a Recovery Team subcommittee to address the topic. The Risk Assessment Team met for 2 years and included individuals from agencies and NGOs, as well as permittees. In 2009 the team released a joint document (Baumer et al. 2009) that identified a process for assessing the risk of contact between bighorn and domestic sheep. Subsequently, an additional interagency document (Croft et al. 2009) was completed that clarified recommendations for grazing management. Federal allotments west of Highway 395 were identified as having the most risk. Many of these have been vacated recently or are not currently in use (Figure 18, in orange). Efforts to quantify the risk associated with grazing domestic sheep adjacent to the Sierra bighorn recovery area predict that outbreaks of respiratory disease would be disastrous to the population and to efforts to reach recovery goals (Clifford et al. 2009, Cahn et al. 2011). Planning efforts to further reduce disease risk to Sierra Nevada bighorn sheep are still ongoing.

Habitat Enhancement

Although habitat for Sierra Nevada bighorn sheep has not suffered from fragmentation, pinyon pine encroachment on some winter ranges has reduced winter habitat suitability. Low elevation winter ranges in the Mount Langley, Mount Williamson, and Mount Warren herd units are more heavily forested than bighorn prefer. In April 2001, we carried out a prescribed burn along Diaz Creek on the Mount Langley winter range; the fire produced excellent habitat conditions and is used heavily by Sierra bighorn. During 2009, six polygons outside of designated Wilderness in those 3 herd units were

delineated as being suitable for burning to enhance bighorn habitat. During March 2010, a prescribed burn was attempted in Shepherd Creek on the Mount Williamson winter range but conditions were too wet for the fire to carry. In 2010 the Wilderness boundaries were expanded, and all of the proposed burn sites are now in Wilderness. We are evaluating the feasibility of implementing further prescribed burns.

In an effort to better understand the effects of fire on bighorn habitat in the Sierra Nevada, we have studied natural fires such as the Seven Oaks Fire that burned most of the Mount Baxter winter range during July 2007. Forage responded favorably to that fire and was superior within 2 years post burn (Greene 2010).



Translocations

We implemented translocations to augment existing populations during the first 11 years following listing. In 2001, 1 ram was moved from Wheeler Ridge to the Mount Williamson herd to help track

bighorn there, but he quickly moved south to the Mount Langley herd. During 2003, 2 rams from Wheeler Ridge were added to the Mount Warren herd to boost genetic diversity. In 2005, 5 pregnant ewes were translocated from Wheeler Ridge to the Mount Baxter herd to expedite recovery, but 3 moved north to the Sawmill Canyon herd. In March 2009, 6 pregnant ewes were moved to Lundy Canyon from Mount Langley (3) and Wheeler Ridge (3), and 5 of the lambs born survived through the summer and were yearlings in spring 2010.

A great deal of planning occurred prior to the translocations in 2009. We used extensive data on collared individuals from source populations to select bighorn ewes with the greatest potential for success following translocation. In particular, we examined data on body condition, disease status, genetic diversity (heterozygosity), winter habitat selection, and reproductive performance. Five of the 6 ewes translocated during 2009 were previously collared and were selected because of their prior optimal health, reproductive history, and heterozygosity. Although program research indicates that changes in genetic variation are not likely to impact short-term conservation efforts, it is important to prevent further losses of genetic diversity (Johnson et al. 2011).



No bighorn have been translocated to unoccupied herd units since listing. Augmentations were restricted to those listed here because of limited source stock, an outbreak of contagious ecthyma, and logistical constraints. Additional planned translocations were not conducted during 2010 because all DFG helicopter operations throughout the state were halted following a helicopter accident in 2010.

Weather

Snow water content was relatively stable during the winters of 2000–2004 (Figure 19), a period during which herds tended to increase in size. Snow water content represents total snowfall as melted water (see figure legend for further explanation). The winters of 2005, 2006, and 2011 were characterized by significantly higher snow levels, while snow water content was below average in the drought year of

2007. Overall, the Mount Gibbs herd unit experienced the greatest snow levels, although this weather station was located at a higher elevation than the other stations. All other herd units exhibit a pattern of comparatively lower snow levels.

Precipitation has the potential both to positively and negatively influence bighorn sheep dynamics (Johnson et al. 2010c). Abundant precipitation results in improved quantity and quality of forage for bighorn sheep; drought years reduce the nutritional quality of habitat. However, although precipitation may ultimately drive population growth, direct relationships between precipitation and population size are often difficult to detect.

A string of relationships separate demographic parameters from precipitation. The complexities arise because precipitation directly affects forage quantity and quality,

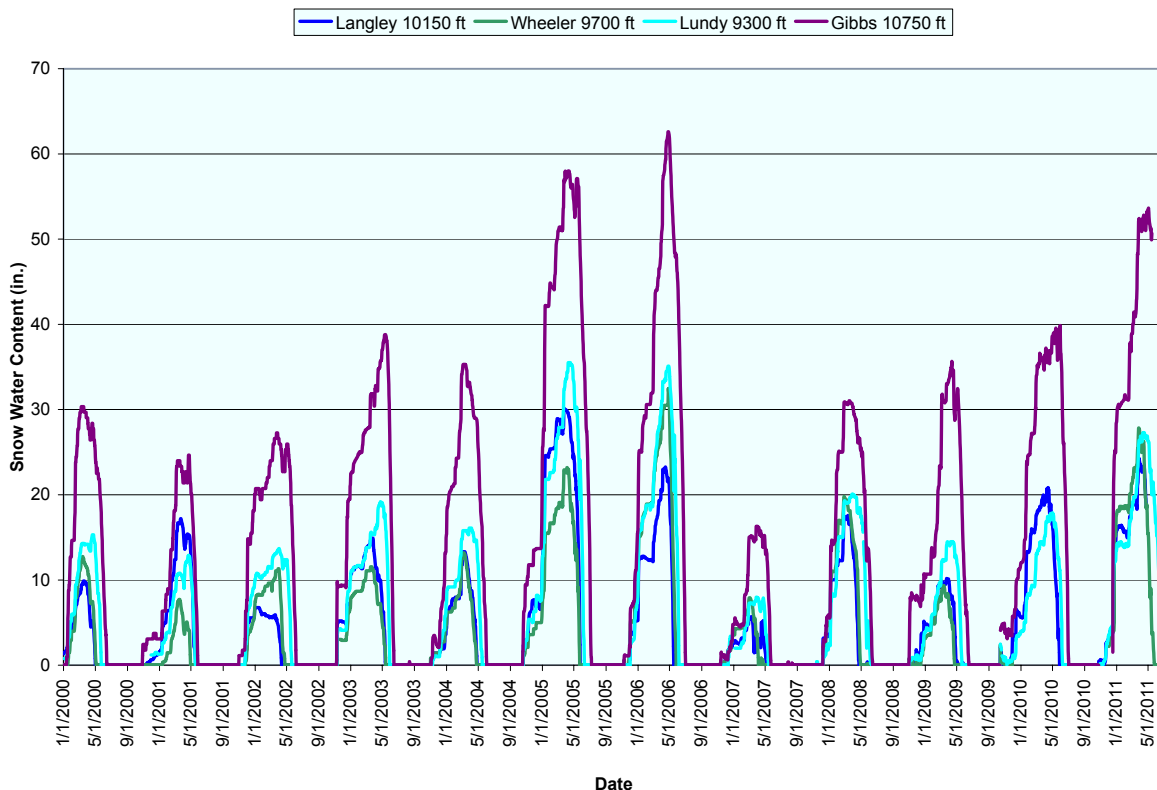


Figure 19. Water content of snow from high elevation weather stations near Sierra Nevada bighorn sheep herd units 2000–2011. Snow depths on an average-weather year can be approximated by multiplying Snow Water Content values reported near the first of the each month by the following factor: January 3.0 and May 2.0. 2010 data is missing for Wheeler; 2004 data is missing for Langley.

which then dictate animal body condition. Population density also affects body condition through competition for forage and its acquisition. Body condition determines survival and reproductive success, which determine recruitment and finally population growth. Further complexities arise from density-independent events, such as predation, avalanches, and disease, that may or may not be influenced by precipitation but that may depress otherwise healthy populations. Many factors interact to determine population size, but on a fundamental level populations will under-perform if precipitation and forage are inadequate.

The average precipitation early in the decade likely benefited body condition of bighorn sheep and is reflected in the overall population growth during that period. Yet the arrival of extreme weather during the

middle of the decade appears to coincide with declining population growth rates and recruitment. Specifically, the drought in the winter of 2006-2007 likely had a multiyear influence on bighorn demographics. Several rams in the Mount Warren herd unit died of malnutrition in 2008. In the fall of 2007, bighorn at Wheeler Ridge experienced an outbreak of contagious ecthyma which may have been induced by stress following the drought. At Mount Langley and Wheeler Ridge, declines in fecundity and recruitment were observed in 2008. The severe winter of 2011 also affected bighorn populations. Mortalities of adult bighorn at Wheeler Ridge and Mount Warren due to deep snow and avalanches increased (see Cause Specific Mortality and Survival above). This stochastic weather event may delay recovery of these herds.



Future Actions to Reach Recovery Goals

Downlisting and delisting goals in the Recovery Plan include: (1) at least 305 adult and yearling females in a specified distribution among recovery units, and (2) the occupation of 12 specific herd units. Currently, established herds occupy 7 of those herd units, and at least 1 more is in the early stages of natural colonization. The current total number of females (195) is 64% of the Recovery Plan goal.

Four vacant herd units are required for recovery: Laurel Creek and Big Arroyo in the Kern Recovery Unit and Olancha Peak and Taboose Creek in the Southern Recovery Unit. As few as 3 herd units (Laurel Creek, Big Arroyo, and Olancha Peak) require translocations to achieve herd unit occupancy goals because movement barriers make it unlikely that natural colonizations will occur. Movements of collared bighorn from an adjacent herd indicate that Taboose Creek may be colonized naturally as the adjacent population increases. Each reintroduction will consist of translocations of at least 40 bighorn sheep to maximize genetic diversity and to generate group sizes for optimal survival and reproduction.

The availability of adequate numbers of bighorn sheep for such translocations is dependent on the growth of the Mount Baxter and Sawmill Canyon herds to a size sufficient to serve as a source of translocations, as they did previously for 4 of the currently occupied herd units. Stock for translocations will also come from the Wheeler Ridge and Mount Langley herds, if they maintain a size large enough to allow removals. Other herd units may need augmentations to reach optimal sizes.

Reaching recovery goals will therefore necessitate adaptive management to maximize the demographic health of the potential sources of translocation stock, and removal of sheep from those herds for translocation in a way that optimizes herd productivity while protecting source herds. This will entail continued protection of sources of translocation stock from predation and the use of fire to improve habitat. Efforts to minimize the potential for introduced disease from domestic sheep and goats are also still ongoing, and are essential to protect existing herds.

Continued cooperation among agencies is essential given that Sierra Nevada bighorn sheep reside almost entirely in multiple National Parks and National Forests, and herd units are adjacent to land with many other public and private owners (Figure 20).

Recovery goals may be approached within a decade if commitment is maintained to fully implement primary recovery actions. Because habitat and connectivity are fully intact, there is high potential to reestablish a fully functioning metapopulation in the Sierra Nevada. A unique opportunity exists to restore this native ungulate to the Sierra Nevada ecosystem.

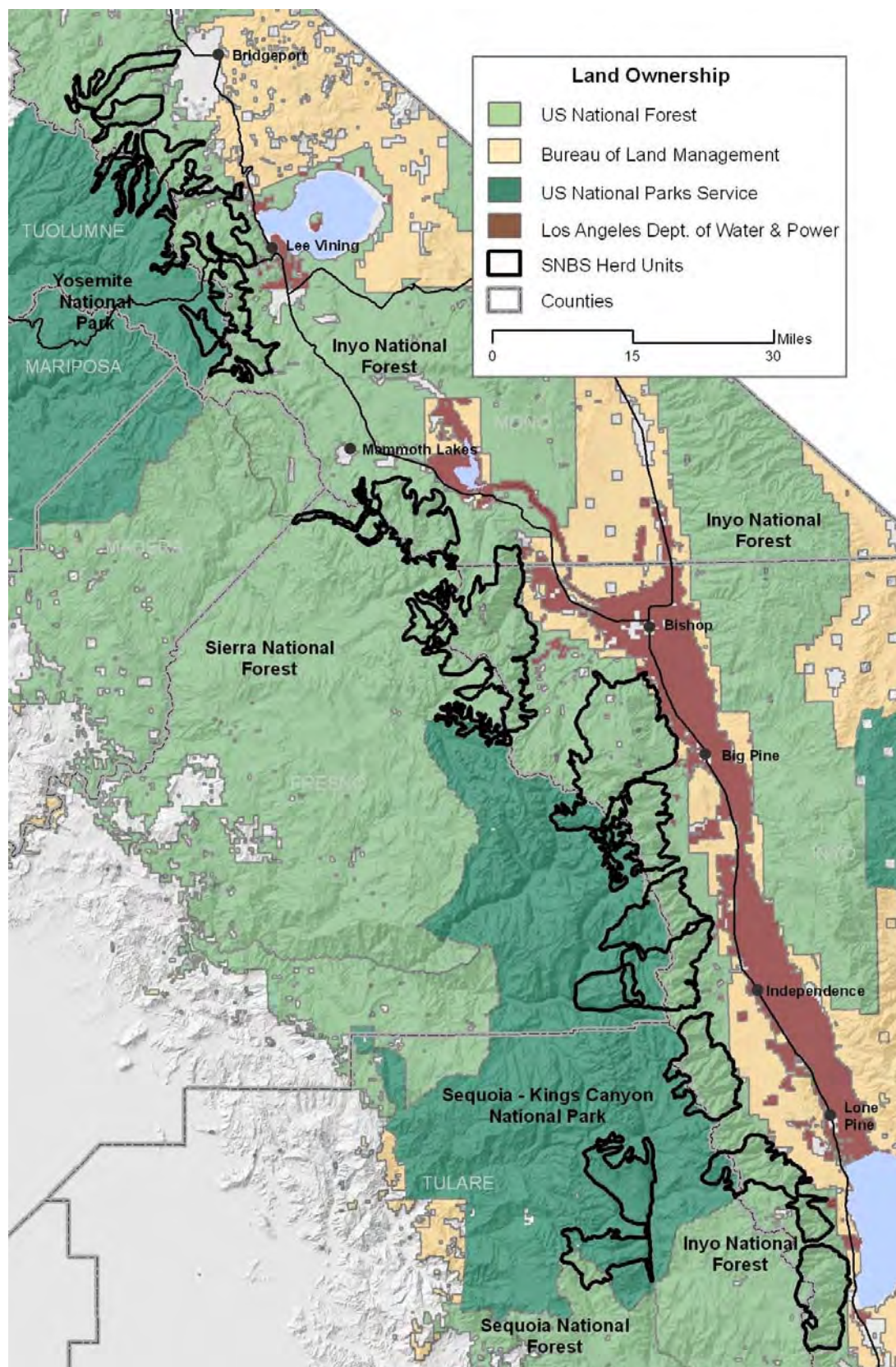


Figure 20. Land ownership of Sierra Nevada bighorn sheep herd units and neighboring areas.

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Appendix A.

Demographic history of Sierra Nevada bighorn sheep during 2006 – 2011.

Herd Unit	Year	Adult Ewes	Yrlg Ewes	Min. Total Ewes	Est. Total Ewes	Lambs	Adult Rams	Yrlg Rams	Min. Total Rams	Est. Total Rams	Min. Total	Total With Ests.
Langley	06-07	34	11	45	38 (35-47)	18	21	7	28		91	
	07-08	34	10	44	47 (38-60)	17	16	6	22		83	86
	08-09	35	3	38	46 (33-65)	8	19	5	24		70	76
	09-10	29	4	37 ¹	48 (32-71)	15	15	4	19		71	67
	10-11	36	6	42	41 (30-56)	11	32	7	39		92	
Williamson	07-08	10	3	13		7	7	1	8		28	
	08-09	11	3	14		4	8	2	10		28	
	09-10	8	0	8		2	6	0	6		16	
	10-11	9	1	11 ¹		3	-	1	1		15	
Bubbs	06-07	-	-	-		-	-	-	-		-	
	07-08	13	1	14		6	6	1	7		27	
	08-09	14	3	17		1	4	1	5		23	
	09-10	-	-	-		-	-	-	-		-	
	10-11	6	3	9		2	11	1	12		23	
Baxter	07-08	26	3	29		10	9	4	13		53	
	08-09	29	5	34	27 (18-40)	13	12	5	17		64	
	09-10	24	6	30	28 (27-36)	20	21	1	22		72	
	10-11	27	5	32	28 (27-36)	13	26	8	34		79	
Sawmill	07-08	11	1	12	22 ¹	4	3	2	5		18	28
	08-09	22	1	23	29 ¹	9	8	3	11		43	49
	09-10	29	1	30	33 ¹	10	13	2	15		55	
	10-11	33	6	39		16	8	6	14		69	
Wheeler	06-07	34	4	38	49 (37-61)	11	26	4	30	59 (26-92)	79	119
	07-08	36	6	42	55 (43-70)	15	35	4	39		96	109
	08-09	36	2	38	43 (33-56)	14	20	2	22	33 (21-55)	74	90
	09-10	36 ¹	3	39 ¹	43 (31-59)	12	31	2	33	35 (29-42)	75	90
	10-11	29	5	34	40 (32-51)	21	23	10	33		88	
Gibbs	06-07	3	1	4		2	3	0	3		9	
	07-08	4	1	5		4	3	1	4		13	
	08-09	5	2	7		3	3	2	5		15	
	09-10	8	1	9		2	5	1	6		17	
	10-11	7	0	7		1	6	0	6		14	
Warren	06-07	7	2	9		4	10	0	10		23	

	07-08	7	2	9	11 ¹	4	13	0	13		26	28
	08-09	6	2	8	10 ¹	5	7	0	7		21	23
	09-10	10 + 6 ²	1	11 + 6 ²	11 + 6 ²	7 + 5 ²	6	2	8		26/37 ²	
	10-11	16	5	21		11	5	3	8		40	
Totals	07-08	141	27	168		67	92	19	111		344	
	08-09	158	21	179		57	81	20	101		338	
	09-10	150	16	170		73	97	12	109		343	
	10-11	163	31	195		78	111	36	147		420	

¹ reconstructed population based on additional ewes documented in later years

² translocated ewes and the lambs born to them that survived into summer

Appendix B.

Herd Unit Summaries: Geographic and Demographic Analyses

The information presented in this appendix is intended to summarize all demographic data and significant events for each herd unit since the time of listing as an endangered species or earlier where reliable information is available. Each herd unit summary contains a map describing the location of the herd unit and areas used by bighorn, a timeline containing management actions, immigration/emigration events, known changes in habitat use, and weather events of ecological importance, and where data permit, a series of graphs displaying demographic data over time. The demographic measures presented are the total number of adult and yearling ewes, the rate of change of the total number of ewes (lambda), fecundity (lamb to ewe ratio), recruitment (yearling to ewe ratio), and survival. Methods used to generate demographic data are described below.

Methods

Population Estimates

Minimum count population estimates were generated by counting adult and yearling ewes and adding live collared ewes not observed. Reconstructed counts were generated by adjusting the minimum count upward using data based on fecal genotyping analysis, following years' minimum counts, and including mark-resight (MR) estimates with 95% confidence intervals for years when the

MR estimate was larger than the minimum count.

For herd units with summer (post-birth pulse) surveys (Mount Langley, Mount Williamson, Bubbs Creek, Mount Gibbs, and Mount Warren); the count data is from July to October of that year. For herd units with winter (pre-birth pulse) surveys (Mount Baxter, Sawmill Canyon, and Wheeler Ridge) the count data were collected from November to April of the following year. For example, most winter surveys typically occur in March; the year associated with those data is typically the prior year such that data collected in March 2010 is recorded for 2009. Data presented in this Appendix are from a consistent season for each herd and may not be consistent with the data in Figure 4 that substitutes summer data for incomplete winter data.

Lambda

Lambda is a measure of population change and was calculated as the current year's population estimate divided by the previous year's population estimate (N_{t+1}/N_t) based on minimum counts for adult and yearling ewes or reconstructed counts and adjusted for translocations and biologically implausible values.

For years in which ewes were removed for translocation, the population estimate the year prior to removal (N_t) was decreased to exclude removed animals. For years in which augmentations occurred, the population estimate of the year of the augmentation (N_{t+1}) was decreased to exclude introduced animals.

Lambda was considered biologically implausible and excluded from analysis if $\lambda > 1.5$ and $N > 20$ or $\lambda >$

2 and $N \leq 20$. These biologically implausible values are likely caused by under counts in year N_t which affects lambda for two years. Thus lambda determined to be biologically implausible by the above rules resulted in censoring that year's lambda and lambda from the preceding year.

Lamb to Ewe and Yearling to Ewe Ratios

Lamb to ewe and yearling to ewe ratios are calculated based on observed animals during one year. No reconstructions are included in these calculations. For winter surveys (pre-birth pulse), adult females are ≥ 2.7 years old; yearlings are ~ 1.7 - 1.9 years old; and lambs are ~ 0.7 - 0.9 year old. For summer surveys (post-birth pulse), adult females are ≥ 2.1 years old; yearlings are ~ 1.1 - 1.3 yrs old; and lambs are ~ 0.1 - 0.3

years old.

Survival

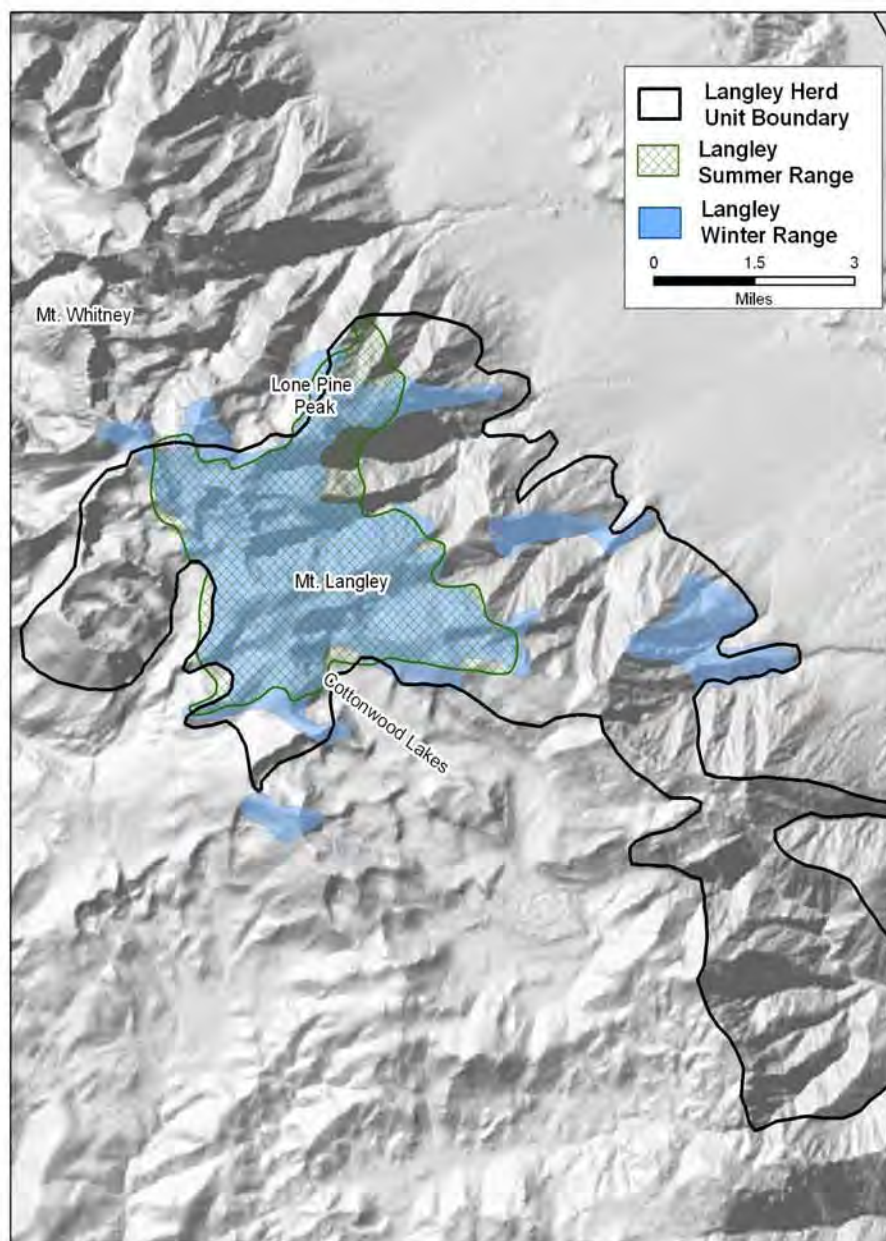
Kaplan-Meyer survival rates are calculated annually for collared ewes based on sheep birth years (April 15-April 14). We calculated adult female survival of the year (t) as $N_A(t)/(N_A(t-1) + N_Y(t-1))$ where N_A is the number of adult females and N_Y is the number of yearling females. We used a Kaplan Meier estimator treating all adult females as a single age class (Heisey 2006). Staggered entry during a given year was not included. Staggered entry was accounted for only on an annual basis. Survival rates are only plotted for years where populations contained ≥ 3 collars.

Literature Cited

Heisey, D. M. and B. R. Patterson. 2006. A review of methods to estimate cause-specific mortality in presence of competing risks. *Journal of Wildlife Management* 70:1544–1555.

Mount Langley

Herd Unit Description



Herd unit area (boundary defined in Recovery Plan): 133 km^2

Combined used summer and winter range area (defined below): 52 km^2 (2D area) or 63 km^2 (3D area)

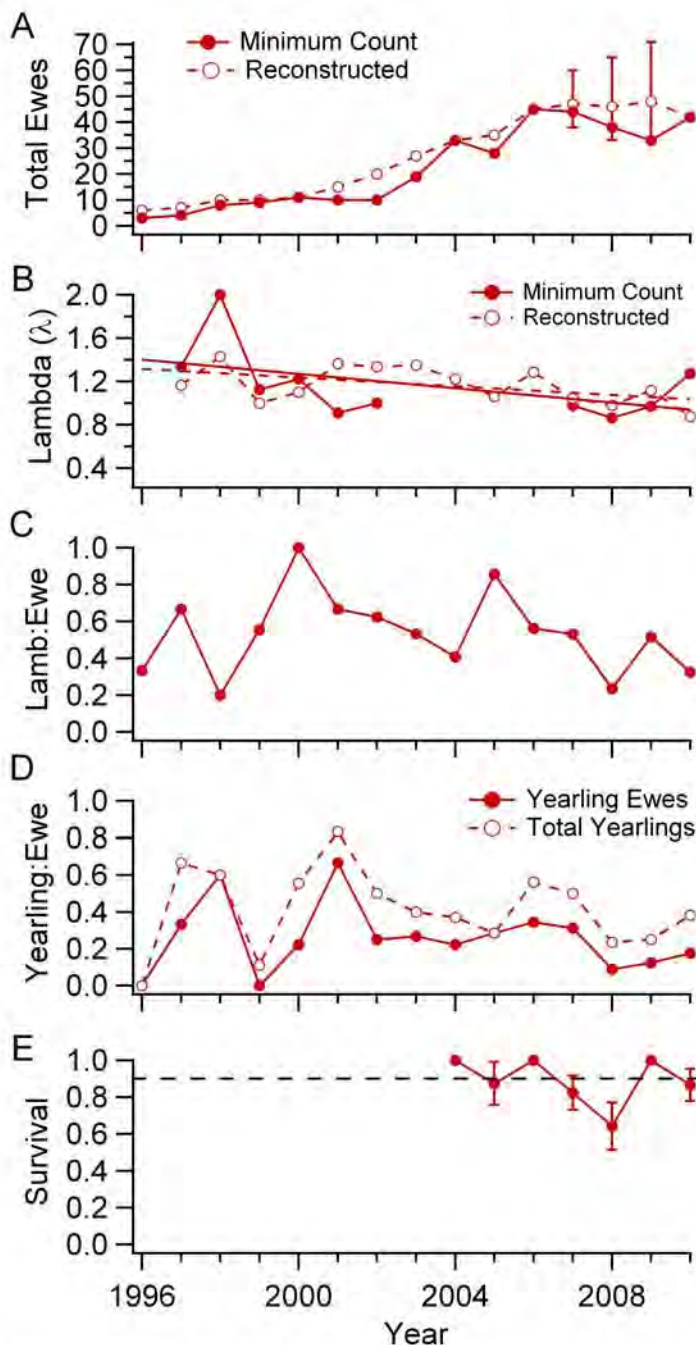
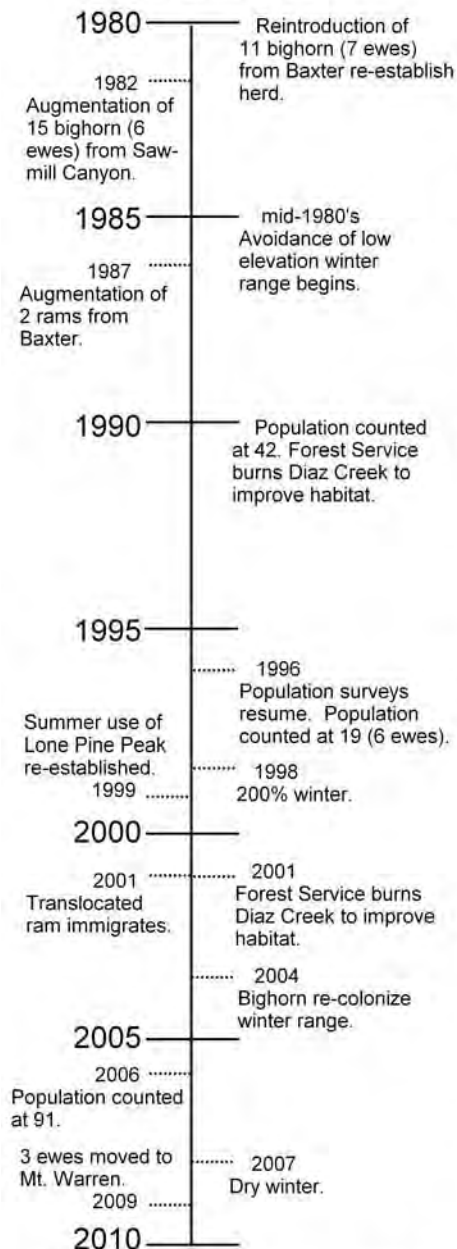
Lowest Elevation: 1,738 m (5,702 ft)

Highest Elevation: 4,261 m (13,980 ft)

Winter and summer range polygons were created manually using GPS locations of bighorn collected for years 2008 through 2010 for winter (December-March) and summer (June-September). Winter and summer range polygons were combined to measure area. Lowest and highest elevations were extracted from this polygon.

Mount Langley

Demographic Data



This herd unit is surveyed in summer. Count data are collected from July - Oct. and recorded for that year.

A. Minimum count population estimates were generated by counting adult and yearling ewes and adding live collared ewes not observed (●). Reconstructed counts were generated by adjusting the minimum count upward using data based on fecal

genotyping analysis, following years' minimum counts, and mark-resight estimates with 95% confidence intervals displayed (○).

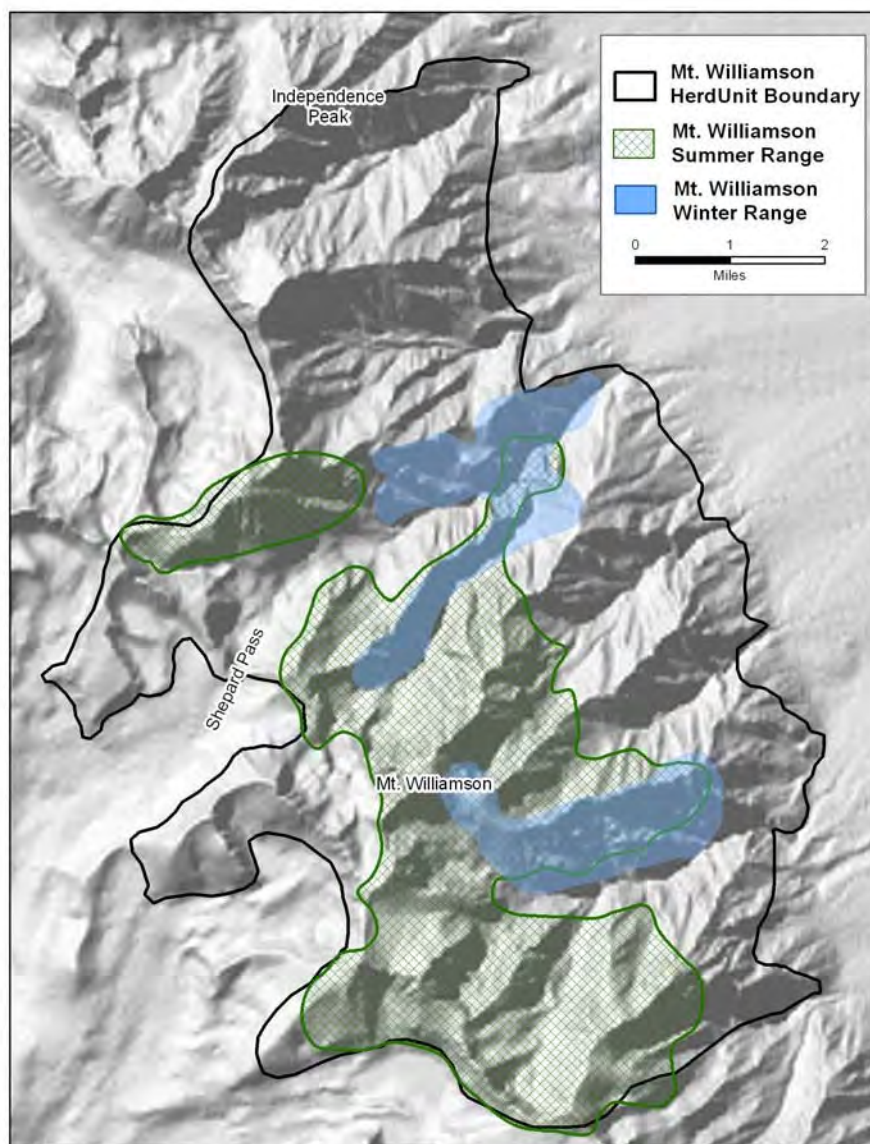
B. Lambda (λ) was calculated as N_{t+1}/N_t using population estimates as in A. Lambda was adjusted for translocations and biologically implausible values of lambda were excluded from analysis (see Methods).

C-D. Lamb to adult ewe and yearling to adult ewe ratios are calculated based on observed animals during one year.

E. Kaplan-Meier survival rates are calculated annually for collared ewes based on sheep birth years (see Methods).

Mount Williamson

Herd Unit Description



Herd unit area (boundary defined in Recovery Plan): 132 km^2

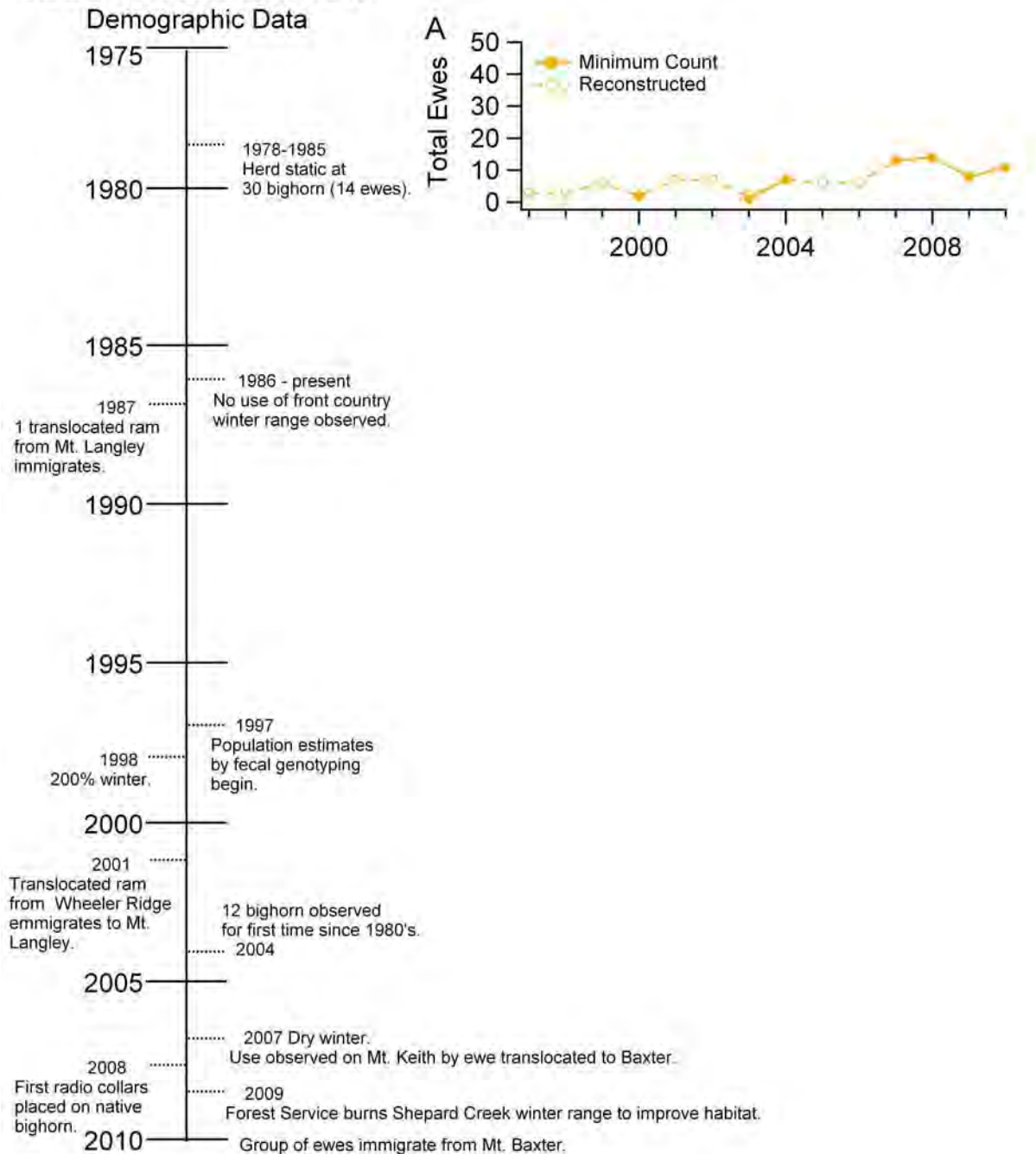
Combined used summer and winter range area (defined below): 55 km^2 (2D area) or 70 km^2 (3D area)

Lowest Elevation: 1,929 m (6,329 ft)

Highest Elevation: 4,372 m (14,344 ft)

Winter and summer range polygons were created manually using GPS locations of bighorn collected for years 2008 through 2010 for winter (December-March) and summer (June-September). Winter and summer range polygons were combined to measure area. Lowest and highest elevations were extracted from this polygon.

Mount Williamson



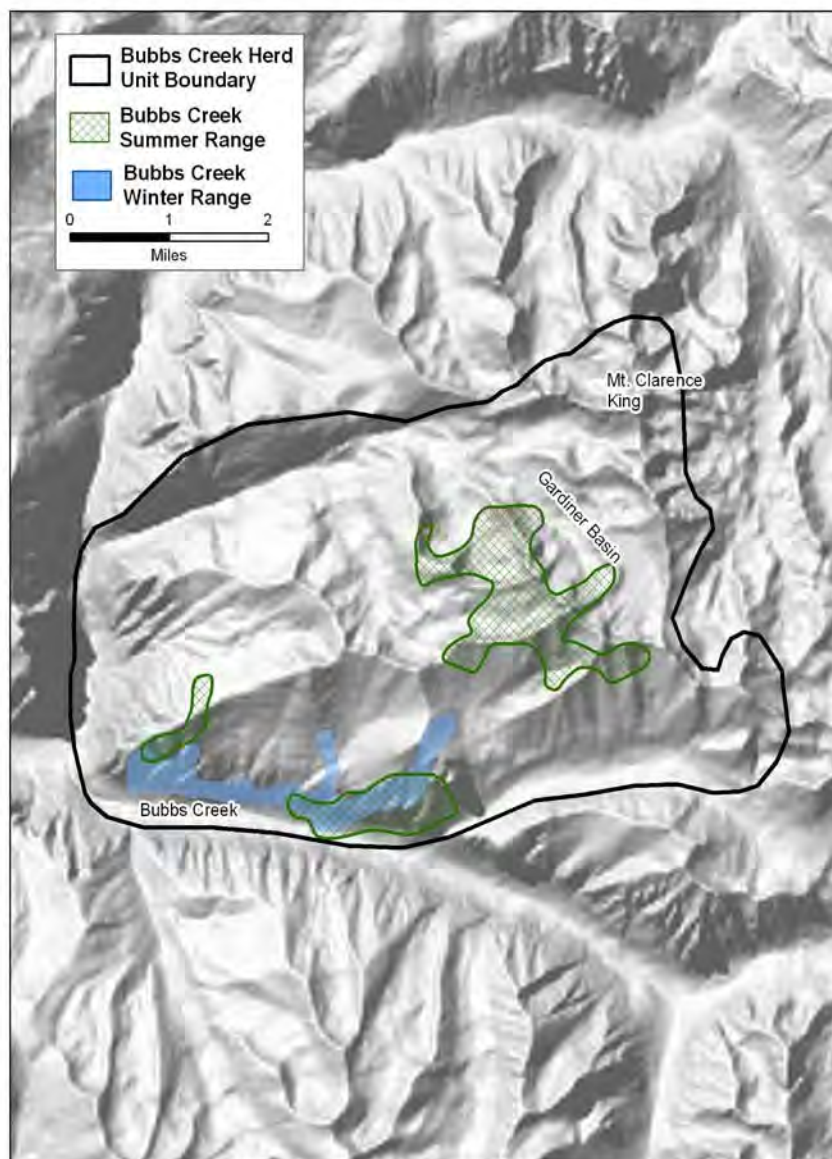
This herd unit has been surveyed in summer and winter.

A. Minimum count population estimates were generated by counting adult and yearling ewes and adding live collared ewes not observed . Reconstructed counts were generated by adjusting the minimum count upward using data based on fecal genotyping analysis, following years' minimum counts, and mark-resight estimates .

Lamb to adult ewe ratios averaged 0.43 based on very small sample sizes. Yearling to adult ewe ratios were calculated based on observed animals during one year. The average yearling ewe to adult ewe ratio was 0.14, and the average total yearling to adult ewe ratio was 0.29 based on very small sample sizes.

Bubbs Creek

Herd Unit Description



Herd unit area (boundary defined in Recovery Plan): 64 km^2

Combined used summer and winter range area (defined below): 7.8 km^2 (2D area) or 10.1 km^2 (3D area)

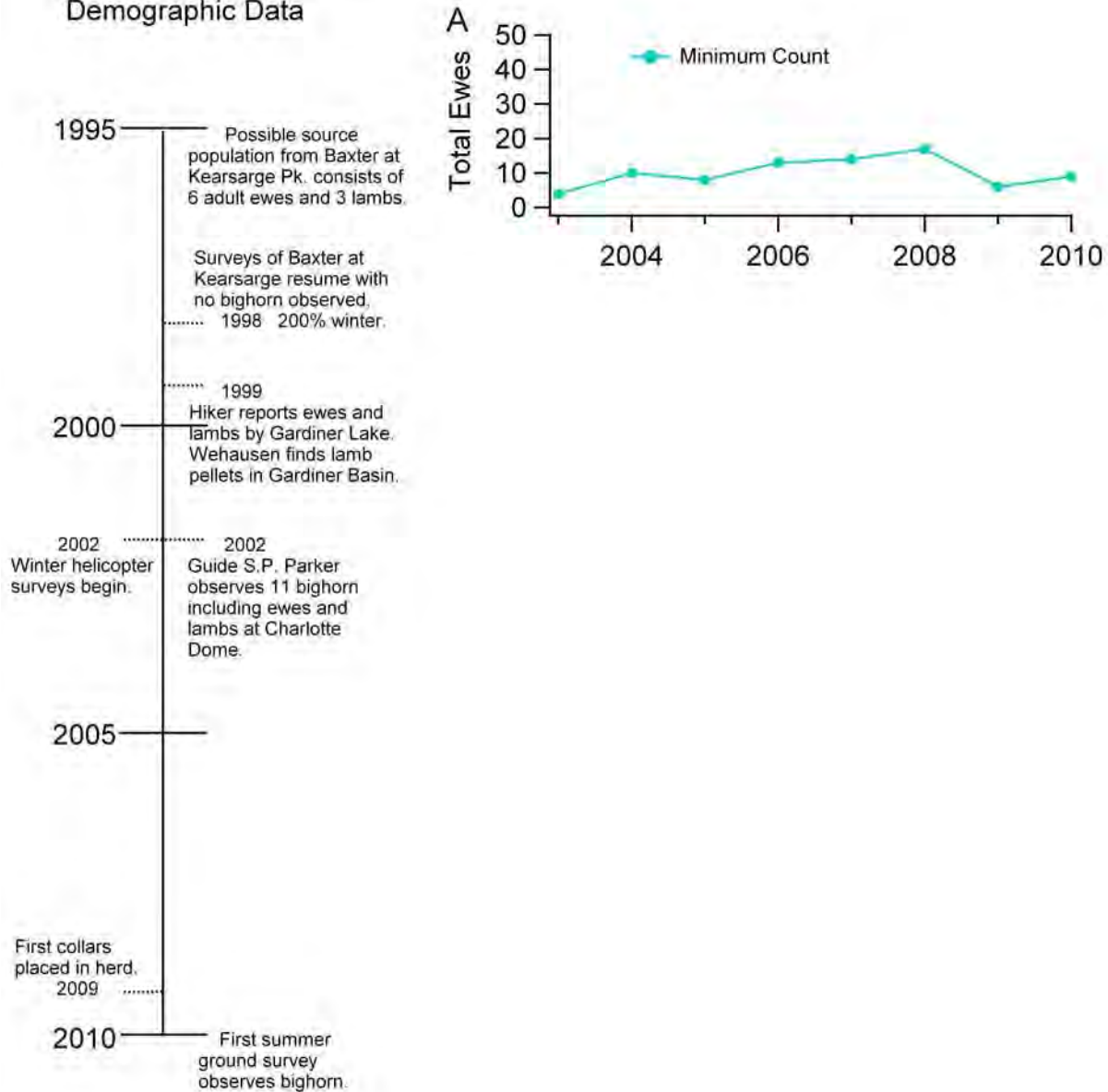
Lowest Elevation: 1,928 m (6,325 ft)

Highest Elevation: 3,927 m (12,884 ft)

Winter and summer range polygons were created manually using GPS locations of bighorn collected for years 2008 through 2010 for winter (December-March) and summer (June-September). Winter and summer range polygons were combined to measure area. Lowest and highest elevations were extracted from this polygon.

Bubbs Creek

Demographic Data

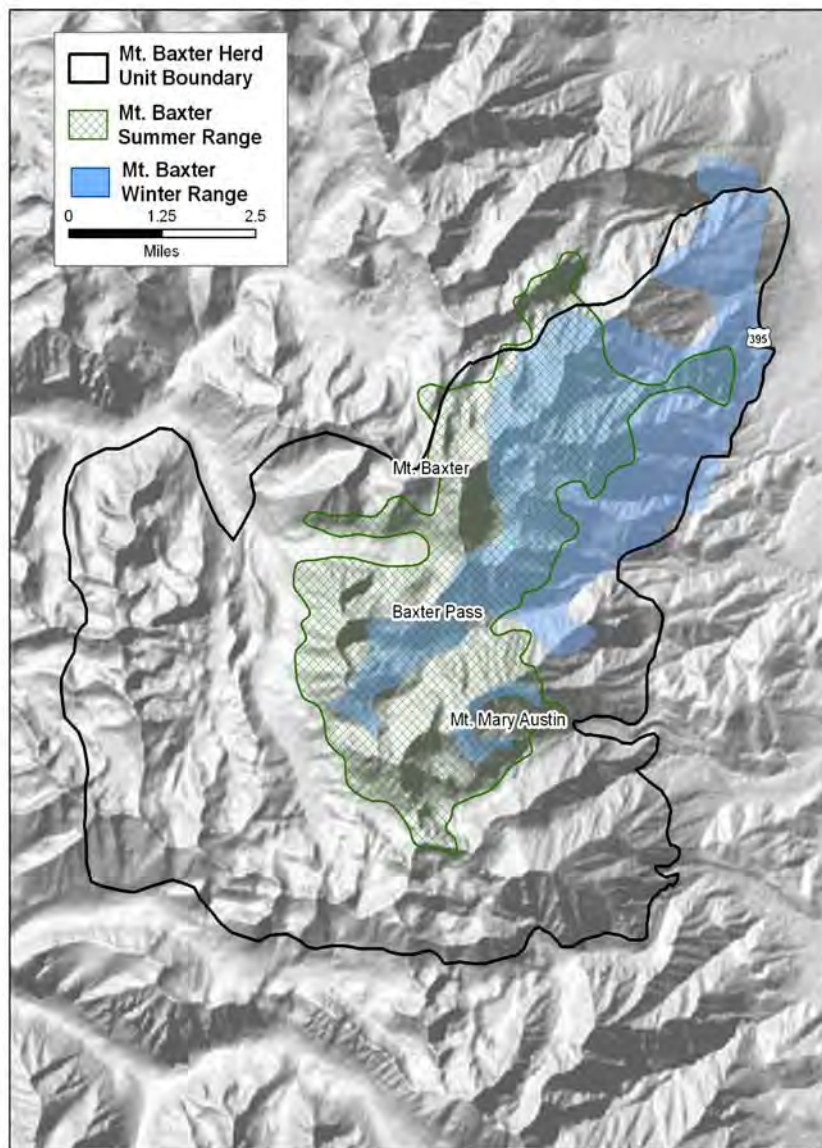
***This herd unit has been surveyed in summer and winter.***

A. Minimum count population estimates were generated by counting adult and yearling ewes and adding live collared ewes not observed.

Lamb to adult ewe ratios averaged 0.4 based on very small sample sizes. Yearling to adult ewe ratios were calculated based on observed animals during one year. The average yearling ewe to adult ewe ratio was 0.23, and the average total yearling to adult ewe ratio was 0.4 based on very small sample sizes.

Mount Baxter

Herd Unit Description



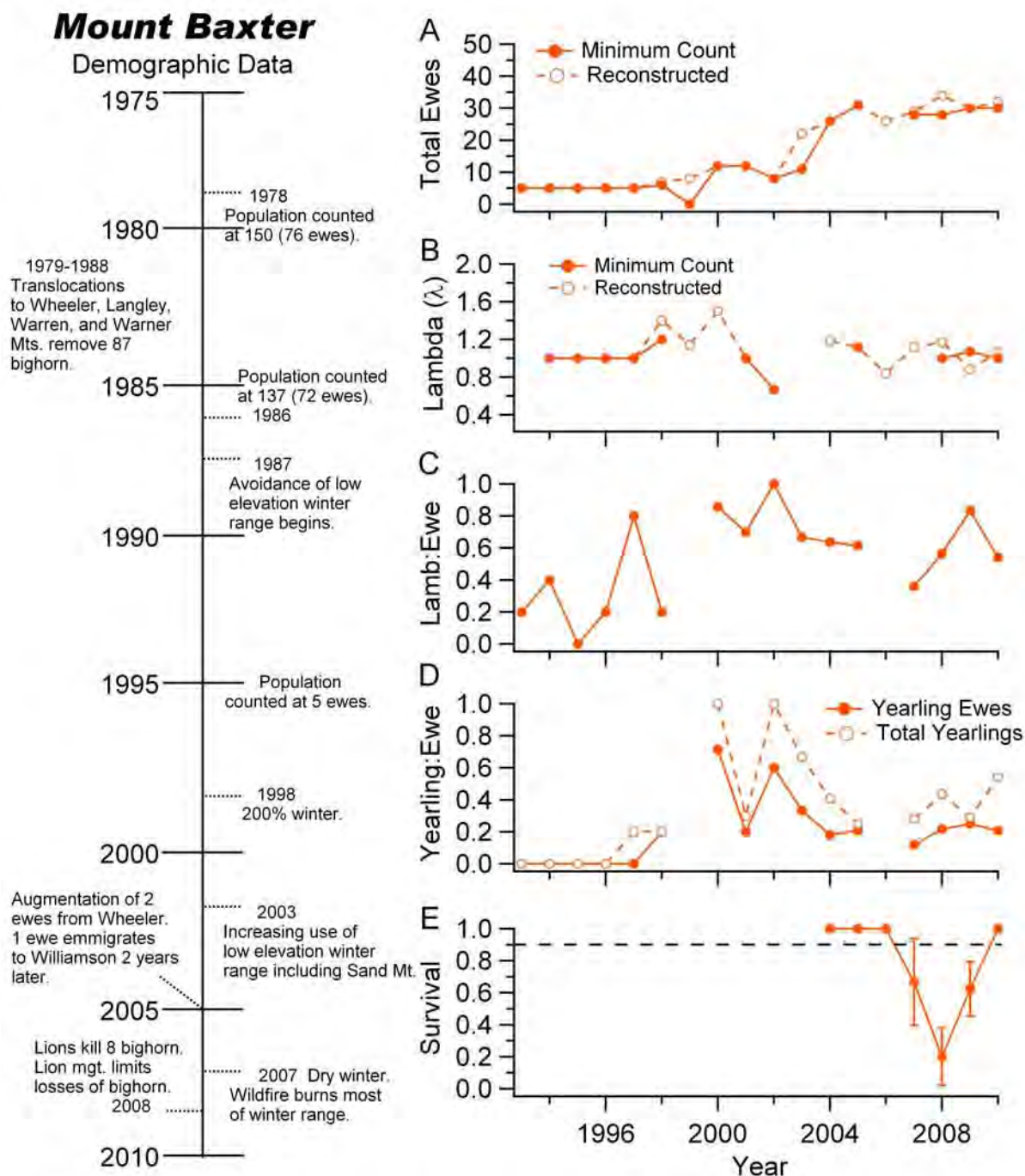
Herd unit area (boundary defined in Recovery Plan): 100 km²

Combined used summer and winter range area (defined below): 59 km² (2D area) or 74 km² (3D area)

Lowest Elevation: 1,450 m (4,757 ft)

Highest Elevation: 4,022 m (13,196 ft)

Winter and summer range polygons were created manually using GPS locations of bighorn collected for years 2008 through 2010 for winter (December-March) and summer (June-September). Winter and summer range polygons were combined to measure area. Lowest and highest elevations were extracted from this polygon.



This herd unit is surveyed in winter. Count data are collected from Dec. - April and recorded for that year.

A. Minimum count population estimates were generated by counting adult and yearling ewes and adding live collared ewes not observed. Reconstructed counts were generated by adjusting the minimum count upward using data based on fecal genotyping analysis, following years' minimum counts, and mark-resight estimates.

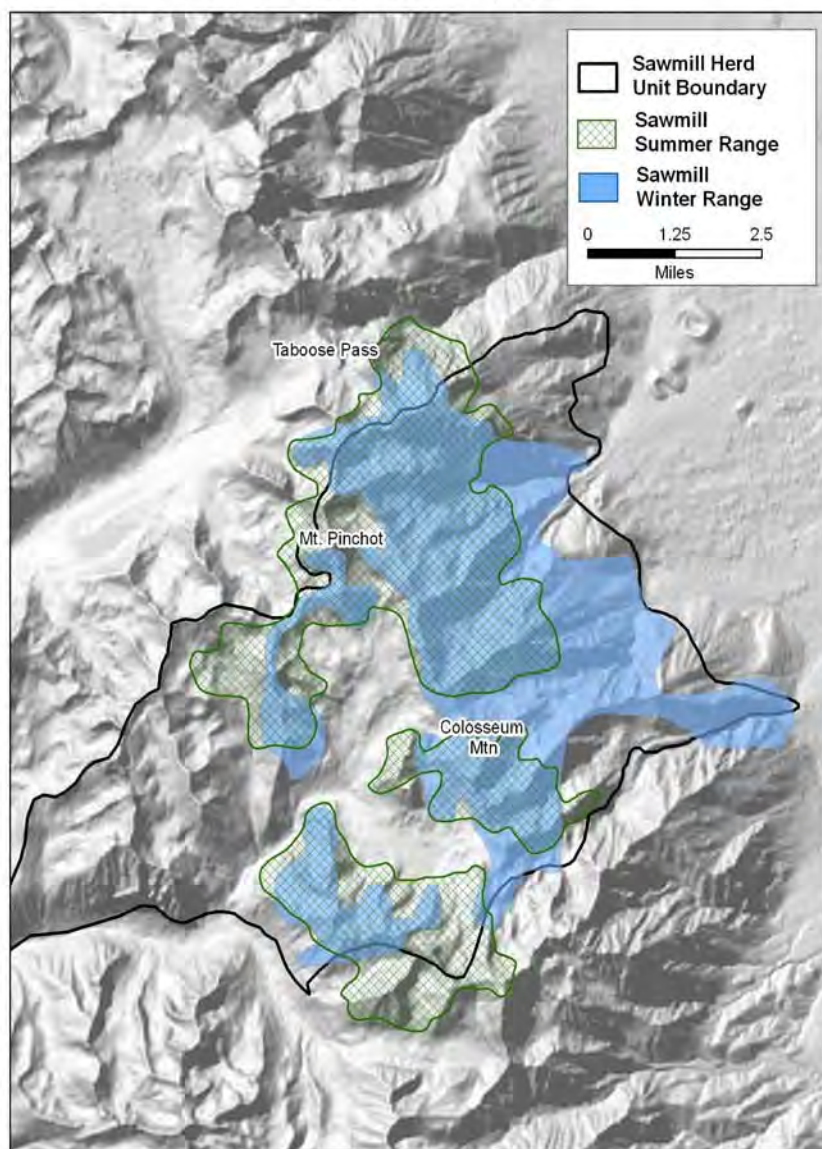
B. Lambda (λ) was calculated as N_{t+1}/N_t using population estimates as in A. Lambda was adjusted for translocations and biologically implausible values of lambda were excluded from analysis (see methods).

C-D. Lamb to adult ewe and yearling to adult ewe ratios are calculated based on observed animals during one year.

E. Kaplan-Meier survival rates are calculated annually for collared ewes based on sheep birth years (see methods).

Sawmill Canyon

Herd Unit Description



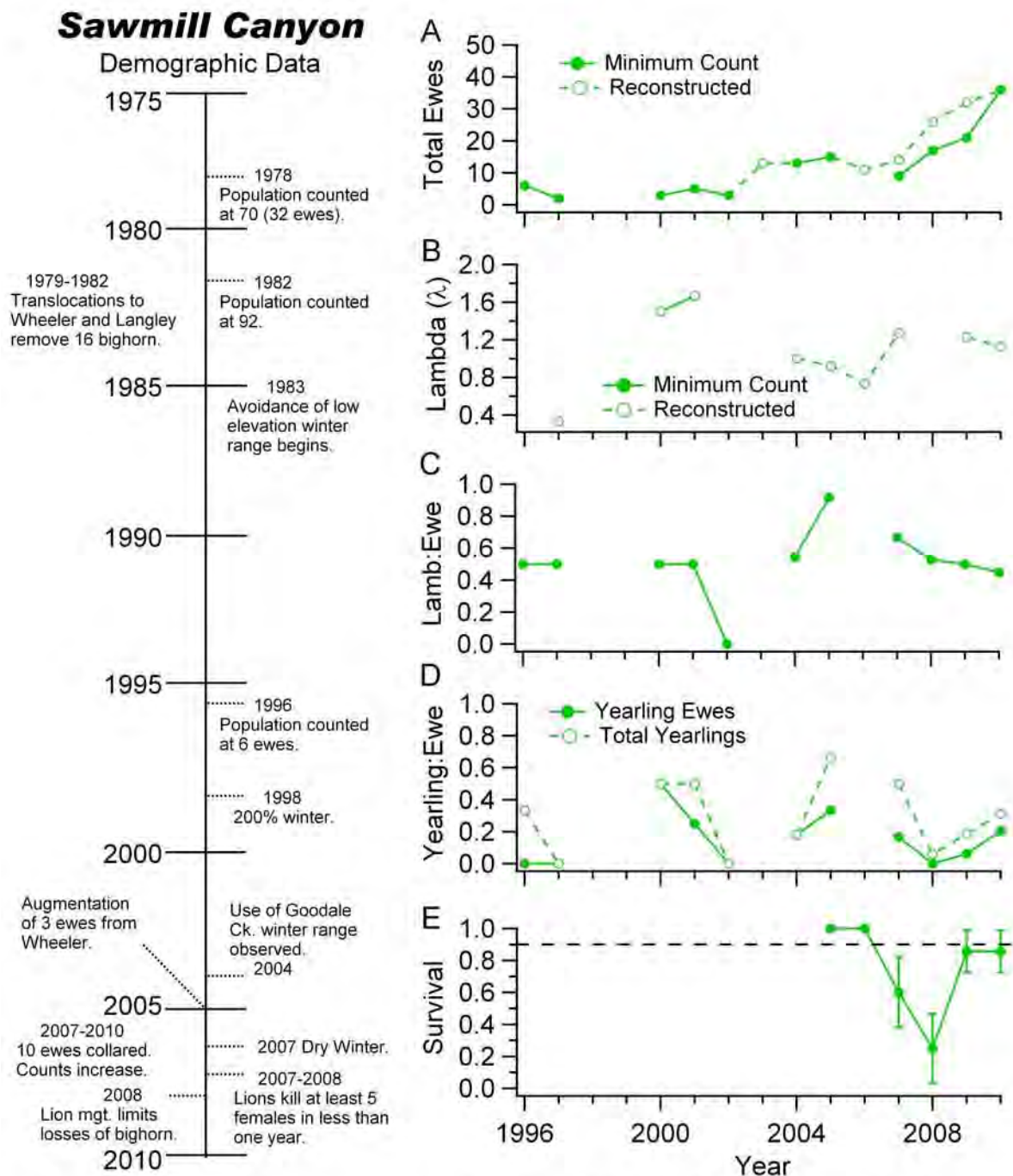
Herd unit area (boundary defined in Recovery Plan): 305 km²

Combined used summer and winter range area (defined below): 79 km² (2D area) or 97 km² (3D area)

Lowest Elevation: 1,441 m (4,728 ft)

Highest Elevation: 4,102 m (13,458 ft)

Winter and summer range polygons were created manually using GPS locations of bighorn collected for years 2008 through 2010 for winter (December-March) and summer (June-September). Winter and summer range polygons were combined to measure area. Lowest and highest elevations were extracted from this polygon.



This herd unit is surveyed in winter. Count data are collected from Dec. - April and recorded for that year.

A. Minimum count population estimates were generated by counting adult and yearling ewes and adding live collared ewes not observed (●). Reconstructed counts were generated by adjusting the minimum count upward using data based on fecal genotyping analysis, following years' minimum counts, and mark-resight estimates (○).

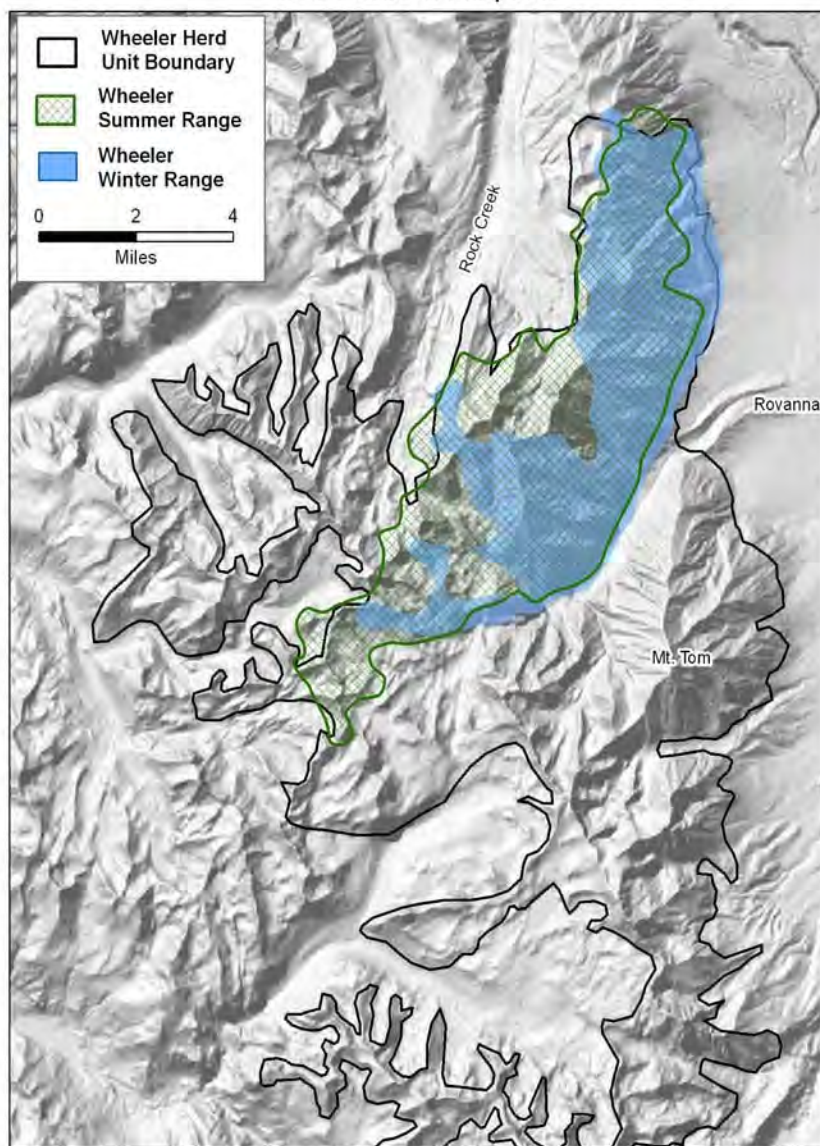
B. Lambda (λ) was calculated as N_{t+1}/N_t using population estimates as in A. Lambda was adjusted for translocations and biologically implausible values of lambda were excluded from analysis (see methods).

C-D. Lamb to adult ewe and yearling to adult ewe ratios are calculated based on observed animals during one year.

E. Kaplan-Meier survival rates are calculated annually for collared ewes based on sheep birth years (see methods).

Wheeler Ridge

Herd Unit Description



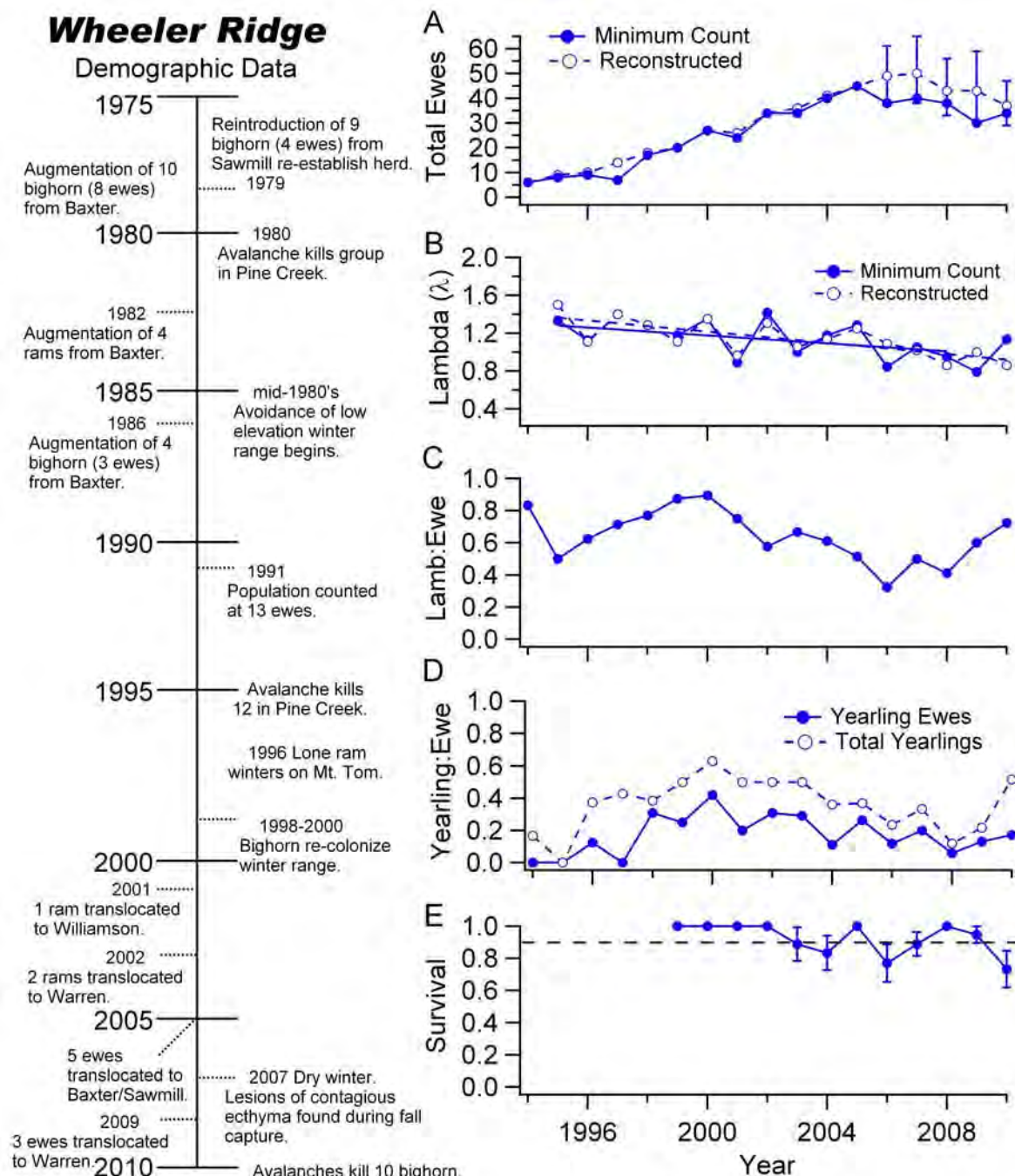
Herd unit area (boundary defined in Recovery Plan): 328 km²

Combined used summer and winter range area (defined below): 103 km² (2D area) or 126 km² (3D area)

Lowest Elevation: 1,585 m (5,200 ft)

Highest Elevation: 4,176 m (13,701 ft)

Winter and summer range polygons were created manually using GPS locations of bighorn collected for years 2008 through 2010 for winter (December-March) and summer (June-September). Winter and summer range polygons were combined to measure area. Lowest and highest elevations were extracted from this polygon.



This herd unit is surveyed in winter. Count data is collected from Dec. - April and recorded for that year.

A. Minimum count population estimates were generated by counting adult and yearling ewes and adding live collared ewes not observed. Reconstructed counts were generated by adjusting the minimum count upward using data based on fecal genotyping analysis, following years' minimum counts, and mark-resight estimates.

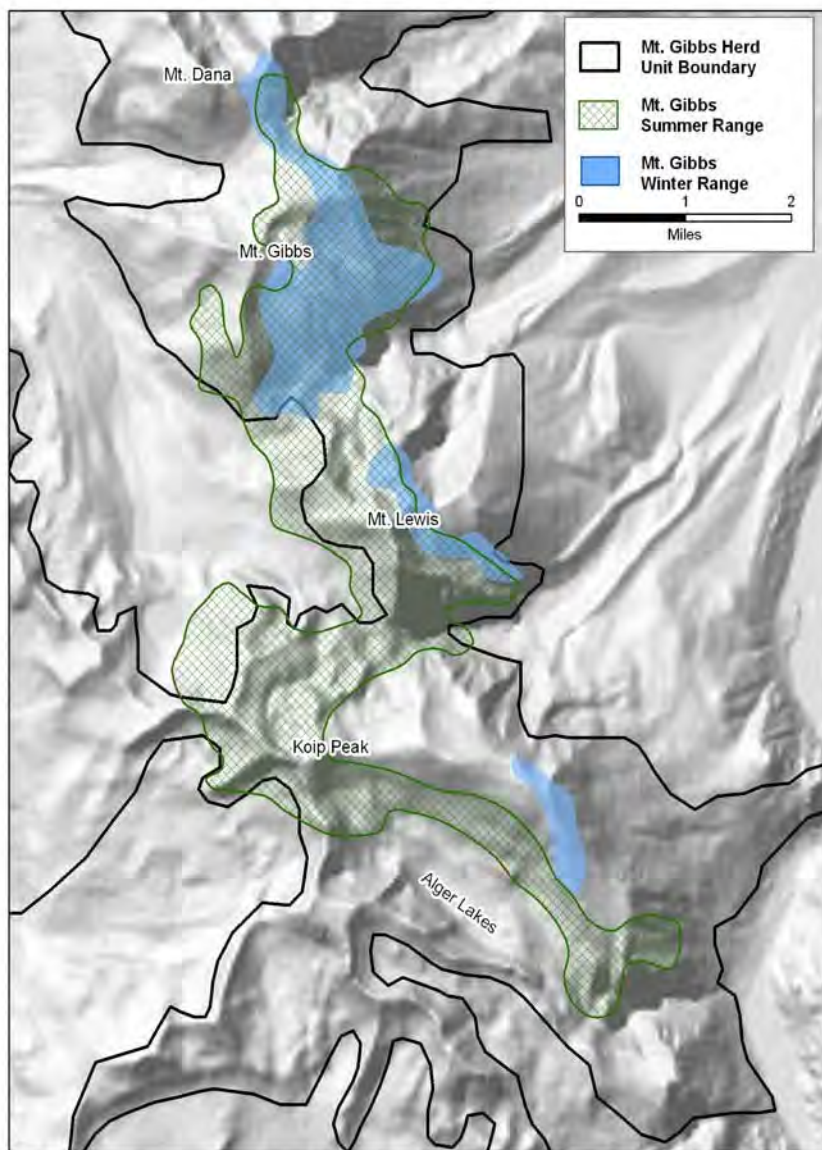
B. Lambda (λ) was calculated as N_{t+1}/N_t using population estimates as in A. Lambda was adjusted for translocations and biologically implausible values of lambda were excluded from analysis (see methods).

C-D. Lamb to adult ewe and yearling to adult ewe ratios are calculated based on observed animals during one year.

E. Kaplan-Meier survival rates are calculated annually for collared ewes based on sheep birth years (see methods).

Mount Gibbs

Herd Unit Description



Herd unit area (boundary defined in Recovery Plan): 120 km^2

Combined used summer and winter range area (defined below): 27 km^2 (2D area) or 31 km^2 (3D area)

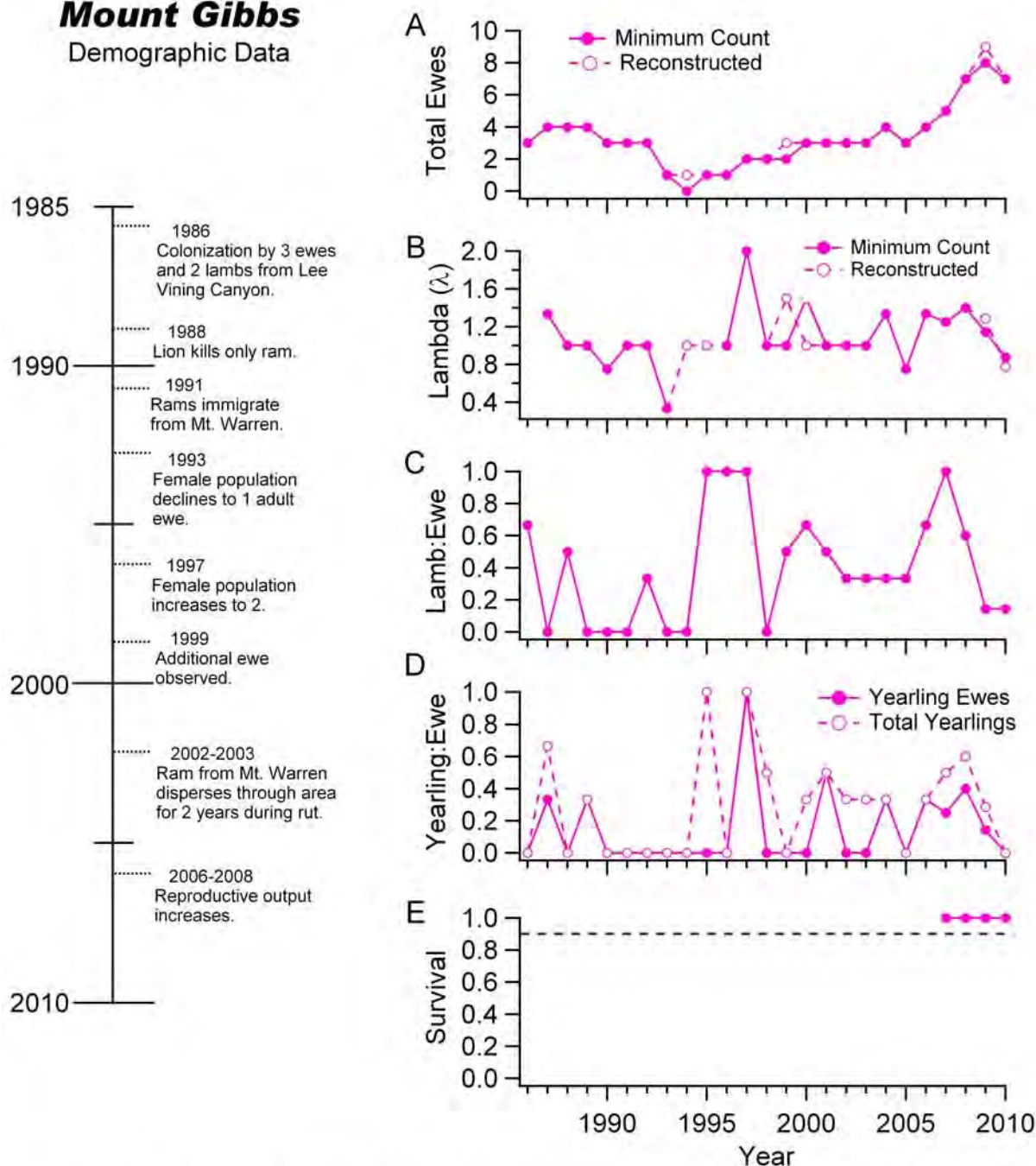
Lowest Elevation: 2,689 m (8,822 ft)

Highest Elevation: 3,948 m (12,953 ft)

Winter and summer range polygons were created manually using GPS locations of bighorn collected for years 2008 through 2010 for winter (December-March) and summer (June-September). Winter and summer range polygons were combined to measure area. Lowest and highest elevations were extracted from this polygon.

Mount Gibbs

Demographic Data



This herd unit is surveyed in summer. Count data are collected from July-Oct. and recorded for that year.

A. Minimum count population estimates were generated by counting adult and yearling ewes and adding live collared ewes not observed —●—. Reconstructed counts were generated by adjusting the minimum count upward using data based on fecal genotyping analysis, following years' minimum counts, and mark-resight estimates —○—.

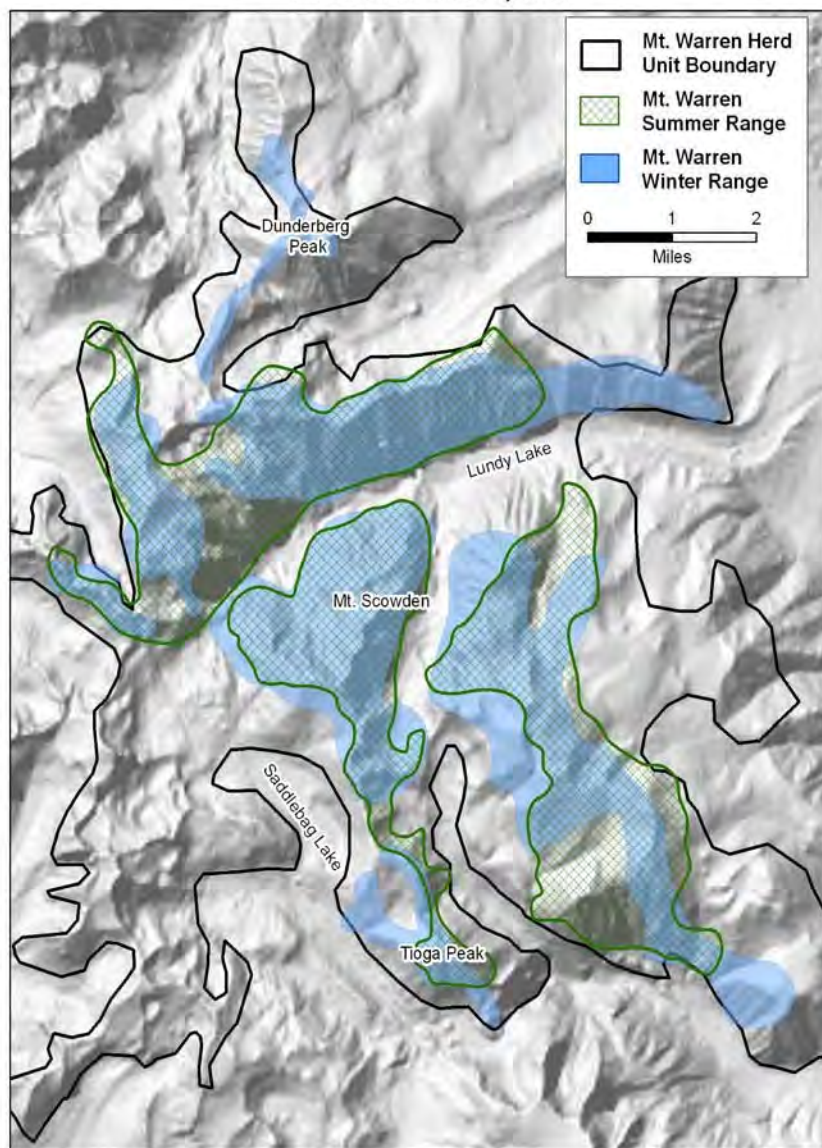
B. Lambda (λ) was calculated as N_{t+1}/N_t using population estimates as in A. Lambda was adjusted for translocations and biologically implausible values of lambda were excluded from analysis (see methods).

C-D. Lamb to adult ewe and yearling to adult ewe ratios are calculated based on observed animals during one year.

E. Kaplan-Meier survival rates are calculated annually for collared ewes based on sheep birth years (see methods).

Mount Warren

Herd Unit Description



Herd unit area (boundary defined in Recovery Plan): 147 km²

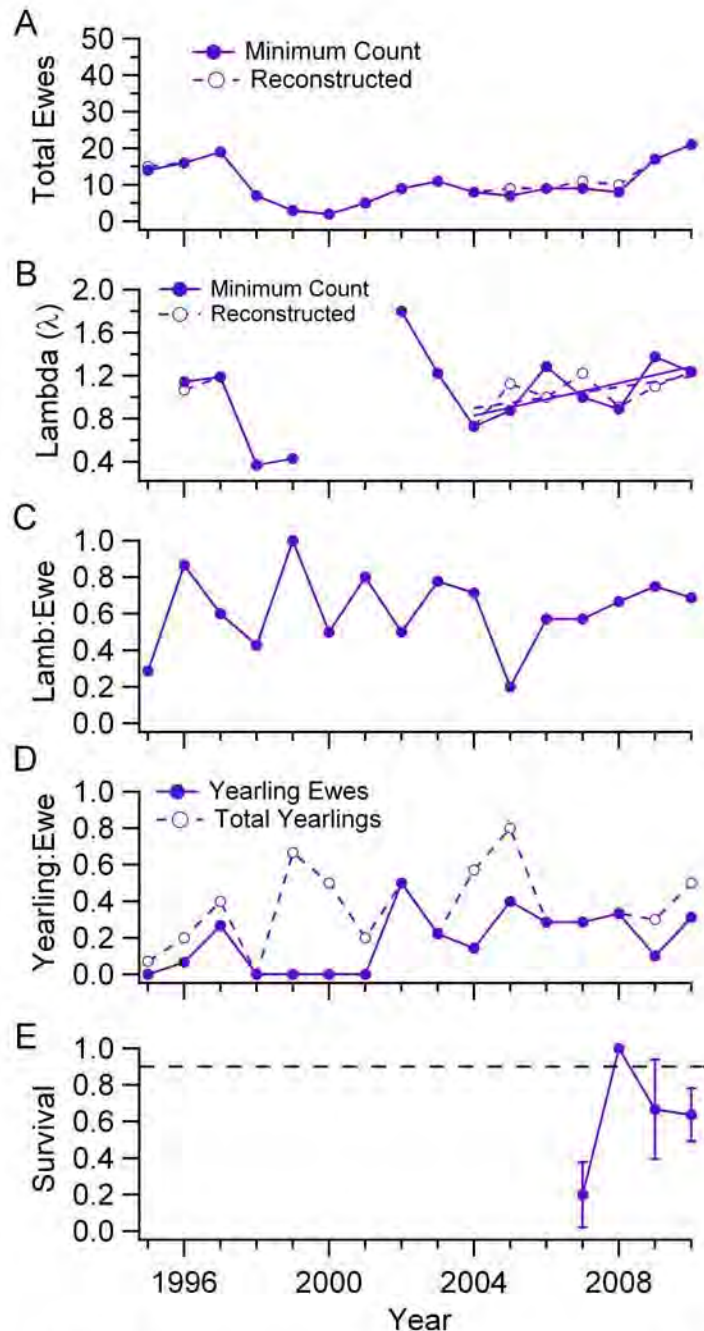
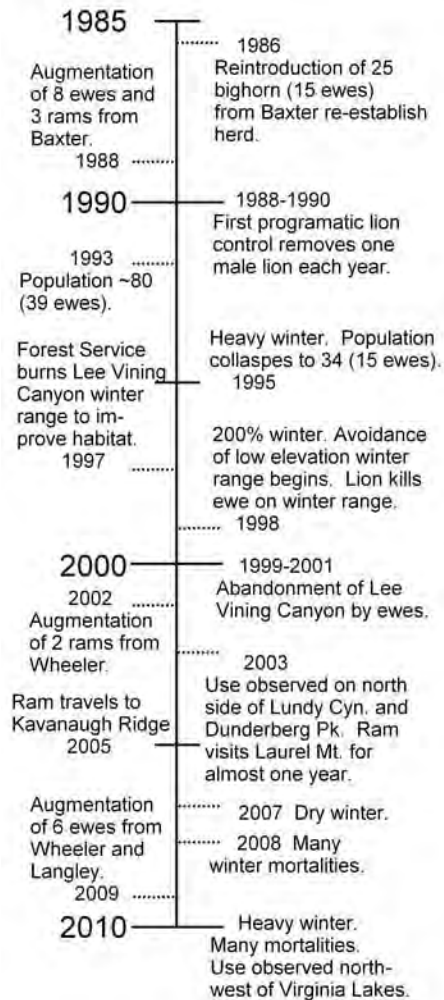
Combined used summer and winter range area (defined below): 64 km² (2D area) or 76 km² (3D area)

Lowest Elevation: 2,326 m (7,631 ft)

Highest Elevation: 3,789 m (12,431 ft)

Winter and summer range polygons were created manually using GPS locations of bighorn collected for years 2008 through 2010 for winter (December-March) and summer (June-September). Winter and summer range polygons were used to measure area. Lowest and highest elevations were extracted from this polygon.

Mount Warren Demographic Data



This herd unit is surveyed in summer. Count data are collected from July-Oct. and recorded for that year.

A. Minimum count population estimates were generated by counting adult and yearling ewes and adding live collared ewes not observed —●—. Reconstructed counts were generated by adjusting the minimum count upward using data based on fecal genotyping analysis, following years' minimum counts, and mark-resight estimates —○—.

B. Lambda (λ) was calculated as N_{t+1}/N_t using population estimates as in A. Lambda was adjusted for translocations and biologically implausible values of lambda were excluded from analysis (see methods).

C-D. Lamb to adult ewe and yearling to adult ewe ratios are calculated based on observed animals during one year.

E. Kaplan-Meier survival rates are calculated annually for collared ewes based on sheep birth years (see methods).

Appendix C.

Herd Unit Summaries for 2010-2011

The information presented in this appendix summarizes survey efforts and significant events occurring between July 1, 2010 and June 30, 2011 for each herd unit.

The 2010-2011 winter was a very heavy winter, exceeding 183% of average snowfall in the mountains. However, a large percentage of that snow fell during just 5 days beginning December 18, producing the snowiest December on record. Numerous bighorn sheep were documented to die in avalanches during winter, but other such losses probably went undocumented in some herds.

Mount Langley

In the summer of 2010 it took 3 survey attempts before a sufficiently complete count was achieved in September. That minimum count was 36 adult ewes, 6 yearling ewes, 11 lambs, 7 yearling rams, and 32 adult rams for a total of 92. The mark-resight estimate of 41 adult and yearling ewes (95% CI:30-56) was just under the minimum count of 42. Rams are not the focus of these counts, but this was the highest number of rams ever counted in this herd.

One radio collared ewe died at high elevation during winter. All others successfully descended to winter ranges despite the deep snow in December.

Mount Williamson

A summer survey in 2010 located only a single group of 9 sheep in North Bairs Creek. It contained 6 adult females, 1 yearling female, 1 lamb, and 1 yearling male, thus suggesting the possibility of a

low lamb:ewe ratio in the population. During the following winter 17 non-immigrant sheep could accounted for: 8 adult ewes, 2 yearling ewes, 4 lambs, and 3 adult rams. One radio-collared ewe died in spring.

Two radio-collared females from the Mount Baxter herd emigrated to Mount Williamson in 2010 and were located on winter ranges in early April of 2011. These were apparently independent events. One of these ewes (S167) was seen during a summer survey of the Mount Baxter herd in 2010, whereas the other (S166) was not. When found at Mount Williamson they were a considerable distance apart. S166 was located between George Creek and South Bairs Creek in a patch of habitat that was the most favored winter range of the Mount Williamson sheep up to 1985 before they abandoned use of low-elevation winter ranges south of Shepherd Creek.

Accompanying S166 was another adult female and a yearling of each sex. Given the absence of Mount Williamson sheep at this location for 25 years, these other sheep were suspected also to be from the Mount Baxter herd. They were genotyped from DNA extracted from droppings and tested for 18 microsatellite loci relative to past samplings of the Mount Williamson herd and the combined Mount Baxter and Sawmill Canyon herds. All 3 showed strong alliance with the Mount Baxter/Sawmill Canyon population; thus this entire group apparently emigrated from the Mount Baxter herd. S167 was located in Shepherd Creek in a group of 12 sheep that included 4 collared females from Mount Williamson. Behavioral interactions (dominance and association) suggested that she was a lone immigrant. These observations indicate the total emigration of 5 Mount Baxter sheep: 3 adult females and a yearling of each sex.

Bubbs Creek

This population was not surveyed by helicopter during the 2010-2011 winter. An attempt was made to count these sheep on the ground in the summer of 2010. The result was 6 adult ewes, 3 yearling ewes, 2 lambs, 1 yearling ram, and 11 adult rams. The adult rams are not necessarily from this herd, and the number of ewes was about one-half that of the last good helicopter count.

Mount Baxter

A coordinated summer count of females and associates was carried out in July of 2010. During that count all collared ewes except S166 (who emigrated to Mount Williamson) were seen. Minimum totals were: 29 adult ewes, 6 yearling ewes, 21 lambs, and 8 yearling rams, for a total of 71 sheep.

Winter range counts began in late December and continued into April. The result was a minimum total count of 77 sheep that included all collars that did not emigrate: 25 adult ewes, 5 yearling ewes, 13 lambs, 8 yearling rams, and 26 adult rams. The sheep that emigrated to Mount Williamson would increase this to 28 adult ewes, 6 yearling ewes, 13 lambs, 9 yearling rams, 26 adult rams, and a total of 82. This suggests a 75% survivorship of the 20 lambs counted the previous year, and 83% survivorship for adult and yearling ewes if no further emigrants existed.

Comparisons with the summer count data suggest losses of at least 3 adult ewes, 1 yearling ewe, and 8 lambs between summer and winter range counts. It is possible that many of these perished after the record December snow fall. One young radio-collared ram from the Mount Baxter herd began emitting a mortality signal at high elevation following that December storm but

could not be investigated because of deep snow.

Sawmill Canyon

Counts of this population have been rapidly increasing each year with the development of better summer census approaches made possible by the recent addition of numerous radio collars on females in this herd unit. Known minimum population sizes have increased from 12 total females in the 2007-08 winter to 23 the following summer and 30 in the summer of 2009. That increase continued in 2010 when 37 total females were counted in a coordinated summer count that logged 33 adult ewes, 4 yearling ewes, 16 lambs, 6 yearling rams, and 4 2-year-old rams.

In the first half of January 2011, following the record December snows, a winter range count logged 30 adult ewes, 6 yearling ewes, 13 lambs, 3 yearling rams, and 8 adult rams for a total of 63. Not long before that count John Dittli photographed 10 sheep on the summit plateau of Goodale Mountain, including ewes, lambs, and yearlings. This suggested that the population could be yet larger. The 6 yearling females recorded on the winter range compared with 4 the previous summer also suggested that the summer count was incomplete.

Wheeler Ridge

Deep snow following the record snow storm in December created treacherous conditions for bighorn sheep at Wheeler Ridge given the extreme steepness of the terrain. It took numerous days for surviving sheep to travel through the deep snow in Pine Creek out to front country winter ranges. One old ram in poor body condition broke a leg and died on that journey. Ten sheep including 6 adult females were documented to die in

avalanches.

Subsequent winter counts produced minimum totals of 29 adult ewes, 5 yearling ewes, 21 lambs, 10 yearling rams and 23 adult rams, for a total of 88, and a mark-resight estimate of 40 adult and yearling females (95% CI: 32-51). The known early winter deaths would have put the minimum total population in mid-December at 98. The 6 ewes known to die in avalanches constituted 17% of the minimum total ewes counted. In early March a female lamb and a yearling male died from mountain lion predation.

Convict Creek

This fledgling herd is likely a recent natural colonization from the Wheeler Ridge herd unit and lives in habitat immediately south of McGee Canyon. In the summer of 2010 it was known to contain 3 ewes, 3 lambs, and a yearling ram. In late June of 2011 all 7 of these sheep were still alive with the addition of 2 new lambs. The 3 lambs observed in the summer of 2010 appear to be 2 females and 1 male that were observed as yearlings in June 2011.

Mount Gibbs

In the summer of 2009 this herd contained 7 adult females, 1 yearling female, 1 lamb, 1 yearling male, and 5 adult males. In the summer of 2010 the composition was 7 adult females, 1 lamb, and 6 adult males (ages 2-9).

Mount Warren

In the summer of 2009 this herd unit included 3 subgroups of females: 1 on Mount Scowden and 2 on the north side of Lundy Canyon, 1 of which contained ewes recently translocated there. Sheep numbers that summer were 16 adult ewes, 1 yearling ewe, 12 lambs, 2 yearling rams, and 6 adult rams, for a total of 37.

From coordinated group counts in the summer of 2010 the numbers were (1) Mount Scowden: 4 adult females, 1 yearling female, 2 lambs, and 1 yearling male; and (2) Lundy Canyon north side: 13 adult females, 5 yearling females, 10 lambs, 2 yearling rams, 2 2-year-old rams, and 3 older rams; for totals of 17 adult females, 6 yearling ewes, 12 lambs, 3 yearling males, 5 adult males, and 43 total sheep. The 2010 count of the Mount Scowden group was consistent with the 2009 count, given a capture-related death of 1 adult ewe in between those counts. However, on the north side of Lundy Canyon the 2010 count was 1 adult female more than could be accounted for in the 2009 count, and 2 yearling females more than known female lambs from fecal genotyping of 2009 lambs. Consequently, there was some question whether this was a true minimum count or might have involved some double counting of sheep appearing and disappearing in complex terrain.

The 2 functional radio collars on ewes at Mount Scowden both began transmitting mortality signals at the very end of November 2010, but could not be investigated then due to treacherous conditions in the mountains, weeks before being covered with deep snow in December. Three radio-collared sheep on the north side of Lundy Canyon shifted to mortality signals after the December storm. One adult female was an avalanche death. The cause of death could not be determined for a young male, and the second adult female had not yet been found by the end of June 2011. Two other adult females on the north side of Lundy Canyon died in spring at high elevation as a result of efforts to capture and collar them.

Appendix D.

Summary of Monitoring Activities and Mortalities for 2010-2011

Sierra Nevada bighorn sheep and mountain lions in and adjacent to Sierra bighorn herd units were monitored. Monitoring efforts for bighorn focused on maintaining VHF collars on 30-35% of the adult ewe population to collect data on demographic rates. As of June 30, 2011, 29.7% of ewes were collared. Monitoring efforts for mountain lions focused on collaring all lions near bighorn habitat with GPS or VHF collars and investigating potential kill sites (clusters of GPS locations).

Table 1. Bighorn collaring activities and mortalities. (Activities occurred between July 1 and June 30 of the following year.)

	<i>Langley</i>		<i>Williamson</i>		<i>Baxter</i>		<i>Sawmill</i>		<i>Bubbs</i>		<i>Wheeler</i>		<i>Gibbs</i>		<i>Warren</i>	
	Ewes	Rams	Ewes	Rams	Ewes	Rams	Ewes	Rams	Ewes	Rams	Ewes	Rams	Ewes	Rams	Ewes	Rams
7/1/2010	15	2	5	2	10	2	7	2	2	0	15	10	5	4	11	6
additions	0	0	0	0	0	0	0	0	0	0	1	1	0	1	3	1
re-collaring	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(1)	(1)
translocations	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
mortalities	-2	0	-1	0	0	-1	-2	0	0	0	-4	-2	0	0	-7	-2
censors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6/30/2011	13	2	4	2	10	1	5	2	2	0	12	9	5	5	7	5

Table 2. Mountain lion collaring activities and mortalities. (Activities occurred between July 1 and June 30 of the following year.) Three additional lions were captured or recaptured in areas adjacent to the recovery units that are not displayed in the table below.

	<i>Southern R.U.</i>	<i>Central R.U.</i>	<i>Northern R.U.</i>
7/1/2010	2	4	1
additions	2	5	0
immigration	1	6	1
emmigration	-2	-2	0
mortalities	-1	-8	-1
re-collaring	(1)	(6)	(0)
6/30/2011	2	5	1

Appendix E.

New index developed for mountain lion population trends

All or most cougar researchers believe that the most reliable estimates of density (cougar numbers per unit area) are derived from long-term radio-telemetry studies that attempt to mark all animals in the population. Although these estimates have no formal mathematical basis other than simple counting, and lack statistical confidence intervals, they are endorsed as the “gold standard” against which indices or other estimates should be compared (Seidensticker et al. 1973, Hemker et al. 1984, Logan and Sweanor 2001). These methods were used in Round Valley, CA from 1992 to 1999 (Pierce et al. 2000, Bowyer et al. 2005). During this study an index to population trends for the mountain lions in Round Valley was developed (Figure 1). This index was derived from the number of collared lions located within a defined area during each aerial telemetry flight averaged over the winter (November thru April). An index is a number that is monotonically related to population size, N . The best indices are linearly related to N (Cougar Management Guidelines Working Group 2005). Indices based on sign are generally assumed linearly related to N whereas harvest number and catch per unit effort are usually not linearly related to N (Caughley 1977). Intensive monitoring of mountain lions during the study in Round Valley supported the assumption that the index was tracking the trends in the study area in a consistent and linear manner.

In 2000, the need to monitor mountain lions in the Eastern Sierra increased with the listing of the Sierra Nevada bighorn sheep. This change in priorities greatly expanded the area that mountain lions needed to be monitored. The effort to collect data for the Round Valley index continued but that did not provide more specific trend data for other winter ranges. Surveying for mountain lion sign and the capture and radio-collaring of mountain lions were expanded to all areas of interest, but as previously stated, catch per unit effort is not a reliable index, and measuring unit effort for searching for sign is very difficult. Global Positioning System (GPS) units are being used to measure effort, but a large data set is needed to offset the variability created by technical difficulties in measuring actual search effort on a daily basis not to mention the variability in detecting sign. For these reasons, a new method for indexing mountain lion use was tested, using radio collar locations, not just from the air but also from GPS recorded data. The proportion of locations within the Round Valley study area, for each individual lion that ever used the original aerial index area, was calculated for each winter, and then all values were summed. This method was then compared to the previous index for all years available and the result was a correlation of 0.69 for the 15 years available. Values were nearly identical for 7 of 15 years and direction of change was the same for 12 of 15 years. Differences seen from 2004 through 2006 were likely a result of less effort during aerial surveys made for mountain lions. These results suggest that the index used in the Round Valley study was valid. Additionally, these results provide the Sierra Nevada Bighorn Sheep Recovery Program with an alternative method for indexing mountain lion use of any area selected, as long as an intensive effort to radio-collar all lions using an area is made.

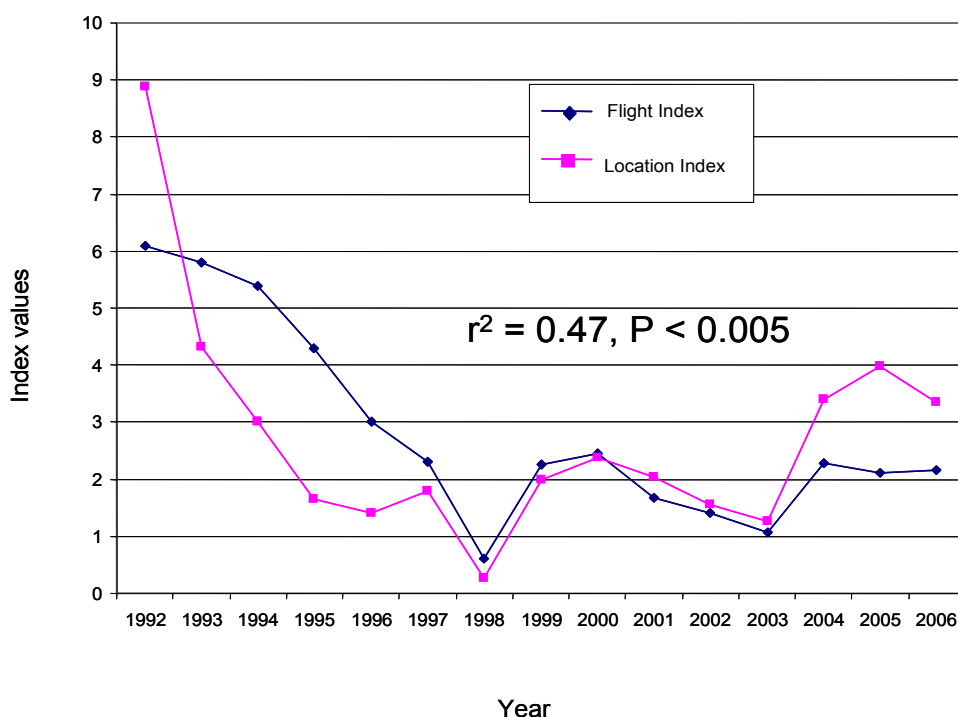


Figure 1. Comparison of mountain lion indices during winter (November – April). Flight Index is based on the average number of individual lions located in Round Valley during weekly flights. Location Index is based on percentage of all location data collected in Round Valley from radio collars.

Literature cited

- Bowyer, R. T. D. K. Person and B. M. Pierce. 2005. Detecting top-down versus bottom-up regulation of ungulates by large carnivores: implications for conservation of biodiversity in J. C. Ray, K. H. Redford, R. S. Steneck, and J. Berger, editors. *Large Carnivores and the Conservation of Biodiversity*. Island Press, Washington D.C., USA.
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- Hemker T. P., F. G. Lindzey, and B. B. Ackerman 1984. Population characteristics and movement patterns of cougars in southern Utah. *Journal of Wildlife Management* 48:1275-1284.
- Logan, K. A., and L. L. Sweanor. 2001. *Desert Puma: Evolutionary Ecology and Conservation of an Enduring Carnivore*. Island Press, Washington, d. C., USA.
- Pierce, B. M, V. C. Bleich, and R. T. Bowyer. 2000. Social organization of mountain lions: does a land-tenure system regulate population size? *Ecology* 81:1533-1543.
- Seidensticker, J. C., IV, M. G. Hornocker, W.V. Wiles, and J. P. Messick. 1973. Mountain lion social organization in the Idaho primitive area. *Wildlife Monograph* 35:1-60.



OFFICE OF THE CLERK
OF THE BOARD OF SUPERVISORS

REGULAR AGENDA REQUEST

Print

MEETING DATE	November 13, 2012	DEPARTMENT	District Attorney
ADDITIONAL DEPARTMENTS			
TIME REQUIRED	10 minutes	PERSONS APPEARING BEFORE THE BOARD	Tim Kendall/DA
SUBJECT	Approval to Advertise for a Deputy District Attorney I/II Position.		

AGENDA DESCRIPTION:

(A brief general description of what the Board will hear, discuss, consider, or act upon)

Jeremy Ibrahim has submitted a letter to terminate his contract as Deputy District Attorney I with Mono County effective December 1st 2012. We are seeking approval from the Board to advertise and filling of a Deputy District Attorney I/II.

RECOMMENDED ACTION:

Approval to advertise to fill the position for a Deputy District Attorney I/II.

FISCAL IMPACT:

Cost for FY 12/13 for a Deputy District Attorney I is \$87,687 of which \$54,915 is salary, \$10,331 is the County PERS contribution and \$22,442 is the cost of benefits. The cost is included in the approved budget. Full year cost is \$150,321 of which \$94,140 is salary, \$17,709 is the County PERS contribution and \$38,472 is the cost of benefits.

Cost for FY 12/13 for a Deputy District Attorney II is \$93,391 of which \$59,087 is salary, \$11,126 is the County PERS contribution and \$23,178 is the cost of benefits. The cost is included in the approved budget. Full year cost is \$160,099 of which \$101,292 is salary, \$19,073 is the County PERS contribution and \$39,734 is the cost of benefits.

CONTACT NAME: Tim Kendall

PHONE/EMAIL: (760) 932-5560 / tkendall@mono.ca.gov

SUBMIT THE ORIGINAL DOCUMENT WITH
ATTACHMENTS TO THE OFFICE OF
THE COUNTY ADMINISTRATOR
PRIOR TO 5:00 P.M. ON THE FRIDAY
32 DAYS PRECEDING THE BOARD MEETING

SEND COPIES TO:

MINUTE ORDER REQUESTED:

☒ YES ☐ NO

ATTACHMENTS:

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 [DA staff](#)

 [Ibrahim resignation Letter](#)

History

Time	Who	Approval
11/5/2012 10:37 AM	County Administrative Office	Yes
11/6/2012 4:12 PM	County Counsel	Yes
11/5/2012 4:10 PM	Finance	Yes

County of Mono Office of the District Attorney

www.monocountydistrictattorney.org

Bridgeport Office:
Main St. Court House, P.O. Box 617
Bridgeport, CA. 93517
Tel: (760) 932-5550 fax: (760) 932-5551



Mammoth Office:
Sierra Center Mall, P.O. Box 2053
Mammoth Lakes, CA. 93546
Tel: (760) 924-1710 fax: (760) 924-1711

Tim Kendall - District Attorney

TO: Honorable Board of Supervisors

FROM: Tim Kendall, District Attorney

DATE: October 30, 2012

Subject

Seek approval to advertise and fill an opening for a Deputy District Attorney I/II position.

Recommendation

Authorize the advertising and filling of the Deputy District Attorney I/II position.

Discussion

Jeremy Ibrahim has given his letter of resignation effective December 1, 2012. Due to his resignation the District Attorney is asking to advertise the opening for a Deputy District Attorney I/II position and to conduct interviews and fill the vacancy as soon as possible. This position has been included and approved in this fiscal budget as a Deputy District Attorney I position.

The District Attorney is asking permission to fly the position as a Deputy District Attorney I/II position, based on experience, because of the need to attract someone with prosecutorial experience. That experience should include evaluating cases, performing trials and being able to fill the position with little training. This is needed in order to take over the case load left by the vacancy. The DDA level I position is an entry level position and may not attract that needed experience required for assuming this case load.

Fiscal Impact

		<u>Total Compensation</u>	<u>Salary</u>	<u>ER-PERS</u>	<u>Benefits</u>
DDA I -	2012/2013	\$87,687.00	54,915.00	10,331.00	22,442.00
	2013/2014	\$150,321.00	94,140.00	17,709.00	38,472.00
DDA II -	2012/2013	\$93,391.00	59,087.00	11,126.00	23,178.00
	2013/2014	\$160,099.00	101,292.00	19,073.00	39,734.00

County of Mono Office of the District Attorney

www.monocountydistrictattorney.org

Bridgeport Office:

Main St. Court House, P.O. Box 617
Bridgeport, CA. 93517

Tel: (760) 932-5550 fax: (760) 932-5551

Tim Kendall - District Attorney



Mammoth Office:

Sierra Center Mall, P.O. Box 2053

Mammoth Lakes, CA. 93546

Tel: (760) 924-1710 fax: (760) 924-1711

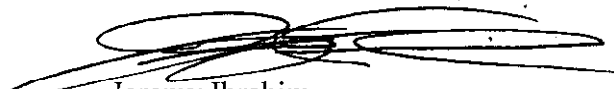
October 30, 2012

Tim Kendall
Mono County District Attorney
P.O. Box 617
Bridgeport, CA 93517

Dear Tim,

Effective December 1, 2012, I would like to terminate my contract with Mono County as a Deputy District Attorney.

Sincerely,



Jeremy Ibrahim



OFFICE OF THE CLERK
OF THE BOARD OF SUPERVISORS

REGULAR AGENDA REQUEST

Print

MEETING DATE	November 13, 2012	DEPARTMENT	Finance
ADDITIONAL DEPARTMENTS	Public Works, Community Development		
TIME REQUIRED	15 minutes	PERSONS APPEARING BEFORE THE BOARD	Mary Booher
SUBJECT	Clean Air Project Program Block Grant Funds		

AGENDA DESCRIPTION:

(A brief general description of what the Board will hear, discuss, consider, or act upon)

Presentation by Mary Booher regarding Clean Air Project Program Block Grant Funds.

RECOMMENDED ACTION:

Consider potential projects and select desired project for implementation with Great Basin Unified Air Pollution Control District (GBUAPCD) Clean Air Project Program (CAPP) Block Grant Funds. Provide any desired direction to staff.

FISCAL IMPACT:

\$59,680 of funds for a project in the County that meets the criteria established by the CAPP grant program.

CONTACT NAME: Mary Booher

PHONE/EMAIL: 760-932-5583 / mbooher@mono.ca.gov

SUBMIT THE ORIGINAL DOCUMENT WITH
ATTACHMENTS TO THE OFFICE OF
THE COUNTY ADMINISTRATOR
PRIOR TO 5:00 P.M. ON THE FRIDAY
32 DAYS PRECEDING THE BOARD MEETING

SEND COPIES TO:

MINUTE ORDER REQUESTED:

☒ YES ☐ NO

ATTACHMENTS:

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- [Staff Report CAPP Block grant Funds](#)
- [CAPP Block grant guidelines](#)
- [Lee Vining Airport site plan](#)

History

Time	Who	Approval
11/5/2012 3:50 PM	County Administrative Office	Yes
11/6/2012 4:12 PM	County Counsel	Yes
11/5/2012 3:47 PM	Finance	Yes



DEPARTMENT OF FINANCE

COUNTY OF MONO

Rosemary Glazier
Assistant Finance Director
Treasurer-Tax Collector

Brian Muir
Finance Director

Roberta Reed
Assistant Finance Director
Auditor-Controller

P.O. Box 495
Bridgeport, California 93517
(760) 932-5480
Fax (760) 932-5481

P.O. Box 556
Bridgeport, California 93517
(760) 932-5490
Fax (760) 932-5491

November 13, 2012

TO: Mono County Board of Supervisors

FROM: Mary Booher, Administrative Services Manager

SUBJECT: **Clean Air Project Program Block Grant Funds**

Recommended Action:

Consider potential projects and select desired project for implementation with Great Basin Unified Air Pollution Control District (GBUAPCD) Clean Air Project Program (CAPP) Block Grant Funds. Provide any desired direction to staff.

Discussion:

In February 2012, the Board of the GBUAPCD allocated CAPP funds to each of the four agencies represented on the APCD Board in the form of Block Grants based on a per capita allocation. Mono County's share of these funds is \$59,680.

The CAPP Grant program provided guidelines for the use of these funds (attached). The following criteria must be met in utilizing these funds:

- CAPP Block Grant funds must be spent on projects that will or could result in real and local air quality improvement.
- CAPP Block Grant funds may be used to comply with existing air quality regulations and requirements.
- CAPP Block Grant funds may not be used to backfill previous expenditures, including any owed reimbursements.
- Prior to disbursing any CAPP Block Grant funds to a participating agency, the agency must provide CAPP administration with a brief project description, including estimated costs.

Staff from Public Works, Community Development and Finance met to develop a list of potential projects for the use of these funds. As a starting point, staff used the list of potential projects that were identified during the competitive grant process this spring. Additional projects were added based on projects identified by members of the Board of Supervisors during various meetings since that time. Staff narrowed the list down to the four projects that best meet the program criteria and county needs.

1. Biomass Feasibility analysis--This feasibility analysis project is requesting \$35,000 of CAPP Block Grant Funds, which will be leveraged with \$15,000 of Sustainable Communities planning funds and \$15,000 of County and agency staff time for a total project cost of \$65,000.
2. Heavy Equipment Replacement-- Mono County has many pieces of diesel powered heavy equipment. These vehicles are required by the State of California to meet existing Air Resource Board regulations. Mono County has two deadlines to comply with these regulations. Initial implementation requirements for Mono County's off-road equipment (19 vehicles) start in 2019 with final compliance in 2028. Mono County's on-road equipment (44 vehicles) must be retired or repowered by December 31, 2020. Due to

the age of our equipment, repowering is not considered a viable option. Cost for a new plow truck is \$210,000 and a new grader is \$320,000. The General Fund would be responsible for this match.

3. Lee Vining Airport Soils Stabilization Project-- In 2010, Mono County completed a re-construction project at the Lee Vining Airport in Lee Vining. The project resulted in the disturbance of approximately 25 acres of soil outside of the Runway Safety Area (site plan attached). Unfortunately, because of the characteristics of the soils left on the site, the revegetation treatment that was specified and funded by the Federal Aviation Administration (FAA) was determined to be inadequate to successfully treat the site. Rather than spend money on a treatment that would not work, the County hired Integrated Environmental Restoration Services (IERS) to plant several test plots to determine what treatment would work best. Over the last two years, the County has been coordinating with IERS to monitor and evaluate the success of the test plots and plan for a complete revegetation of the site. This process exhausted the funds available from the FAA. Very limited natural revegetation has occurred and the site remains exposed to wind and water erosion. The site has been known to be a source of dust during windy conditions.

In the last couple of months, the County used excess material from Lee Vining Airport as engineered fill for the Bryant Field Reconstruction Project in Bridgeport. As a result, our contractor will perform revegetation of areas that were re-disturbed at Lee Vining Airport. However, significant portions of the site will still need to be revegetated with funding from other sources. The cost of revegetation (including tub grindings/wood chips, seed, fertilizer, mulch, tackifier, and prevailing wage labor) is approximately \$20,000 per acre. However, if this project is selected for the use of CAPP funds, the County General Fund can contribute wood chips generated at our landfills and road department labor, as available, to treat as much of the site as possible.

This project is categorically exempt under CEQA and has strong community support, including backing from the Mono Lake Committee.

4. Solar Feasibility Study-- Solar-produced electricity provides cleaner energy and has proven to lower energy bills. Mono County Public Works would like to hire a consultant to conduct a feasibility study on County buildings to determine; if it is cost effective to convert its office buildings into solar powered facilities and verify what financial incentives and tax credits are available for the conversion to solar power. Study costs are estimated to be \$2,500/building.

Staff submitted project descriptions of these four projects to GBUAPCD staff for review and comment. CAPP Administrator Lisa Isaacs indicated that she felt both the heavy equipment replacement and the Lee Vining airport soils stabilization would meet the grant criteria. She indicated that for both the biomass feasibility study and the solar feasibility study that since most of the energy utilized in this area is generated outside of the APCD boundaries, they would not serve to reduce air pollution within the District. In addition to Ms. Isaac's comments, Air Pollution Control Officer Ted Schade indicated that he was not aware of serious air quality issues at the Lee Vining Airport site. He strongly supported utilizing these funds for Heavy Equipment replacement.

Once the Board has given staff direction, staff will submit the appropriate paperwork to the CAPP program for approval. Once the project is approved by the District's Air Pollution Control Officer, funds will be sent to the County for implementation.

Fiscal Impact:

\$59,680 of funds for a project in the County that meets the criteria established by the CAPP grant program.

If there are any questions regarding this item, please contact Mary Booher at 932-5583.

Thank you,

Submitted by: _____ Date 10/29/12
Mary Booher, Administrative Services Manager

CAPP Block Grant Guidelines and Agreement

March, 2012

At its February 6, 2012 meeting, the Governing Board of the Great Basin Unified Air Pollution Control District (District) approved CAPP block grants for payment to the four agencies represented on the Board. As such, ten dollars per person (\$10/capita) is now available to each agency, as determined by 2010 census data:

Inyo County: $18,546 \times \$10 = \mathbf{\$185,460.}$

Mono County: $14,202 - \text{TML population} = 5,968 \times \$10 = \mathbf{\$59,680.}$

Alpine County: $1,175 \times \$10 = \mathbf{\$11,750.}$

Town of Mammoth Lakes: $8,234 \times \$10 = \mathbf{\$82,340.}$

To be eligible for payment, a qualified agency representative must agree and adhere to the following guidelines:

- CAPP Block Grant funds are payable one time only and must be spent by December 31, 2013.
- CAPP Block Grant funds must be spent on projects that will or could result in real and local air quality improvement.
- CAPP Block Grant funds may be used to comply with existing air quality regulations and requirements.
- CAPP Block Grant funds may not be used to backfill previous expenditures, including any owed reimbursements.
- Prior to disbursing any CAPP Block Grant funds to a participating agency, the agency must provide CAPP administration with a brief project description, including estimated costs.
- Following the District Air Pollution Control Officer's approval of project description, project funds will be paid to the agency for immediate use as approved.
- If the total balance of an agency's awarded amount is not committed, payments may be made incrementally with remaining amounts payable upon request and approval.

CAPP Block Grant Guidelines and Agreement - continued

- All project expenditures financed by CAPP Block Grants must be tracked by the participating agency for general reporting purposes. Brief project summaries must be provided to CAPP bi-annually and following the conclusion of the project's full implementation.
- CAPP Administration reserves the right to contact relevant agency staff for more frequent, informal updates and reporting if necessary.
- Participating agencies agree to provide the District with all program cost and expense information as requested by the District.
- Any unspent CAPP Block Grant funds remaining after December 31, 2013 shall be returned to the District to fund competitive air pollution reduction projects.

Please complete, sign and date below and provide original to CAPP Administrator.

Participating District Agency:

Agency Representative's Name:

Agency Representative's Title:

Agency Representative's Signature:

Date:

Clean Air Projects Program

Lisa Isaacs, Administrator

P.O. Box 100 – PMB 331

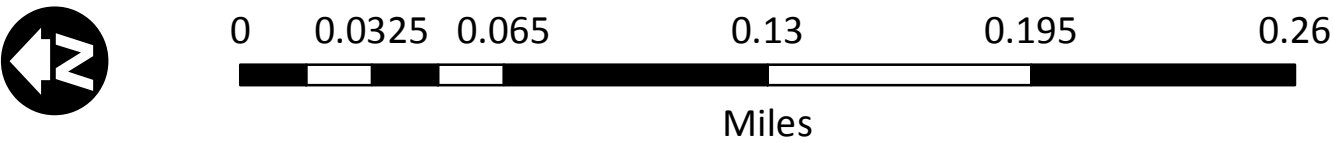
Mammoth Lakes, CA 93546-0100

760.914.0388

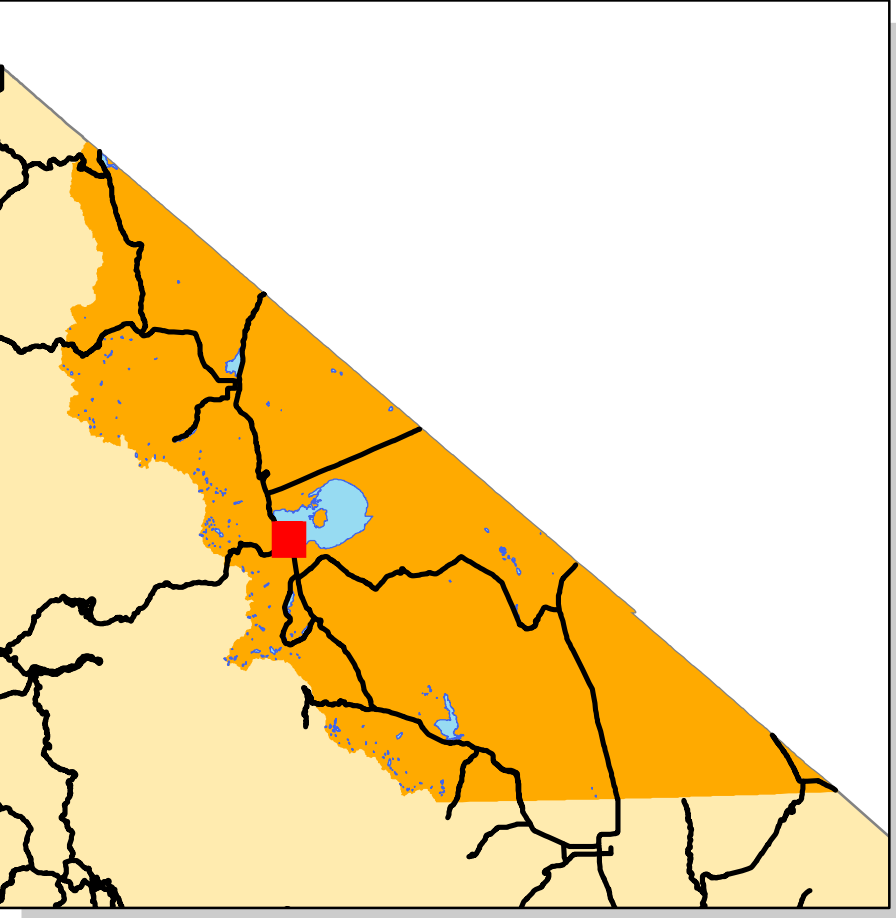
Lee Vining Airport Revegetation Project

Exhibit 1 - Site Plan
September 21, 2012

- Areas Needing Revegetation
- Federal Highways
- State Highways
- Local Roads
- Private Roads
- USFS, Dirt & 4WD Roads
- Base Parcels



Mono County GIS
PO Box 7657
Mammoth Lakes, CA
93546
(760) 924-1819
gis.mono.ca.gov



The information contained on this map is for reference purposes only and is in no way intended to serve as a legal description of property or other boundaries. The information on this map is subject to change without notice. This map is not to be reproduced or re-used without the prior permission of Mono County.

Map created by: ghigerd on 9/21/2012
J:\COMMON\@WORK\AIRPORTS\PROJECTS\Bryant Field Reconstruction 2012\Bryant Field R



OFFICE OF THE CLERK
OF THE BOARD OF SUPERVISORS

REGULAR AGENDA REQUEST

Print

MEETING DATE	November 13, 2012	DEPARTMENT	Public Works - Road Division
ADDITIONAL DEPARTMENTS			
TIME REQUIRED	15 minutes	PERSONS APPEARING BEFORE THE BOARD	Jeff Walters
SUBJECT	Review of Snow Removal Priorities		

AGENDA DESCRIPTION:

(A brief general description of what the Board will hear, discuss, consider, or act upon)

Each year the Roads Division of Public Works provides the Board of Supervisors with a list of the snow removal policies, procedures and priorities for county-maintained roads.

RECOMMENDED ACTION:

1. Receive staff report regarding current snow removal priorities and recommended changes to those priorities. 2. Provide direction to staff regarding modifications to current snow removal priorities. 3. Consider and potentially adopt Resolution No. R12-____, "A Resolution of the Mono County Board of Supervisors Re-Establishing Snow Removal Policies, Procedures, and Priorities for County-Maintained Roads." 4. Provide any desired direction to staff.

FISCAL IMPACT:

None.

CONTACT NAME: Jeff Walters

PHONE/EMAIL: 760.932.5459 / jwalters@mono.ca.gov

SUBMIT THE ORIGINAL DOCUMENT WITH
ATTACHMENTS TO THE OFFICE OF
THE COUNTY ADMINISTRATOR
PRIOR TO 5:00 P.M. ON THE FRIDAY
32 DAYS PRECEDING THE BOARD MEETING

SEND COPIES TO:

MINUTE ORDER REQUESTED:

☐ YES ☒ NO

ATTACHMENTS:

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[Review of Snow Removal Priorities - BOS Staff Report 11.13.12](#)

- 📎 [Exhibit 1 - Snow Removal Policy - BOS Reso DRAFT 11.13.12](#)
- 📎 [Exhibit B - Snow Removal Priority Map DRAFT 11.13.12](#)
- 📎 [Exhibit C - Snow Removal Priorities by Road Area 11.13.12](#)

History

Time	Who	Approval
10/28/2012 3:04 PM	County Administrative Office	Yes
11/6/2012 4:06 PM	County Counsel	Yes
10/29/2012 2:27 PM	Finance	Yes



MONO COUNTY DEPARTMENT OF PUBLIC WORKS

POST OFFICE BOX 457 • 74 NORTH SCHOOL STREET • BRIDGEPORT, CALIFORNIA 93517
760.932.5440 • Fax 760.932.5441 • monopw@mono.ca.gov • www.monocounty.ca.gov

Date: November 13, 2012

To: Honorable Chair and Members of the Board of Supervisors

From: Jeff Walters, Director of Road Operations/Fleet Services

Re: Review of Snow Removal Priorities

Recommended Action:

1. Receive staff report regarding current snow removal priorities and recommended changes to those priorities.
2. Provide direction to staff regarding modifications to current snow removal priorities.
3. Consider and potentially adopt Resolution No. R12-___, "A Resolution of the Mono County Board of Supervisors Re-Establishing Snow Removal Policies, Procedures, and Priorities for County-Maintained Roads."
4. Provide any desired direction to staff.

Fiscal Impact:

None.

Discussion:

In past years, the Board of Supervisors considered and approved policies, procedures, and priorities for the Department of Public Works' snow removal operations. These were incorporated into a document adopted by the County through Board resolutions. In addition, snow removal priorities for individual County-maintained streets are delineated on a map maintained by Public Works and referenced in the resolution.

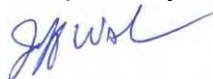
The resolution calls for an annual review of the program, which gives the Board an opportunity to add or delete streets, change priorities or procedures, and make any other changes it desires. It is Public Works' intention to review current snow removal protocol at the meeting, then either ask the Board to adopt the resolution as presented or bring changes resulting from the discussion back to the Board for approval at a later date.

Public Works confirmed with the Eastern Sierra Unified School District that they do not require any changes to their regular bus routes for this season. Public Works does not have any other changes to recommend to the policies, procedures, and priorities for the 2012-13 winter. However, the Board may wish to have some current practices expanded upon, clarified, or memorialized.

A copy of the draft Board resolution, which includes and references the Snow Removal Policies, Procedures, and Priorities as Exhibit A, is enclosed as Exhibit 1 to this staff report. A reduced copy of the revised Snow Removal Priority Map is included as Exhibit B to the resolution; full-size copies of the map and individual Road Area maps will be available at the meeting for Board reference. Exhibit C contains more detail by road area and community.

If you have any questions regarding this item, please contact me at 760.932.5459. We may also be contacted by email at jwalters@mono.ca.gov.

Respectfully submitted,



Jeff Walters
Director of Road Operations/Fleet Services

Attachment: Exhibit 1 – Draft Resolution (with Exhibit A)
Exhibit B – Snow Removal Priority Map
Exhibit C – Snow Removal Priorities by District



RESOLUTION NO. R12-

**A RESOLUTION OF THE MONO COUNTY BOARD OF SUPERVISORS
RE-ESTABLISHING SNOW REMOVAL POLICIES, PROCEDURES,
AND PRIORITIES FOR COUNTY-MAINTAINED ROADS**

WHEREAS, the Mono County Board of Supervisors recognizes and confirms that snow removal activities are a critical and essential element of the County Road System; and,

WHEREAS, the Mono County Department of Public Works has been delegated the responsibility of administering a safe and expeditious snow removal program for County-maintained roads; and,

WHEREAS, to effectuate such a program, the Board of Supervisors and the Department of Public Works find it necessary to develop snow removal policies, procedures, and priorities; and,

NOW, THEREFORE, BE IT RESOLVED that the Board of Supervisors hereby approves and adopts the “Mono County Snow Removal Policies, Procedures, and Priorities” for 2013 as specified in the attached Exhibit A and the “Snow Removal Priority Map,” attached hereto as Exhibit B.

BE IT FURTHER RESOLVED that the Board of Supervisors shall, at a minimum, review said program and map annually and make such modifications as they may deem appropriate.

APPROVED AND ADOPTED this 13th day of November, 2012, by the following vote of the Board of Supervisors, County of Mono:

AYES :

NOES :

ABSENT :

ABSTAIN :

Vikki Bauer, Chair
Mono County Board of Supervisors

Exhibit 1

ATTEST:

Approved as to Form:

Lynda Roberts
Clerk of the Board

Marshall Rudolph
County Counsel

DRAFT

EXHIBIT A

MONO COUNTY SNOW REMOVAL POLICIES, PROCEDURES, AND PRIORITIES

It is the desire and intention of Mono County to provide snow removal services on paved and gravel roads within the county and to provide access to year-round residences and businesses for emergency vehicles and the public. The amount of safety and convenience to motorists in the winter varies with a number of factors such as weather conditions, the amount of snowfall, and the availability of equipment and manpower. In recognition of the County's limited resources, residents may find that at times of heavy snowfall, wind drift, or avalanche, some roads may be impassable. For the purposes of this document, the County's maintained roads have been separated into five classifications reflecting their priority status for receiving snow removal resources and effort, based on amount of traffic, type of traffic, remoteness of location, elevation, and avalanche conditions. It is not the intention of this policy to create or impose any new mandatory duties upon the County or its staff.

It is within the authority of each Road District Supervisor to maintain the roads in their districts in a reasonably safe condition according to the County's standards. As such, hazardous conditions and public complaints will normally be addressed at this level. Where situations can not be resolved at this level or assistance is needed, the next step would be to contact the Road Operations Supervisor, followed by the Director of Road Operations/Fleet Services and then the Public Works Director.

SNOW REMOVAL PRIORITIES

The following section describes the County's adopted classification system for snow removal priorities on County-maintained roads. For snow removal class designations for individual County-maintained roads, refer to the most recent "Mono County Maintained Mileage" table and/or "Snow Removal Priority Map," both of which are on file at the Department of Public Works.

Class I

Class I roads are paved roads that are school bus routes and major collectors, which provide the main access for communities to the State Highway System, and County roads that serve as access to fire stations, paramedics, and the Mono County Sheriff's office. These roads will generally receive snow removal resources first and more frequently than subordinate road classifications, and it is the Department of Public Works' goal to keep them open continuously. While roads in this classification may close temporarily for public safety reasons, they will typically be the first to be re-opened. Safety devices, such as cinders and reflective tape on snow poles, may be used more extensively on these roads than for other road classifications.

Class II

Class II roads are primarily paved minor collector roads, which service communities and government offices, but carry less traffic than Class I roads and are not part of school bus routes. These are the second priority to receive snow removal resources. Snow removal

efforts and application of cinders are similar to that of Class I roads, but with less frequency of resources and safety devices.

Class III

Class III roads are residential streets, cul-de-sacs, and other paved and gravel community roads. As the third priority designation, these roads generally receive snow removal as soon as all of the Class I and Class II roads have been opened and cleared. Cinders are typically used only in hazardous situations or locations, as determined by the Road District Supervisor, such as on steep grades and at intersections. Snow accumulations of less than three inches may not be plowed except during normal working hours.

Class IV

Class IV roads are other paved and gravel roads that are forest roads, remote roads serving single residences, or high mountain roads with severe snow accumulations and avalanche potential. These roads generally receive snow removal only after all of the above classes of roads are plowed and cleared, typically after the storms have passed. Snow will be removed during daylight hours only (if at all), and overtime hours are typically not authorized. These roads are subject to temporary closure or seasonal closure at the discretion of the Director of Road Operations/Fleet Services or the Public Works Director, which may be the result of a series of heavy storms or presence of an avalanche hazard. Snow accumulations of six inches or less may not be plowed except during normal working hours. Cinders may be used only in hazardous situations or locations at the Road District Supervisor's discretion.

Class V

Class V roads are primarily other forest roads that are closed during the winter months. These roads receive no snow removal resources or are only opened in the spring after a substantial amount of snowpack has melted.

SNOW REMOVAL PROCEDURES

The following section describes procedures and practices for snow removal operations on County-maintained roads.

Plowing

Plowing usually begins when it appears that snowfall amounts are accumulating to the extent that use of the roads is being adversely affected and dangerous conditions may exist. A small amount of snow, such as 1-2 inches, may not warrant plowing other than during normal work hours. Road District Supervisors may monitor the amount of snowfall accumulations on roads within their jurisdictions. Snow depths of three inches or more may trigger the initiation of snow removal activities. Where existing or anticipated snowfall or high winds begin prior to 7:30 am, snow removal operations may start at or prior to 4:30 am. Starting at 4:30 am may also be required where clean-up operations have not yet been completed from a prior storm. Should questions occur, the Road District Supervisors will coordinate their snow removal operations with the Road Operations Supervisor.

When conditions require continuous plowing to keep roads open, 16-hour shifts are considered the maximum for any operator. To reduce stress and fatigue during these types of extended work shifts, a 30-minute dinner break may be implemented along with normal lunch and coffee breaks.

At the direction of the Road Operations Supervisor, Director of Road Operations/Fleet Services, or Public Works Director, deployment of personnel to districts other than their permanent work station may be necessary to provide assistance with snow removal operations where it is most needed (as determined by the County at its discretion), during extreme conditions, or when a shortage of personnel exists. Travel to and from an area other than the operator's normal reporting district is considered hours worked, and a County vehicle will be supplied. In some circumstances, a motel room and meals may be furnished.

Cinders

The purpose for placing cinders on County-maintained roads is to provide a possible additional measure of safety during very icy and/or slippery conditions, as opposed to providing convenience for motorists. Motorists should not be encouraged to rely on cinders on all roads, especially when conditions warrant the use of tire chains and/or snow tires.

The following are some examples of situations or locations where cinders should be used, which are done at the County's discretion:

- Steep hills, curves, or intersections with hard-packed snow or ice when cars can negotiate other areas without chains.
- Roads that are bare for the most part but have patches of snow or ice that may not be expected by motorists.
- Isolated patches of snow or ice that could melt faster with the application of cinders.

Most of these situations would occur after snow storms have passed and snow removal has been completed. Normally, the application of cinders should not be necessary during storms when roads are covered with fresh snow and driving conditions are more uniform and obvious to motorists, and when the use of tire chains is expected.

Snow Stakes

Snow stakes of various colors may be placed along road shoulders to provide visible guides for operators of snow removal equipment. Although they provide some delineation for motorists, the stakes are not intended to be used as traffic delineators.

Steel "U" channel posts are typically used for snow stakes. On certain residential streets, "L"-type guide posts and fiberglass whips may be used. The length of snow stakes may vary from 6 feet to 10 feet. Stakes should be placed between 2 feet to 4 feet off the edge of the pavement or directly behind curbs. Snow poles are normally placed at intersections and at a distance of 100 feet to 250 feet apart. Snow poles may be painted yellow, safety orange or another color.

Reflective Tape

Snow poles (for Class I and Class II roads): on the side of the pole facing traffic, a 3" x 3" strip of colored reflective tape (typically blue or white) is to be placed five feet above the pavement and at the top of the post. On the side facing away from traffic, one strip is to be placed at the top of the post.

Fiberglass whips: on each whip, a 6" strip of colored reflective tape (typically blue or white) is to be wrapped around the top of the whip.

Warning Signs

The intention and purpose of warning signs is to advise motorists of unexpected conditions, when the County determines at its discretion to provide such warnings. In the winter these conditions would normally be ice and, on occasion, suspended snow removal operations.

To warn motorists of icy conditions, permanent signs reading "ROAD MAY BE ICY" may be placed on roads where slippery conditions may not be anticipated at all times. These signs should be placed (if at all) at each end of the road and at critical intermediate locations along the way. Signs should be placed 8 to 12 feet from edge of pavement. Portable temporary signs reading "ICY" may also be utilized, at the County's discretion, where an isolated extreme icy condition exists that is not addressed by permanent signs.

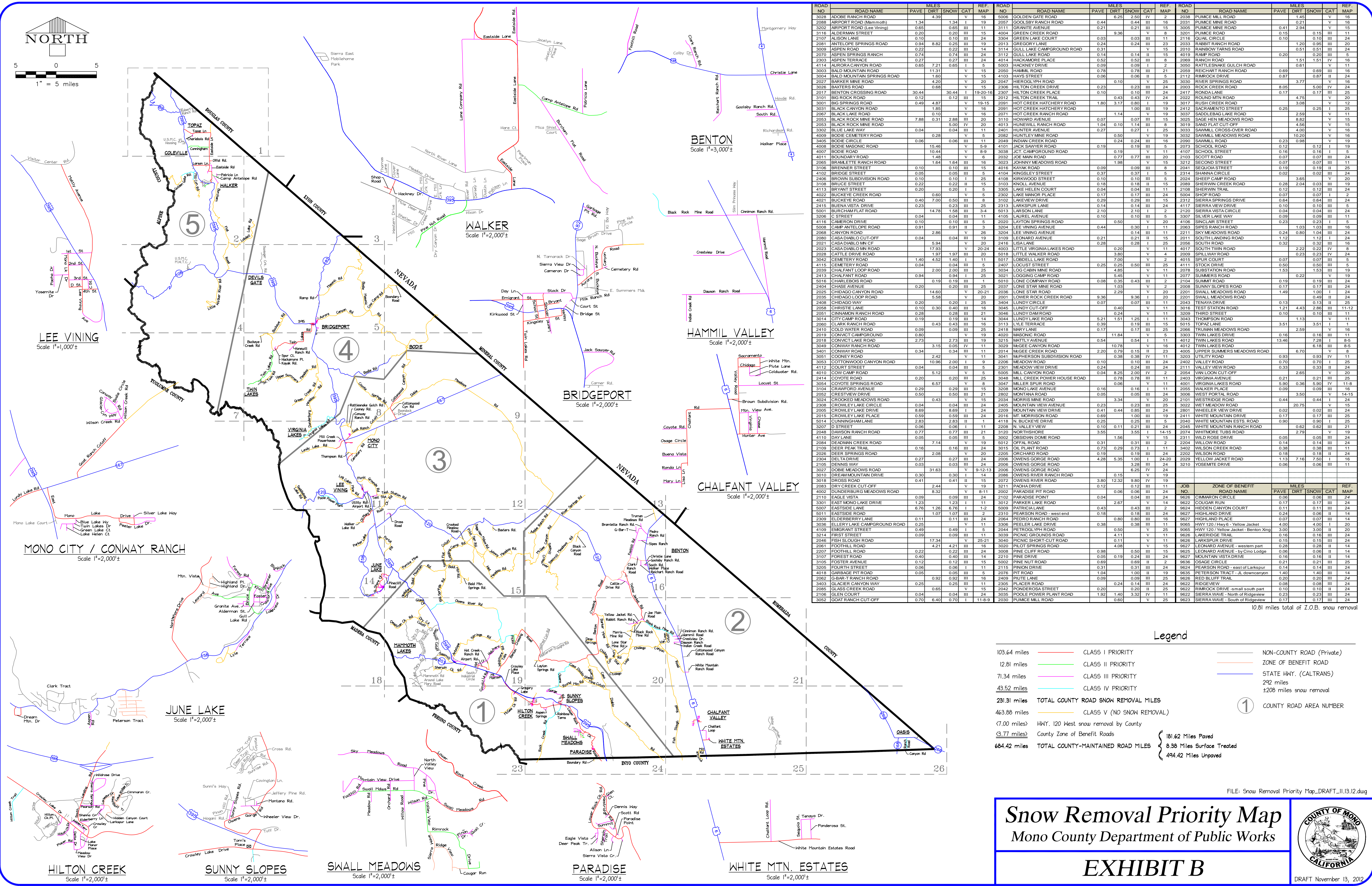
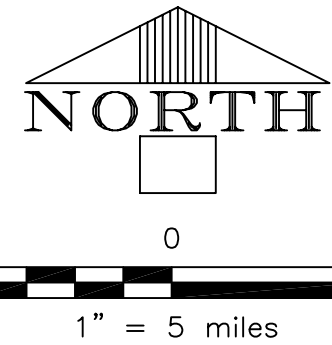
Permanent turn-able or temporary portable signs reading "SNOW REMOVAL SUSPENDED" may be used, at the County's discretion, at locations where plowing activities have been ceased due to the posting of severe avalanche danger advisory by the Sheriff's Department or the presence of other conditions where public and operator safety warrants the suspension of snow removal operations.

Permanent signs reading "SNOW NOT REMOVED BEYOND THIS POINT" may be used, at the County's discretion, where only a portion of the road is plowed. These signs *should* be placed 8 to 12 feet from the edge of pavement, adjacent to the end of the plowed section of roadway.

Permanent turn-able or temporary portable signs reading "ROAD CLOSED" may be used, at the County's discretion, when snow, avalanche, wind, or flooding conditions warrant the closure of a road or portion thereof, for the safety of the public or County employees.

Emergency Road Closures

In emergency situations, the Director of Road Operations/Fleet Services, Public Works Director, and/or the Mono County Sheriff may find it necessary to close County-maintained roads. As soon as reasonably practicable following a determination by the Director of Road Operations/Fleet Services or Public Works Director that a road or roads warrant closure, notification of the road closure may be given to the Mono County Sheriff and to the California Highway Patrol.



ROAD NO.	ROAD NAME	MILES	PAVE	DIRT	SNOW	CAT	REF. MAP	ROAD NO.	ROAD NAME	MILES	PAVE	DIRT	SNOW	CAT	REF. MAP	ROAD NO.	ROAD NAME	MILES	PAVE	DIRT	SNOW	CAT	REF. MAP		
3028	ADORE RANCH ROAD	1.34	4.39				V 16	5006	GOLDEN GATE ROAD	6.25	2.50				IV 2	2038	PUMICE MILL ROAD	1.45					V 16		
2088	AIRPORT ROAD (Mammoth)	1.34					I 19	2057	GOCKSBY RANCH ROAD	0.44	0.44				III 16	3031	PUMICE MINE ROAD	0.21					V 16		
3202	AIRPORT ROAD (Lee Vining)	0.65					III 11	3111	GRANITE AVENUE	0.21	0.21				III 15	3005	PUMICE MINE ROAD	0.41	2.94				V 15		
3116	ALDERMAN STREET	0.20					III 15	4004	GREEN CREEK ROAD	0.21	0.21				V 8	3201	PUMICE ROAD	0.16					0.15	III 11	
2107	ALISON LANE	0.10					III 24	3304	GREEN LAKE COURT	0.03	0.03				III 11	2118	QUAIL CIRCLE	0.10					0.10	III 24	
2081	ANTELOPE SPRINGS ROAD	0.96	8.82				III 19	2013	GREGORY LANE	0.24	0.24				III 23	2033	RABBIT RANCH ROAD	1.20	0.95				0.35	III 20	
3009	ASPEN ROAD	0.22					III 14	3114	GULL LAKE CAMPGROUND ROAD	0.31					V 15	2010	RAINBOW TARNIS ROAD	0.51	0.51				0.31	III 24	
2070	ASPEN SPRINGS RANCH	0.74					III 24	3112	GULL LAKE ROAD	0.14	0.14				II 15	4019	RAMP ROAD	0.20					0.20	III 5	
2303	ASPEN TERRACE	0.27					III 24	2304	HACKADEE PLACE	0.53					III 8	2089	RANCH ROAD	1.51	1.51				0.81	IV 16	
4114	AURORA CANYON ROAD	0.65	7.21	0.65			I 1	5003	HACKNEY DRIVE	0.09	0.09				I 2	3050	RATTLESNAKE GULCH ROAD	0.61					0.61	V 11	
3003	BALD MOUNTAIN ROAD	11.31					V 15	2050	HAMMILL ROAD	0.78	0.78				III 21	2059	REICHART RANCH ROAD	0.69	0.69				0.69	III 16	
3004	BALD MOUNTAIN SPRINGS ROAD	1.60					V 15	4103	HAYS STREET	0.06	0.06				II 5	2112	RIMROCK DRIVE	0.87	0.87				0.87	II 24	
2027	BARKER MINE ROAD	4.20					III 19	2047	HERCULES ROAD	0.10	0.10				V 25	3030	RIVER SPRINGS ROAD	3.77					3.77	V 16	
3026	BAXTERS ROAD	0.68					V 15	2306	HILTON CREEK DRIVE	0.23	0.23				III 24	2003	ROCK CREEK ROAD	8.05					5.00	IV 24	
2017	BENTON CROSSING ROAD	30.44	30.44				I 19-20-16	2307	HILTON CREEK PLACE	0.10	0.10				III 24	2417	RONDA LANE	0.17	0.17				0.17	III 25	
3101	BIG ROCK ROAD	0.12					III 15	2012	HILTON CREEK TRAIL	0.43	0.43				IV 24	2022	ROUND MTR ROAD	0.17	0.17				0.17	III 25	
3001	BIG SPRINGS ROAD	0.49	4.87				V 19-15	2091	HOT CREEK HATCHERY ROAD	1.80	3.17	0.80			I 19	3017	RUSH CREEK ROAD	3.08					3.08	V 12	
3031	BLACK CANYON ROAD	1.85					V 16	2091	HOT CREEK HATCHERY ROAD	1.00	1.00				III 19	2412	SACRAMENTO STREET	0.25	0.25				0.25	I 25	
2067	BLACK LAKE ROAD	0.10					V 16	2071	HOT CREEK RANCH ROAD	0.14	0.14				V 19	3037	SADDLEBAG LAKE ROAD	2.59					2.59	V 11	
2053	BLACK ROCK MINE ROAD	0.96	0.31	2.88			III 19	2032	JOE MAIN ROAD	0.07	0.07				III 15	3025	SAGE HEN MEADOWS ROAD	8.82					8.82	V 15	
2053	BLACK ROCK MINE ROAD	5.00					IV 20	4013	HUNEWILL RANCH ROAD	1.04	0.10	1.14			III 8	3019	SAND FLAT CUT-OFF	4.56					4.56	V 15	
3302	BLUE LAKE WAY	0.04					0.04	III 21	2401	HUNTER AVENUE	0.27	0.27			I 25	3033	SAWMILL CROSS-OVER ROAD	4.00					4.00	V 16	
4008	BODIE CEMETERY ROAD	0.06	0.28				V 5	2082	HUNTLEY MINE ROAD	0.24	0.24				V 19	3032	SAWMILL MEADOWS ROAD	10.20					10.20	V 16	
3405	BODIE CIRCLE	0.06	0.06				III 11	2049	INDIAN CANYON ROAD	0.24	0.24				III 16	2096	SAWMILL ROAD	0.23	0.98				0.12	I 19	
4008	BODIE MASONIC ROAD	15.46					V 5-9	4101	JACK SAWYER ROAD	0.19	0.19				III 5	2073	SCHOOL ROAD	0.12	0.12				0.12	I 19	
4007	BODIE ROAD	10.44					V 8-9	3038	JCT. CAMPGROUND ROAD	0.19	0.19				V 11	4107	SCHOOL STREET	0.16	0.16				0.16	I 5	
4011	BOUNDARY ROAD	1.48					V 5	2032	JOE MAIN ROAD	0.07	0.07				III 27	3030	SILVER LAKE WAY	0.09	0.09				0.09	III 24	
2065	BRAMLETTE RANCH ROAD	1.64	1.64				III 16	3023	JOHNNY MEADOWS ROAD	1.98					V 15	3212	SECOND STREET	0.07	0.07				0.07	III 11	
3106	BRENNER STREET	0.10					III 15	4016	KAYAK ROAD	0.09	0.09				III 8	2041	SEQUOIA STREET	0.19	0.19				0.19	II 25	
4102	BRIDGE STREET	0.05					III 5	4104	KINGSLEY STREET	0.37	0.37				III 5	2314	SHANNA CIRCLE	0.02	0.02				0.02	III 24	
2406	BROWN SUBDIVISION ROAD	0.10					III 25	4108	KIRKWOOD STREET	0.18	0.18				V 20	2084	SHEEP CAMP ROAD	0.28	3.65				0.28	III 19	
3108	BRUCE STREET	0.22					III 15	3103	KNOLL AVENUE	0.18	0.18				III 15	2089	SHERWIN CREEK ROAD	2.04	2.04				0.03	III 24	
4113	BRYANT STREET	0.20					III 5	3305	LAKE HELEN COURT	0.04	0.04				III 11	2108	SHERWIN TRAIL	0.12	0.12				0.12	III 24	
4022	BUCKEYE CREEK ROAD	0.60					V 5	2302	LAKE MAJOR PLACE	0.17	0.17				V 24	3004	SHOCK ROAD	0.07	0.07				0.07	I 2	
4021	BUCKEYE ROAD	0.40	7.00	0.50			III 8	3102	LAKEVIEW DRIVE	0.29	0.29				III 15	2312	SIERRA SPRINGS DRIVE	0.64	0.64				0.64	III 24	
2415	BUENA VISTA DRIVE	0.23					III 25	2313	LARKSPUR LANE	0.14	0.14				III 24	4117	SIERRA VIEW DRIVE	0.10	0.10				0.10	III 5	
5001	BUTCHERFLAT ROAD	1.58					III 34	5013	LARSON LANE	2.10	2.10				II 2	2120	SIERRA VISTA CIRCLE	0.04	0.04				0.04	III 24	
2053	C STREET	0.04					III 20	4105	LAUREL AVENUE	0.10	0.10				III 10	3307	SILVER LAKE WAY	0.09	0.09				0.09	III 24	
4116	CAMERON DRIVE	0.10					III 10	2020	LAYTON SPRINGS ROAD	0.10	0.50				V 20	4106	SINGULAR STREET	0.23	0.23				0.23	I 5	
5008	CAMP ANTELOPE ROAD	0.91					III 3	3204	LEE VINING AVENUE	0.44	0.30				I 11	2063	SIPES RANCH ROAD	1.03	1.03				1.03	III 16	
2088	CANYON ROAD	2.86					V 26	3204	LEE VINING AVENUE	0.44	0.30				I 11	2211	SKY MEADOWS ROAD	0.24	0.80				1.04	III 24	
2280	CASA DIABLO CUT-OFF	0.04					III 19	3109	LEONARD AVENUE	0.21	0.21				II 15	2011	SOUTH LANDING ROAD	1.12	1.12				1.12	I 24	
2021	CASA DIABLO MIN. CF	5.94					V 20	2416	LISA LANE	0.28	0.28				I 25	2056	SOUTH ROAD	0.32	0.32				0.32	III 16	
2023	CASA DIABLO MIN. ROAD	17.83					III 20-24	4003	LITTLE VILLAGES ROAD	0.20	0.20				V 11	4017	SOUTH TWIN ROAD	2.22	0.22				0.22	IV 8	
2028	CATTLE DRIVE ROAD	1.97	1.97				III 11	5018	LITTLE WALKER ROAD	3.80					V 4	2009	SPURWAY ROAD	0.23	0.23				0.23	IV 8	
3042	CEMETERY ROAD	1.40	4.52	1.40			I 11	5017	LOBDELL LAKE ROAD	7.90					V 2	4015	SPUR COURT	0.07	0.07				0.07	0.07	III 5
4115	CEMETERY ROAD	0.04					III 04	5	2407	LOCUST STREET	0.25	0.25	0.50			III 25	4111	STOCK DRIVE	0.50	0.50				0.50	III 5
2039	CHALFANT CANYON ROAD	2.00					III 25	3034	LOCKWOOD MINE ROAD	4.85					V 11	2079	SUBSTATION ROAD	1.53	1.53				1.53	III 19	
2413	CHALFANT ROAD	0.94	0.94				I 25	3021	LOGGING CAMP ROAD	5.45					V 11	2077	SUMMERS ROAD	0.22	0.22				0.22	V 19	
5016	CHARLEBOIS ROAD	0.19	0.19				III 1	5010	LONE COMPANY ROAD	0.08	0.35	0.43			III 2	2104	SUMMIT ROAD	0.19	0.19				0.19	III 24	
2404	CHASE AVENUE	0.20					III 25	2037	LONE STAR MINE ROAD	1.03					V 2	2008	SUNNY SLOPES ROAD	0.17	0.17				0.17	III 24	
2025	CHIDAGO CANYON ROAD	14.60					V 26	2036	LONE STAR MINE ROAD	2.29	2.29				V 20	2201	SWALL MEADOWS ROAD	1.49	1.49				1.49	III 24	
2035	CHIDAGO LOOP ROAD	5.58					V 20	2001	LOWER ROCK CREEK ROAD	9.36					I 20	2201	SWALL MEADOWS ROAD	0.19	0.19				0.19	III 24	
2408	CHIDAGO WAY	0.20					III 25	3404	LUNDY CIRCLE	0.07	0.07				III 11	2043	TENAWA DRIVE	0.13	0.13				0.13	III 25	
2058	CHRISTIE LANE	0.10	0.30				III 16	3405	LUNDY CUT-OFF	0.40					V 11	2016	TEST STATION ROAD	1.21	2.86				1.12	III 11	
2051	CINNAMON RANCH ROAD	0.28	0.28				III 21	3046	LUNDY DAM ROAD	0.24					V 11	3209	THIRD STREET	0.10	0.10				0.10	III 24	
3014	CITY CAMP ROAD	0.19	0.19				III 14	3044	LUNDY LAKE ROAD	5.21	1.51	1.25			I 11	3043	THOMPSON ROAD	1.13	1.13				1.13	V 11	
2060	CLARK RANCH ROAD	0.43	0.43				III 16	3113	LYLE TERRACE	0.39	0.39	0.19			III 15	5015	TOPAZ LAKE	3.51	3.51				3.51	I 16	
2410	COLD WATER ROAD	0.09	0.09				III 25	2418	MARY LANE	0.17	0.17				III 25	2086	TRUMAN MEADOWS ROAD	2.59	2.59				2.59	V 16	
2019	CONVICT CAMPGROUND	0.80					V 19	4002	MASONIC ROAD	11.84					V 5	3303	TWIN LAKES DRIVE	0.16	0.16				0.16	III 11	
2018	CONVICT LAKE ROAD	2.73	2.73				III 19	3215	MATLY AVENUE	0.54	0.54				I 11	4012	TWIN LAKES ROAD	13.46	7.28				11.8	I 8-5	
3024	CONWAY RANCH ROAD	3.15					III 11	3029	MAGEE CANYON ROAD	10.78					III 6	4012	TWIN LAKES ROAD	16	6.18				6.18	III 8-5	
3401	CONWAY ROAD	0.34	0.34				III 11	2014	MAGEE CREEK ROAD	0.20	0.79	0.15			II 23	4005	UPPER SUMMERS MEADOWS ROAD	6.70	1.09				0.09	III 16	
3051	COONEY ROAD	2.42					V 11	3041	MCPHERSON SUBDIVISION ROAD	0.38	0.38				IV 11	3203	UTILITY ROAD	0.93	0.93				0.93	IV 11	
3053	COTTONTWOOD CANYON ROAD	10.96	2.00				I 9	2206	MEADOW ROAD	0.10	0.10				III 24	2402	VALLEY ROAD	0.70	0.70				0.70	I 25	
4112	COURT STREET	0.04	0.04				III 2	2301	MEADOW VIEW AVENUE	0.24	0.24				III 2	2111	VALLEY VIEW ROAD	0.33	0.33				0.33	III 24	
4010	COW CAMP ROAD	5.12					V 5	5005	MILL CANYON ROAD	0.04	8.25	2.00			IV 2	2054	VAN LOON CUT-OFF	3.33	2.65				2.65	V	

Exhibit C

Road Area 1 Snow Removal Road Priorities						
Road Number	Road Name	Paved	Dirt	Snow	Class	Map Reference
Crowley						
2005	CROWLEY LAKE DRIVE	8.69		8.50	I	24
2006	OWENS GORGE ROAD	4.28		1.00	I	24-20
2011	SOUTH LANDING ROAD	1.12		1.08	I	24
2017	BENTON CROSSING ROAD	30.44		30.44	II	19-20-16
2014	McGEE CREEK ROAD	2.20	0.79	0.20	II	23
2076	PIT ROAD	1.04		1.04	II	19
2070	ASPEN SPRINGS RANCH	0.74		0.74	III	24
2303	ASPEN TERRACE	0.27		0.27	III	24
2018	CONVICT LAKE ROAD	2.73		2.50	III	19
2308	CROWLEY LAKE CIRCLE	0.04		0.04	III	24
2015	CROWLEY LAKE PLACE	0.59		0.59	III	24
2309	ELDERBERRY LANE	0.11		0.11	III	24
2013	GREGORY LANE	0.24		0.24	III	23
2313	LARKSPUR LANE	0.14		0.14	III	24
2310	PEARSON ROAD (west end)	0.18		0.18	III	24
2314	SHANNA CIRCLE	0.02		0.02	III	24
2312	SIERRA SPRINGS DRIVE	0.64		0.64	III	24
2120	SIERRA VISTA CIRCLE	0.04		0.04	III	24
2311	WILD ROSE DRIVE	0.05		0.05	III	24
3001	BIG SPRINGS ROAD	0.49	4.87	0.09	IV	19-15
2072	OWENS RIVER ROAD	3.80	12.32	11.00	IV	19
2003	ROCK CREEK ROAD	8.05		6.00	IV	24
3003	BALD MOUNTAIN ROAD		11.31		V	15
3004	BALD MOUNTAIN SPRINGS ROAD		1.60		V	15
2019	CONVICT CAMPGROUND	0.80			V	19
2084	DEADMAN CREEK ROAD		7.14		V	19
2083	DRY CREEK CUT-OFF		2.44		V	19
2085	GLASS CREEK ROAD		0.65		V	15
2071	HOT CREEK RANCH ROAD		1.14		V	19
2082	HUNTLEY MINE ROAD		0.50		V	19
2020	LAYTON SPRINGS ROAD		0.50		V	20
3002	OBSIDIAN DOME ROAD		1.56		V	15
2009	SPILLWAY ROAD		0.23		V	24
2077	SUMMERS ROAD		0.22		V	19
2074	WHITMORE TUBS ROAD		2.79		V	19
ZOB	PEARSON ROAD (east of Larkspur)	0.14		0.14	III	24
ZOB	RED BLUFF TRAIL	0.20		0.20	III	24

Exhibit C

Road Area 1 Snow Removal Road Priorities						
Road Number	Road Name	Paved	Dirt	Snow	Class	Map Reference
ZOB	LARKSPUR DRIVE	0.15		0.15	III	24
ZOB	CIMMARON CIRCLE	0.06		0.06	III	24
ZOB	LAKERIDGE TRAIL	0.16		0.16	III	24
ZOB	HIDDEN CANYON COURT	0.11		0.11	III	24
ZOB	LAKE RIDGE TRAIL	0.16		0.16	III	24
Hilton Creek						
2070	ASPEN SPRINGS RANCH	0.74		0.74	III	24
2304	DELTA DRIVE	0.27		0.27	III	24
2306	HILTON CREEK DRIVE	0.23		0.23	III	24
2307	HILTON CREEK PLACE	0.10		0.10	III	24
2302	LAKE MANOR PLACE	0.17		0.17	III	24
2301	MEADOW VIEW DRIVE	0.24		0.24	III	24
2305	PLACER ROAD	0.04	0.20	0.14	III	24
2010	RAINBOW TARNs ROAD		0.51	0.51	III	24
2012	HILTON CREEK TRAIL		0.43		V	24
Hot Creek						
2091	HOT CREEK HATCHERY ROAD	1.80	3.17	0.80	I	19
2073	SCHOOL ROAD	0.12		0.12	I	19
2088	AIRPORT ROAD	1.34		1.34	II	19
2081	ANTELOPE SPRINGS ROAD	0.94	8.82	0.25	III	19
2080	CASA DIABLO CUT-OFF	0.04		0.04	III	19
2016	MT. MORRISON ROAD	0.69		1.00	III	19
2089	SHERWIN CREEK ROAD	0.28	2.04	0.03	III	19
2078	SUBSTATION ROAD	1.53		1.53	III	19
Paradise						
2001	LOWER ROCK CREEK ROAD	9.36		9.36	I	20
2101	WESTRIGE ROAD	0.44		0.44	I	24
2107	ALISON LANE	0.10		0.10	III	24
2109	DEER PEAK TRAIL	0.16		0.16	III	24
2105	DENNIS WAY	0.03		0.03	III	24
2110	EAGLE VISTA	0.09		0.09	III	24
2106	GLEN COURT	0.04		0.04	III	24
2002	PARADISE PIT ROAD		0.06	0.06	III	24
2103	SCOTT ROAD	0.07		0.07	III	24
2108	SHERWIN TRAIL	0.12		0.12	III	24
2102	PARADISE POINT	0.04		0.04	III	24
2104	SUMMIT ROAD	0.19		0.19	III	24

Exhibit C

Road Area 1 Snow Removal Road Priorities						
Road Number	Road Name	Paved	Dirt	Snow	Class	Map Reference
Sunny Slopes						
2802	MONTANA ROAD	0.05		0.05	III	24
2008	SUNNY SLOPE ROAD	0.17		0.17	III	24
2801	WHEELER VIEW DRIVE	0.02		0.02	III	24
2021	CASA DIABLO MN CF		5.94		V	20
2023	CASA DIABLO MN ROAD		17.93		V	20-24
2006	OWENS GORGE ROAD		5.35		V	24
2086	OWENS RIVER RANCH ROAD		0.15		V	19
2022	ROUND MTN ROAD		4.75		V	20
2090	SAWMILL ROAD	0.23	0.98		V	19
2024	SHEEP CAMP ROAD		3.65		V	20
Swall Meadows						
2001	LOWER ROCK CREEK ROAD	9.36		9.36	I	20
2112	RIMROCK DRIVE	0.87		0.87	II	24
2201	SWALL MEADOWS ROAD			0.49	II	24
2111	VALLEY VIEW ROAD	0.33		0.33	II	24
2202	WILSON ROAD	0.18		0.18	II	24
2207	FOOTHILL ROAD	0.22		0.22	III	24
2206	MEADOW ROAD	0.10		0.10	III	24
2209	MOUNTAIN VIEW DRIVE	0.41	0.44	0.85	III	24
2208	N. VALLEY VIEW DRIVE	0.10	0.11	0.21	III	24
2205	ORCHARD ROAD	0.19		0.19	III	24
2210	PINE DRIVE	0.05	0.19	0.24	III	24
2115	PINION DRIVE	0.31		0.31	III	24
2116	QUAIL CIRCLE	0.10		0.10	III	24
2211	SKY MEADOWS ROAD	0.24	0.80	1.04	III	24
2204	WILLOW ROAD	0.14		0.14	III	24
ZOB	SIERRA WAVE (South of Ridgeview)	0.17		0.17	III	24
ZOB	SIERRA WAVE (North of Ridgeview)	0.23		0.23	III	24
ZOB	RIMROCK DRIVE (small south part)	0.10		0.10	II	24
ZOB	COUGAR RUN	0.17		0.17	III	24
ZOB	RIDGE VIEW	0.08		0.08	III	24

Exhibit C

Road Area 2 Snow Removal Road Priorities

Road Number	Road Name	Paved	Dirt	Snow	Class	Map Reference
Benton						
2017	BENTON CROSSING ROAD	30.44		30.44	I	19-20-16
2065	BRAMLETTE RANCH ROAD		1.64	1.64	III	16
2058	CHRISTIE LANE	0.10	0.30	0.40	III	16
2060	CLARK RANCH ROAD		0.43	0.43	III	16
2048	DAWSON RANCH ROAD	0.77		0.77	III	21
2061	FOOTHILL ROAD		4.21	4.21	III	16
2062	G-BAR-T RANCH ROAD		0.92	0.92	III	16
2057	GOOLSBY RANCH ROAD	0.44		0.44	III	16
2049	INDIAN CREEK ROAD		0.24	0.24	III	16
2064	PEDRO RANCH ROAD		0.80	0.80	III	16
2059	REICHART RANCH ROAD	0.69		0.69	III	16
2063	SIPES RANCH ROAD		1.03	1.03	III	16
2056	SOUTH ROAD	0.32		0.32	III	16
2055	WALKER PLACE	0.09		0.09	III	16
2029	YELLOW JACKET ROAD	1.13	7.16	7.12	I	16
Chalfant						
2040	WHITE MOUNTAIN ESTS. ROAD	0.90		0.90	I	25
2402	VALLEY ROAD	0.70		0.70	I	25
2406	BROWN SUBDIVISION ROAD	0.10		0.10	I	25
2408	CHIDAGO WAY	0.20		0.20	I	25
2412	SACRAMENTO STREET	0.25		0.25	I	25
2413	CHALFANT ROAD	0.94		0.94	I	25
2416	LISA LANE	0.28		0.28	I	25
2041	SEQUOIA STREET	0.19		0.19	II	25
2042	PONDEROSA STREET	0.20		0.20	II	25
2043	TENAYA DRIVE	0.13		0.13	II	25
2039	CHALFANT LOOP ROAD		2.00	2.00	III	25
2045	WHITE MOUNTAIN RANCH ROAD		0.62	0.50	III	21
2401	HUNTER AVENUE	0.27		0.27	I	25
2403	VIRGINIA AVENUE	0.21		0.21	III	25
2404	CHASE AVENUE	0.20		0.20	III	25
2405	MOUNTAIN VIEW AVENUE	0.23		0.23	III	24
2407	LOCUST STREET	0.25	0.25	0.50	III	25
2409	PIUTE LANE	0.09		0.09	III	25

Exhibit C

Road Area 2 Snow Removal Road Priorities

Road Number	Road Name	Paved	Dirt	Snow	Class	Map Reference
2410	COLD WATER ROAD	0.09		0.09	III	25
2411	WHITE MOUNTAIN DRIVE	0.17		0.17	III	25
2414	COYOTE ROAD	0.20		0.20	III	25
2415	BUENA VISTA DRIVE	0.23		0.23	III	25
2417	RONDA LANE	0.17		0.17	III	25
2418	MARY LANE	0.17		0.17	III	25
ZOB	OSAGE CIR	0.21		0.21	III	25
2046	FISH SLOUGH ROAD		17.34		V	25-21
Hammil Valley						
2053	BLACK ROCK MINE ROAD	7.88	0.31	0.30	III	20
2051	CINNAMON RANCH ROAD	0.28		0.28	III	21
2052	CRESTVIEW DRIVE	0.50		0.50	III	21
2050	HAMMIL ROAD	0.78		0.78	III	21
2053	BLACKROCK MINE RD.			7.12	IV	20
2028	CATTLE DRIVE ROAD		1.97	1.97	IV	20
2032	JOE MAIN ROAD		0.77	0.77	IV	20
2033	RABBIT RANCH ROAD		1.20	0.95	IV	20
3028	ADOBE RANCH ROAD		4.39	0.00	V	16
2027	BARKER MINE ROAD		4.20		V	20
3031	BLACK CANYON ROAD		1.85		V	16
2067	BLACK LAKE ROAD		0.10		V	16
2068	CANYON ROAD		2.86		V	26
2025	CHIDAGO CANYON ROAD		14.60		V	20-21
2035	CHIDAGO LOOP ROAD		5.58		V	20
2026	DEER SPRINGS ROAD		2.08		V	20
2047	HIEROGLYPH ROAD		0.10		V	25
2037	LONE STAR MINE ROAD		1.03		V	20
2036	LONE STAR ROAD		2.29		V	20
3029	McGEE CANYON ROAD		10.78		V	16
2034	MORRIS MINE ROAD		3.34		V	20
2044	PETROGLYPH ROAD		0.50		V	25
2030	PUMICE MILL ROAD		0.60		V	25
2038	PUMICE MILL ROAD		1.45		V	16
2031	PUMICE MINE ROAD		0.21		V	16
2069	RANCH ROAD		1.51		V	16
3030	RIVER SPRINGS ROAD		3.77		V	16
3033	SAWMILL CROSS-OVER ROAD		4.00		V	16

Exhibit C

Road Area 2 Snow Removal Road Priorities

Road Number	Road Name	Paved	Dirt	Snow	Class	Map Reference
3032	SAWMILL MEADOWS ROAD		10.20		V	16
2066	TRUMAN MEADOWS ROAD		2.59		V	16
2054	VAN LOON CUT-OFF		2.65		V	20
3022	WET MEADOW ROAD		20.75		V	15

Exhibit C

Road Area 3 Snow Removal Road Priorities						
Road Number	Road Name	Paved	Dirt	Snow	Class	Map Reference
Conway Summit						
3052	GOAT RANCH CUT-OFF		10.96	2.00	I	9
3403	GLACIER CANYON WAY	0.25		0.25	III	11
3402	WILSON CREEK ROAD	0.38		0.38	III	11
3405	BODIE CIRCLE	0.06			V	11
3027	DOBIE MEADOWS ROAD		31.63		V	9-12-13
3404	LUNDY CIRCLE	0.07			V	11
June Lake						
3010	DREAM MOUNTAIN DRIVE	0.30		0.30	I	14
3120	NORTHSHORE	3.55		3.55	I	14-15
3108	BRUCE STREET	0.22		0.22	II	14
3112	GULL LAKE ROAD	0.14		0.14	II	15
3103	KNOLL AVENUE	0.18		0.18	II	14
3109	LEONARD AVENUE	0.21		0.21	II	14
3116	ALDERMAN STREET	0.20		0.20	III	15
3009	ASPEN ROAD	0.22		0.22	III	14
3106	BRENNER STREET	0.10		0.10	III	15
3104	CRAWFORD AVENUE	0.29		0.29	III	15
3107	FOREST ROAD	0.40		0.40	III	14
3106	FOSTER AVENUE	0.12		0.12	III	15
3107	GRANITE AVENUE	0.21		0.21	III	15
3111	HOWARD AVENUE	0.07		0.07	III	15
3113	LAKEVIEW DRIVE	0.29		0.29	III	15
3116	LYLE TERRACE	0.39		0.19	III	15
3119	PINE CLIFF ROAD	0.98		0.50	III	15
3036	CITY CAMP ROAD	0.19			V	14
3037	ELLERY LAKE CAMPGROUND ROAD	0.25			V	11
3012	GULL LAKE CAMPGROUND ROAD	0.31			V	15
3014	PARKER LAKE ROAD		2.67		V	14
ZOB	PETERSON TRACT (June Lake downcanyon)	1.40		1.40	III	14
ZOB	MOUNTAIN VISTA DRIVE	0.16		0.16	II	14
ZOB	LEONARD AVENUE - western part	0.28		0.28	II	14
ZOB	LEONARD AVENUE - By Cino Lodge	0.06		0.06	II	14
ZOB	HIGHLAND DRIVE	0.24		0.24	II	14
ZOB	HIGHLAND PLACE	0.07		0.07	III	14
Lee Vining						
3016	FOURTH STREET	0.06		0.06	I	11
3044	LEE VINING AVENUE	0.44		0.30	I	11
3048	OIL PLANT ROAD	0.73	0.29	0.73	I	11
3053	DROSS ROAD	0.41		0.41	II	15
3101	AIRPORT ROAD	0.65		0.65	III	11
3015	BIG ROCK ROAD	0.12		0.12	III	15

Exhibit C

Road Area 3 Snow Removal Road Priorities

Road Number	Road Name	Paved	Dirt	Snow	Class	Map Reference
3204	C STREET	0.04		0.04	III	11
3205	COTTONWOOD CANYON ROAD		10.96		III	9
3018	D STREET	0.06		0.06	III	11
3201	FIRST STREET	0.09		0.09	III	11
3202	LEE VINING AVENUE			0.14	III	11
3204	LUNDY LAKE ROAD	5.21	1.51	1.25	I	11
3206	MATTLY AVENUE	0.54		0.54	I	11
3207	MILL CREEK POWER HOUSE ROAD		0.78	0.78	III	11
3208	MONO LAKE AVENUE	0.16		0.16	I	11
3209	PAOHA DRIVE	0.12		0.12	III	11
3210	PUMICE ROAD	0.15		0.15	III	11
3211	SECOND STREET	0.07		0.07	III	11
3212	TEST STATION ROAD	1.21	4.43	1.21	III	11-12
3214	THIRD STREET	0.10		0.10	III	11
3215	YOSEMITE DRIVE	0.06		0.06	III	11
3305	CONWAY ROAD	0.34		0.04	III	11
3401	POOLE POWER PLANT ROAD	1.92	1.40	3.32	IV	11
3035	UTILITY ROAD	0.93		0.93	IV	11
3029	BAXTERS ROAD		0.68		V	15
3031	CONWAY RANCH ROAD		3.15		V	11
3032	COONEY ROAD		2.42		V	11
3033	COYOTE SPRINGS ROAD		6.57		V	8
3034	CROOKED MEADOWS ROAD		0.43		V	15
3039	JCT. CAMPGROUND ROAD		0.19		V	11
3040	JOHNNY MEADOWS ROAD		1.98		V	15
3043	LOG CABIN MINE ROAD		4.85		V	11
3045	LOGGING CAMP ROAD		5.45		V	11
3046	LUNDY CUT-OFF		0.40		V	11
3047	LUNDY DAM ROAD		0.24		V	11
3050	MILLER SPUR ROAD		0.06		V	11
3053	PICNIC GROUNDS ROAD		4.11		V	11
3054	PICNIC SHORT-CUT ROAD		0.11		V	11
3017	PILOT SPRINGS ROAD		4.08		V	15
3203	PUMICE MINE ROAD	0.41	2.94		V	15
3019	RATTLESNAKE GULCH ROAD		0.61		V	11
3020	RIVER SPRINGS ROAD		3.77		V	16
3021	RUSH CREEK ROAD		3.08		V	12
3022	SAGE HEN MEADOWS ROAD		8.82		V	15
3023	SAND FLAT CUT-OFF		4.56		V	15
3026	THOMPSON ROAD		1.13		V	11
3005	WEST PORTAL ROAD		3.50		V	14-15
3114	SADDLEBAG LAKE ROAD		2.59		V	11
3027	WET MEADOW ROAD		20.75		V	15

Mono City

Exhibit C

Road Area 3 Snow Removal Road Priorities

Road Number	Road Name	Paved	Dirt	Snow	Class	Map Reference
3302	EAST MONO LAKE DRIVE	1.23		1.23	I	11
3303	BLUE LAKE WAY	0.04		0.04	III	11
3304	CEMETERY ROAD	1.40	4.52	1.40	I	11
3306	GREEN LAKES COURT	0.03		0.03	III	11
3307	LAKE HELEN COURT	0.04		0.04	III	11
3042	PEELER LAKE DRIVE	0.38		0.38	III	11
3301	SILVER LAKE WAY	0.09		0.09	III	11
3303	TWIN LAKES DRIVE	0.16		0.16	III	11
3041	McPHERSON SUBDIVISION ROAD		0.38	0.38	IV	11

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Road Area 4 Snow Removal Road Priorities

Road Number	Road Name	Paved	Dirt	Snow	Class	Map Reference
Bridgeport						
4104	KINGSLEY STREET	0.37		0.37	I	5
4107	SCHOOL STREET	0.16		0.16	I	5
4103	HAYS STREET	0.06		0.06	II	5
4102	BRIDGE STREET	0.05		0.05	III	5
4113	BRYANT STREET	0.20		0.20	I	5
4021	BUCKEYE ROAD	0.40	7.00	0.50	III	8
4112	COURT STREET	0.04		0.04	III	5
4110	DAY LANE	0.05		0.05	III	5
4109	EMIGRANT STREET	0.49		0.49	I	5
4101	JACK SAWYER ROAD	0.19		0.19	III	5
4108	KIRKWOOD STREET	0.10		0.10	III	5
4105	LAUREL AVENUE	0.10		0.10	III	5
4106	SINCLAIR STREET	0.23		0.23	I	5
4111	STOCK DRIVE	0.50		0.50	III	5
4009	BODIE CEMETERY ROAD		0.28		V	5
4008	BODIE MASONIC ROAD		15.46		V	5-9
4007	BODIE ROAD		10.44		V	8-9
4011	BOUNDARY ROAD		1.48		V	6
4010	COW CAMP ROAD		5.12		V	5
4002	DUNDERBURG MEADOWS ROAD		8.32		V	8-11
4004	GREEN CREEK ROAD		9.36		V	8
4003	LITTLE VIRGINIA LAKES ROAD		0.20		V	11
4020	MASONIC ROAD		11.84		V	5
4005	UPPER SUMMERS MEADOWS ROAD		6.70		V	8
4001	VIRGINIA LAKES ROAD	5.90	0.36		V	11-8
Twin Lakes						
4012	TWIN LAKES ROAD	13.46		7.28	I	8-5
4014	HACKAMORE PLACE	0.52		0.52	III	8
4013	HUNEWILL RANCH ROAD	1.04	0.10	1.14	III	8
4016	KAYAK ROAD	0.09		0.09	III	8
4015	SPUR COURT	0.07		0.07	III	5
4012	TWIN LAKES ROAD			6.18	III	8-5
4017	SOUTH TWIN ROAD		2.22	0.22	IV	8
4022	BUCKEYE CREEK ROAD		0.60		V	5
Sierra View						
4114	AURORA CANYON ROAD	0.65	7.21	0.65	I	5
4116	CAMERON DRIVE	0.10		0.10	III	5
4115	CEMETERY ROAD	0.04		0.04	III	5
4018	GARBAGE PIT ROAD	0.05		0.05	III	5
4118	N. BUCKEYE DRIVE	0.25		0.25	III	5
4019	RAMP ROAD	0.20		0.20	III	5
4117	SIERRA VIEW DRIVE	0.10		0.10	III	5

Exhibit C

Road Area 5 Snow Removal Road Priorities						
Road Number	Road Name	Paved	Dirt	Snow	Class	Map Reference
Walker / Coleville / Topaz						
5007	EASTSIDE LANE	6.76	1.26	6.76	I	1-2
5013	LARSON LANE	2.10		2.10	I	2
5015	TOPAZ LANE	3.51		3.51	I	1
5008	CAMP ANTELOPE ROAD	0.91		0.91	II	3
5014	CUNNINGHAM LANE	2.83		2.83	II	1
5003	HACKNEY DRIVE	0.09		0.09	I	2
5002	PINE NUT ROAD	0.69		0.69	II	2
5004	SHOP ROAD	0.07		0.07	I	2
5001	BURCHAM FLAT ROAD		14.78	1.00	III	3-4
5016	CHARLEBOIS ROAD		0.19	0.19	III	1
5011	EASTSIDE ROAD		1.07	1.07	III	2
5010	LONE COMPANY ROAD	0.08	0.35	0.43	III	5
5012	OFFAL ROAD	0.31		0.31	III	2
5009	PATRICIA LANE	0.43		0.43	III	2
5005	MILL CANYON ROAD	0.04	8.25	1.00	IV	2
5006	GOLDEN GATE ROAD		6.25		V	2
5018	LITTLE WALKER ROAD		3.80		V	4
5017	LOBDELL LAKE ROAD		7.00		V	2



OFFICE OF THE CLERK
OF THE BOARD OF SUPERVISORS

REGULAR AGENDA REQUEST

Print

MEETING DATE	November 13, 2012	DEPARTMENT	Public Works - Road Division
ADDITIONAL DEPARTMENTS			
TIME REQUIRED	20 minutes	PERSONS APPEARING BEFORE THE BOARD	Jeff Walters
SUBJECT	Proposed Fuel Reduction Initiatives		

AGENDA DESCRIPTION:

(A brief general description of what the Board will hear, discuss, consider, or act upon)

Mono County's vehicles, machinery and equipment use over 200,000 gallons of fuel on average each year. Mono County has many fuel reduction initiatives already in place and continues to develop and implement others in an effort to reduce county fuel use.

RECOMMENDED ACTION:

Receive staff report regarding current and proposed fuel reduction initiatives. Provide any desired direction to staff.

FISCAL IMPACT:

Proposed initiatives may result in a reduction in county fuel consumption.

CONTACT NAME: Jeff Walters

PHONE/EMAIL: 760.932.5459 / jwalters@mono.ca.gov

SUBMIT THE ORIGINAL DOCUMENT WITH
ATTACHMENTS TO THE OFFICE OF
THE COUNTY ADMINISTRATOR
PRIOR TO 5:00 P.M. ON THE FRIDAY
32 DAYS PRECEDING THE BOARD MEETING

SEND COPIES TO:

MINUTE ORDER REQUESTED:

☐ YES ☒ NO

ATTACHMENTS:

Click to download

- [Proposed Fuel Reduction Initiatives - BOS Staff Reprt 11.13.12](#)
- [Exhibit 1 - Fuel Use 11.13.12](#)

History

Time	Who	Approval
10/28/2012 3:03 PM	County Administrative Office	Yes
11/6/2012 4:04 PM	County Counsel	Yes
10/29/2012 2:26 PM	Finance	Yes



MONO COUNTY DEPARTMENT OF PUBLIC WORKS

POST OFFICE BOX 457 • 74 NORTH SCHOOL STREET • BRIDGEPORT, CALIFORNIA 93517
760.932.5440 • FAX 760.932.5441 • monopw@mono.ca.gov • www.monocounty.ca.gov

Date: November 13, 2012

To: Honorable Chair and Members of the Board of Supervisors

From: Jeff Walters, Director of Road Operations/Fleet Services

Re: Proposed Fuel Reduction Initiatives

Recommended Action:

Receive staff report regarding current and proposed fuel reduction initiatives. Provide any desired direction to staff.

Fiscal Impact:

Current and proposed initiatives may result in a reduction in county fuel consumption.

Background:

Mono County's fleet of vehicles and equipment (this includes Motor Pool, Heavy Equipment and other gasoline and diesel powered machinery) have historically used, on average, over 200,000 gallons fuel each year. With the increasing fuel costs associated with powering these vehicles and equipment every effort should be made by county staff to reduce fuel consumption.

Mono County has many current fuel reduction initiatives already in place that provide a reduction in fuel use. These include:

1. Car pooling with county staff to/from various county meetings;
2. Purchasing more fuel efficient vehicles (when appropriate for the intended use) to replace older less efficient vehicles;
3. Use by county staff of video conferencing capabilities at Bridgeport and Mammoth;
4. Ongoing supervision by department heads to ensure their staff's vehicle travels are necessary and, if so, consolidated before granting vehicle travel;
5. Proper training of staff in energy efficient driving tactics.

There are a few factors that can impact Mono County's fuel consumption such as:

1. Sierra Nevada winters with above average snowfall or other natural phenomena that require more equipment hours to maintain roads and other facilities.
2. Chain requirements on roads also require county vehicles to use all wheel drive and/or four wheel drive which reduces fuel economy;
3. Failure by Department heads to ensure their staff follows fuel saving efforts (such as driving the speed limit, accelerating and de-accelerating slowly, avoiding excessive

- idling, ensure tires are properly inflated and the vehicle is serviced regularly, and to use air conditioning sparingly etc.);
4. County staff utilizing county vehicles for travel rather than their personal automobile can save the county money but increases county overall fuel use.

Fuel economy education for all county staff is essential to ensure vehicle use is minimized and efficient. The Board may have additional input regarding methods to decrease county fuel use.

Exhibit 1 (attached) provides some additional information regarding county vehicle and fuel use.

If you have any questions regarding this issue, please contact me at 760.932.5459.

Respectfully submitted,

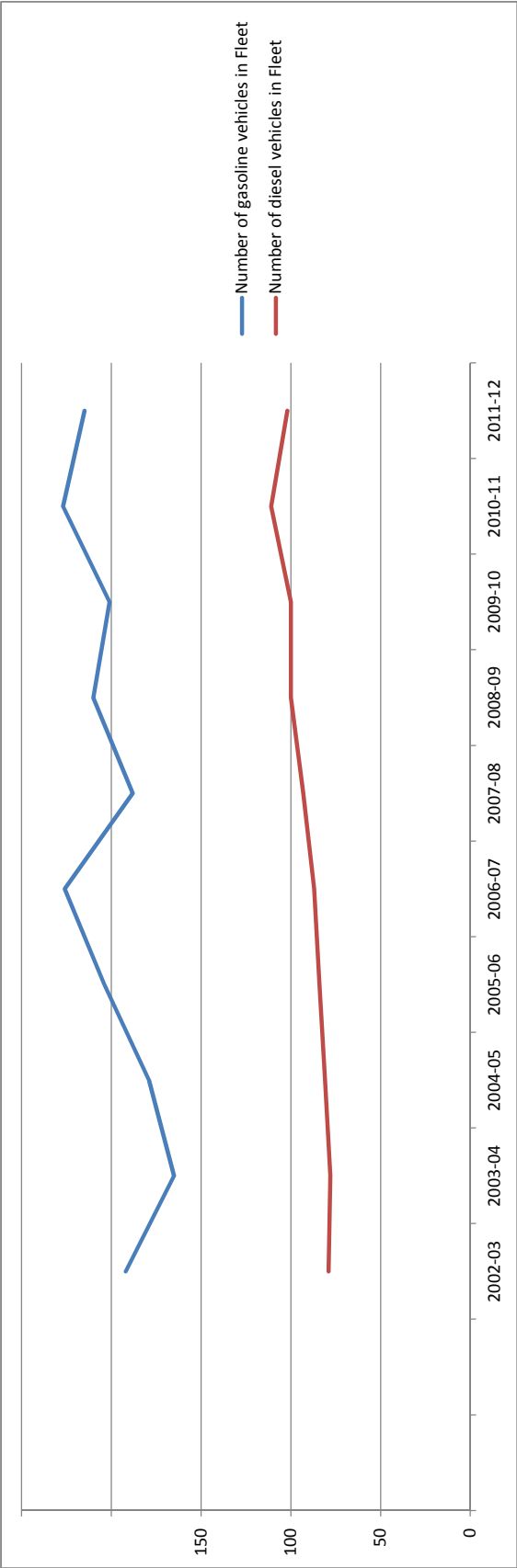


Jeff Walters
Director of Road Operations/Fleet Services

Mono County Fuel Use
2002 - 2012

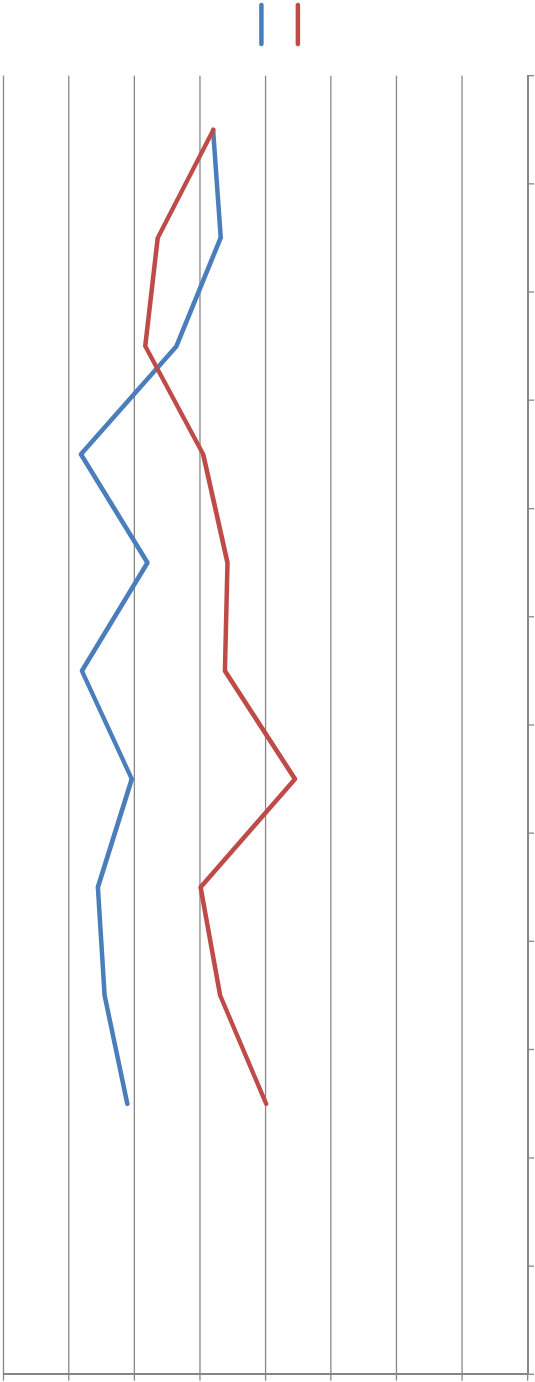
Year	Number of gasoline vehicles in Fleet	Number of diesel vehicles in Fleet	Gasoline used in gallons	Diesel used in gallons	Snowfall in inches at Mammoth Mt.
2002-03	192	79	122160	79756	356
2003-04	165	78	129100	93835	348
2004-05	179	81	131129	99851	570
2005-06	204	84	120837	70949	578
2006-07	226	87	136018	92425	222
2007-08	188	93	115970	91558	333
2008-09	210	100	136357	99013	469
2009-10	201	100	107124	116682	533
2010-11	227	111	93675	112931	661
2011-12	215	102	96009	95876	241

Number of Vehicles in County Fleet (Including Heavy Equipment)

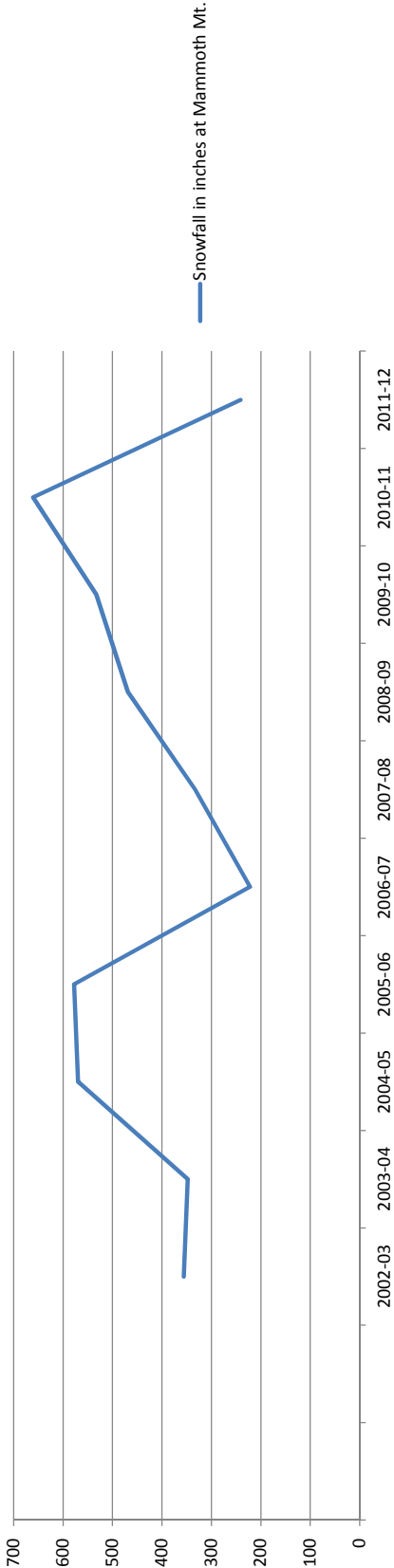


Mono County Fuel Use
2002 - 2012

Gallons of Fuel Used by County Vehicles (Including Heavy equipment)



Snowfall in inches at Mammoth Mt.





OFFICE OF THE CLERK
OF THE BOARD OF SUPERVISORS

REGULAR AGENDA REQUEST

Print

MEETING DATE	November 13, 2012	DEPARTMENT	Community Development - Planning Division
ADDITIONAL DEPARTMENTS	Economic Development Department		
TIME REQUIRED	60 minutes	PERSONS APPEARING BEFORE THE BOARD	Courtney Weiche
SUBJECT	California Unions for Responsible Energy appeal of the Planning Commission approval of the Mammoth Pacific I Replacement Project		

AGENDA DESCRIPTION:

(A brief general description of what the Board will hear, discuss, consider, or act upon)

Public hearing regarding appeal of Planning Commission approval of Conditional Use Permit No. 12-004 and Final Environmental Impact Report for the Mammoth Pacific I Replacement Project filed by California Unions for Reliable Energy (CURE).

RECOMMENDED ACTION:

Conduct a public hearing to receive all relevant information in considering the appeal filed by CURE and either affirm, affirm in part (i.e., modify), or reverse the Planning Commission's actions.

[[If the Board affirms, or affirms in part, the Planning Commission's actions, then it should: Adopt "Resolution Denying Appeal of CUP 12-004 and FEIR Adoption for the Mammoth Pacific Replacement Project Filed by California Unions for Reliable Energy (CURE); Certifying and Adopting the FEIR for the Project; and Affirming the Planning Commission's Approval of CUP 12-004.]]

FISCAL IMPACT:

The cost of the appeal is being borne by the applicant.

CONTACT NAME: Courtney Weiche

PHONE/EMAIL: 760.924.1803 / cweiche@mono.ca.gov

SUBMIT THE ORIGINAL DOCUMENT WITH
ATTACHMENTS TO THE OFFICE OF
THE COUNTY ADMINISTRATOR
PRIOR TO 5:00 P.M. ON THE FRIDAY
32 DAYS PRECEDING THE BOARD MEETING

SEND COPIES TO:

MINUTE ORDER REQUESTED:

☐ YES ☒ NO

ATTACHMENTS:

Click to download

-  [Staff Report](#)
-  [CURE Appeal Application](#)
-  [Planning Commission minutes](#)
-  [Approval docs](#)
-  [Planning Commission Approvals](#)
-  [Backup material](#)
-  [Resolution](#)
-  [Resolution](#)
-  [Resolution](#)

History

Time	Who	Approval
11/7/2012 11:06 AM	County Administrative Office	Yes
11/7/2012 5:41 PM	County Counsel	Yes
11/7/2012 4:12 PM	Finance	Yes

Mono County Community Development Department

PO Box 347
Mammoth Lakes, CA 93546
(760) 924-1800, fax 924-1801
communitydev@mono.ca.gov

Planning Division

PO Box 8
Bridgeport, CA 93517
(760) 932-5420, fax 932-5431
www.mono-county.ca.gov

November 13, 2012

To: Mono County Board of Supervisors

From: Courtney Weiche, Associate Planner
Gerry LeFrancois, Principal Planner
Stacey Simon, Assistant County Counsel

Re: Appeal by California Union for Reliable Energy of the Planning Commission's approval of the Mammoth Pacific I Replacement Project Conditional Use Permit 12-004, and adoption of the Final Environmental Impact Report (SCH # 2011022020).

I. RECOMMENDATION

It is recommended that the Board of Supervisors conduct a public hearing to receive all relevant information in considering the appeal filed by the California Unions for Reliable Energy of the Use Permit and EIR approval for the Mammoth Pacific Replacement Project, and either affirm, affirm in part, or reverse the Planning Commission's decision as to those approvals.

If the Board affirms, or affirms in part, the Planning Commission's decisions, then it is recommended that the Board adopt the "Resolution of the Mono County Board of Supervisors Denying Appeal of CUP 12-004 and FEIR Adoption for the Mammoth Pacific Replacement Project Filed by California Unions for Reliable Energy (CURE); Certifying and Adopting the FEIR for the Project; and Affirming the Planning Commission's Approval of CUP 12-004," which is included in the Board packet as attachment 8.

II. PLANNING COMMISSION ACTIONS

Following public hearing held October 11, 2012 the Planning Commission made the required findings and took the following actions, those shown in bold are the subject of this appeal:

- A. **Adopted and certified the Final EIR** and Mitigation Monitoring and Reporting Program (MMRP) for Mammoth Pacific I Replacement Project (the Project);
- B. **Approved Use Permit 12-004 for the Project, subject to the MMRP and Conditions of Approval, with modification of General Condition #3;**
- C. Approved Variance 12-002 for the Project;
- D. Approved Reclamation Plan 12-001 for the Project;
- E. Recommended that the Board of Supervisors approve Clarifying General Plan Amendment 12-003 (b), with modified wording.

III. PROJECT OVERVIEW, SETTING AND LAND USE

The existing Mammoth Pacific Unit I (MP-I) is a commercial geothermal development project operated by Mammoth Pacific L.P. (MPLP) and located near Casa Diablo Hot Springs. The existing MP-I consists of a binary power plant with a design capacity of about 14 megawatts (MW), a geothermal wellfield, production and injection fluid pipelines, and ancillary facilities that have been operating since

1984. The existing MP-I power plant site is located approximately 1,200 feet northeast of the intersection of U.S. Highway 395 and California State Route 203 on 90 acres of private (fee) land owned by Ormat Nevada, Inc. (Ormat), the parent company of MPLP.

The Mammoth Pacific I Replacement Project (Project) was proposed by MPLP to replace the aging MP-I power plant with a new, more modern and efficient binary power plant (M-1), while maintaining the existing geothermal wellfield, pipeline system and ancillary facilities. The proposed M-1 replacement power plant would be constructed and operated within the existing Casa Diablo geothermal complex. It would be capable of generating, on average, approximately 18.8 MW (net) of electricity. No net change in the rate of geothermal fluid produced and supplying the existing Casa Diablo geothermal development complex would result, and no substantive change to the geothermal reservoir would occur as a result of the Project. 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 the old MP-I plant would be closed and dismantled. The old MP-I plant site would be converted to an equipment storage area as part of the decommissioning process and the entire site would be subject to a Reclamation Plan providing for ultimate return of the property to natural conditions. The transition period during with both plants would overlap would be a period of up to two years from the date the M-1 plant begins startup operations, but would not involve any additional geothermal wells or extraction.

The new M-1 plant site would be located to the east on the approximately 50-acre parcel, and within an area designated as Resource Extraction (RE). The RE designation is “is intended to provide for protection of the environment and resource extraction activities . . . and for processing plants utilizing on-site materials or materials found in close proximity to the site.” The existing MP-I plant site decommissioning activities and establishment of a storage area, would be conducted on private land with a land use designation of Resource Management (RM). The RM designation is intended “to recognize and maintain a wide variety of values in the lands outside existing communities,” including “geothermal or mineral resources.”

PROJECT COMPONENTS

The following approvals are required from Mono County for the Project and were granted by the Planning Commission on October 11:

- Certification of the FEIR.
- A Conditional Use Permit for the M-1 replacement plant (including the granting of a height exception for mechanical appurtenances) and decommissioning/reuse of the existing MP-I plant site as a storage area;
- A Variance for: setback reductions from property line(s); setback reductions from a stream designated by a blue line on USGS topographic maps (for structures within the 5.7-acre proposed M-1 plant site); use of the existing MP-I plant site as an equipment storage area; and to construct an aboveground electrical transmission line; and
- A Reclamation Plan.

The Project will also require grading and building permits prior to the commencement of construction.

Project approval by the Planning Commission is not effective until the Board clarifies provisions of the General Plan related to setbacks from mapped water courses for geothermal development within the Hot Creek Buffer Zone. The Planning Commission recommended that the Board approve a clarifying General Plan amendment, which is on the Board’s agenda following the appeal hearings, to effectuate this. However, the Board could provide clarification by other means including, but not limited to, providing an interpretation. Adoption of the amendment is not required for Project approval, but is recommended.

Finally, as noted previously, the Planning Commission approved alternative language to that initially proposed for General Condition of Approval #3. That language is as follows:

GC #: “The rate of geothermal fluid production supplying the Casa Diablo geothermal complex shall not exceed the existing geothermal fluid flow capacity utilized in the complex.”

Following discussions with the Project EIR consultant, staff recommends that if the Board affirms the Planning Commission’s approval of the Use Permit and EIR, that it further refine the Planning Commission’s language to read as follows:

Revised GC #3: “The combined rate of geothermal fluid production utilized by the Project, including during any interim period when the M-1 and MP-1 plants are operating simultaneously, shall not exceed the present rate of geothermal fluid flow utilized in the operation of the MP-1 plant, unless offset by equivalent reductions at the MPII plant.”

This revised language is contained in the Resolution recommended for Board approval if it affirms (or affirms in part) the Planning Commission’s approvals (attachment 8).

IV. BACKGROUND

At a noticed public meeting on October 11, 2012, the Planning Commission visited the M-I project site and then held a public hearing on the project. At the hearing the Commission received a comment letter with attachments, from California Unions for Reliable Energy (CURE). Following the public hearing CURE filed an appeal application, which was received on October 19, 2012. The application challenged both the approval of the Conditional Use Permit and the certification/approval of the FEIR for the Project, for the reasons set forth below. Summary responses to each asserted reason are also provided.

APPEAL ISSUES AND RESPONSES

Issue 1: The EIR Fails to Include An Adequate Project Description.

The EIR (consisting of the RDEIR, RDEIR2 and the FEIR) contains an adequate project description. This is discussed in Final EIR Response to Comments 9-02, 9-06, 12-01 and 12-02 which all address previous statements by the commenter regarding the adequacy of the project description. The comment also erroneously asserts that all references to the proposed General Plan Amendments have been deleted from the EIR. In fact, the proposed clarifying General Plan revisions are explicitly identified as being part of the project, although not required in order to approve the project, in numerous places in the EIR (e.g., p. 2, p. 160, p. 165, p. 168, p. 172, p. 174, etc.).

Issue 2: The EIR Violates CEQA’s Prohibition on Piecemealed Review.

The Mammoth Pacific Replacement Project is a separate and independent project, not dependent upon any other project for its operation. Its impacts were thoroughly analyzed and there was no piecemealed environmental review. The FEIR Responses to Comments 9-02 and 9-27 address this assertion in more detail.

Issue 3: The EIR Fails to Include Baseline Data on Owens Tui Chub.

As described in FEIR Responses to Comments 9-03, 9-05, 9-10, 9-11, 9-16, and 9-28, appropriate baseline data was used in analyzing impacts to the Owens Tui Chub. Further, the Project would not increase the rate of geothermal extraction above historic levels as set forth in conditions of approval.

Issue 4: The EIR Fails to Identify Setting and Baseline for Air Quality.

FEIR Responses to Comments 9-14, 9-159, D-06, 9D-07, 9D-09 and 9D-10 address the setting and baseline used for air quality and contain references to those portion of the document containing the information asserted to be absent. Further, The Great Basin Air Pollution Control District states, both by letter and in discussions with staff, that the emission of ozone precursors at the Casa Diablo Geothermal Complex does not result in ozone production within the Mammoth Lakes non-attainment zone (which is created by the transport of ozone precursors eastward from the San Joaquin Valley). Instead, any ozone produced as a result of the emission of ozone precursors at Casa Diablo would be generated in areas well to the east of the Mammoth Lakes area, all of which are in attainment of applicable ozone standards.

Issue 5: The EIR Fails to Identify Project's Potentially Significant Impacts on Air Quality.

The FEIR Response to Comments 9-15, 9D-09, 9D-10 address the Project's air quality impacts and reference the applicable provisions and discussion in the RDEIR. In addition, see response to Issue 4. Great Basin Air Pollution Control District states that the 250 lbs/day VOC standard is a permit limitation, not a significance threshold. According to Great Basin staff, the emission of 250 lbs/day of criteria pollutants or their precursors (even in conjunction with full operation of the existing MP-1 plant) does not result in a significant impact, and the District will issue a permit for the Project which requires monitoring and frequent checking to assure compliance with fugitive emission limits. District staff also stated that all VOC emissions are included in the limit.

Issue 6: The EIR's Impact Conclusions Regarding the Owens Tui Chub are Unsupported.

The FEIR Response to Comment 9-16 addresses this assertion and references applicable provisions of the RDEIR which clearly support the EIR's conclusions..

Issue 7: The EIR Fails to Address Project's Potentially Significant Biological Impacts.

The FEIR Responses to Comments 9A-17 and 9A-19 address this assertion and reference those locations in the RDEIR where these impacts are thoroughly discussed.

Issue 8: The EIR's Impact Conclusions Regarding Hydrology are Unsupported.

The FEIR Responses to Comments 9-16, 9-26, and 9C-02 address this assertion and reference those locations in the RDEIR where support for the conclusions are found.

Issue 9: The County Failed to Respond to the Following 6 Comments on Draft EIR:

1. Baseline for Geothermal Resource Extraction/Injection: Responses are found at F EIR RTC 9-12, 9-19, 9A-19
2. Potentially Significant Impact to Bio/Special Status Species: Responses are found at F EIR RTC 9-16
3. Potentially Significant Biology Impact due to General Plan Amendment: Responses are found at F EIR RTC 9-13
4. Potentially Significant impact regarding tree kills: Responses are found at F EIR RTC 9A-17, 9A-19
5. Goals of Applicable Deer Management Plans: Responses are found at F EIR RTC 9A-11
6. Potential Geothermal Resource Depletion: Responses are found at F EIR RTC 9-16, 9-19, 9-26, 9C-02

Issue 10: There Is a New Potentially Significant Mule Deer Impact.

The FEIR Response to Comment 9-25 addresses potential impacts to mule deer and references the applicable RDEIR analysis. All issues identified and analyzed in detail in the DEIR were determined to be *potentially* significant as far back as the Initial Study and scoping process (which CURE did not participate in) in early 2011. This was explained in the RDEIR. The very fact that mule deer were analyzed in the DEIR reveals that impacts to them were considered potentially significant. The Final EIR did not identify any “new” impacts that were not previously disclosed in the Revised Draft EIR and Second Revised Draft EIR. The Initial Study identified impacts to biological resources (including deer) as less than significant with mitigation – which is another way of saying that they are potentially significant without mitigation.

V. ENCLOSURES

- 1) California Unions for Renewable Energy (CURE) Appeal Application:
- 2) Planning Commission Staff Report
- 3) Planning Commission Minutes
- 4) Planning Commission approval documents
 - i) Resolution and attachments
 - ii) Notice of Decision and MMRP
 - iii) Notice Determination
- 5) Planning Commission Comments submitted at the Hearing by CURE
- 6) Final EIR with Exhibits I, II, & III (Previously distributed)
- 7) Proposed Resolution Denying Appeal of CUP 12-004 and FEIR Adoption

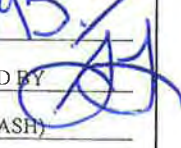
**Mono County
Community Development Department
Planning Division**

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Mammoth Lakes, CA 93546
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commdev@mono.ca.gov

PO Box 8
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www.monocounty.ca.gov

**APPEAL
APPLICATION**

In order to be valid,
appeal must be filed within
10 days of action date.

RECEIVED	
APPLICATION	OCT 19 2012
DATE RECEIVED	FEE \$ 495.00
RECEIPT	RECEIVED BY 
MONO COUNTY Community Development CHECK	
(NO CASH)	

APPELLANT California Unions for Reliable Energy s

ADDRESS 601 Gateway Blvd., Suite 1000 CITY/ STATE/ ZIP South San Francisco, CA 94080

TELEPHONE (650)589-1660 E-MAIL eklebaner@adamsbroadwell.com

APPLICATION # BEING APPEALED CUP 12-004

DATE OF ACTION 10/11/2012 DATE OF APPEAL 10/19/12

NATURE OF APPEAL: Describe what is being appealed. If it is a condition of approval, attach a copy of the project conditions and indicate which conditions are being appealed.

Planning Division 10/11 actions on CUP 12-004 and FEIR adoption.

REASON FOR APPEAL: Describe why the decision is being appealed

See Attached.

APPLICATION SHALL INCLUDE:

- A. Completed application form.
- B. Deposit for project processing: See Development Fee Schedule.

I CERTIFY UNDER PENALTY OF PERJURY THAT I am: I legal owner(s) of the subject property,
☐ corporate officer(s) empowered to sign for the corporation or authorized legal agent, or ☒
other interested party.

Signature _____

Elizabeth Klebaner
Signature _____

10/18/12
Date _____

ADAMS BROADWELL JOSEPH & CARDOZO

A PROFESSIONAL CORPORATION

ATTORNEYS AT LAW

601 GATEWAY BOULEVARD, SUITE 1000
SOUTH SAN FRANCISCO, CA 94080-7037

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ELIZABETH KLEBANER
RACHAEL E. KOSS
JAMIE L. MAULDIN
ROBYN C. PURCHIA
ELLEN L. TRESCOTT

OF COUNSEL
THOMAS R. ADAMS
ANN BROADWELL

October 18, 2012

BY: Overnight Mail

Mono County Board of Supervisors
C/O: Scott Burns, Director
Mono County
Community Development
437 Old Mammoth Road, Suite P
Mammoth Lakes, CA 93546

**RE: Appeal of Planning Commission Approval of Conditional Use
Permit No. 12-004 and Final Environmental Impact Report for the
Mammoth Pacific I Replacement Project; and Clarifying General
Plan Amendment 12-003(b)**

Dear Board:

We write on behalf of California Unions for Reliable Energy ("CURE") to appeal the Mono County Planning Commission's decision to approve Conditional Use Permit No. 12-004 and Final Environmental Impact Report for the Mammoth Pacific I Replacement Project and clarify General Plan Amendment 12-003(b) (collectively, "Project"). This appeal is made pursuant to Mono County General Plan Land Development Regulations sections 47.010 and 47.020 and all applicable local and state laws and regulations.

Ormat Nevada, Inc., ("Applicant" or "Ormat") seeks a conditional use permit authorizing: the construction of: the Mammoth Pacific I Replacement ("M-1") unit, a geothermal power plant facility with a net generating capacity of approximately 18.8 megawatts ("MW"); the routing and rerouting of geothermal pipelines; the construction of a substation and transmission line; the simultaneous operation of the proposed M-1 unit and the existing Mammoth Pacific Unit I ("MP-I") plant¹ for

¹ The existing MP-I facility includes a binary geothermal power plant with a design capacity of 14 MW, associated well field, production and injection fluid pipelines, and ancillary facilities. MP-I is one of three existing geothermal plants within the Casa Diablo Geothermal Complex.
2620-023cv

a period of two years; the decommissioning of MP-I; and a 30-year operational life and the eventual decommissioning of the M-1 unit. The County prepared an Environmental Impact Report ("EIR"), under the California Environmental Quality Act ("CEQA"),² to allegedly evaluate the above activities. The EIR, and these comments, refer to the proposed M-1 unit, substation, transmission line, and ancillary pipeline facilities together with the eventual decommissioning of the MP-I unit as the "Project" for the purpose of CEQA. It is unclear from the Planning Division Staff and County Counsel's testimony at the October 11, 2012 Planning Commission Hearing whether the Plan Amendment is part of the Project. However, an amendment to a General Plan is a discretionary action subject to CEQA and the County is required to undertake environmental review of Plan Amendment 12-003(b) prior to approving the action.

The Project is located on private land owned by the Applicant within the Casa Diablo geothermal development complex, northeast of the intersection of Highway 395 and Route 203 and approximately two miles east of Mammoth Lakes in Mono County, California. The Project requires a conditional use permit from Mono County; variances from County land use regulations authorizing construction of a transmission line and construction within 100 feet of the exterior property line; and an Authority to Construct and Permit to Operate from the Great Basin Unified Air Pollution Control District. The Project also requires the County to amend the Mono County General Plan to authorize the Applicant to develop geothermal facilities within 500 feet of a watercourse within the Hot Creek Buffer Area.

Based upon our review of the EIR and the County's responses to comments on the Revised Draft EIR ("RDEIR") and the Second Revised Draft EIR ("RDEIR2"), we conclude that the County failed to comply with CEQA. We incorporate by reference our earlier comments on the Draft EIR,³ the RDEIR,⁴ the RDEIR2,⁵ and the Final EIR.⁶ Our comments⁷ and this letter constitute our reasons for this Appeal.

² Pub. Resources Code, §§ 21000 et seq.

³ Comments of California Unions for Reliable Energy on the Draft Environmental Impact Report for the Mammoth Pacific I Replacement Project, August 26, 2011.

⁴ Comments of California Unions for Reliable Energy on the Revised Draft Environmental Impact Report for the Mammoth Pacific I Replacement Project, March 26, 2012.

⁵ Comments of California Unions for Reliable Energy on the Second Revised Draft Environmental Impact Report for the Mammoth Pacific I Replacement Project, August 6, 2012.

⁶ Comments of California Unions for Reliable Energy on the Final Environmental Impact Report for the Mammoth Pacific I Replacement Project, October 10, 2012.

I. STATEMENT OF INTEREST

CURE has an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for industry to expand in Mono County, and by making it less desirable for businesses to locate and people to live in the County, including the Project vicinity. Continued degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduces future employment opportunities. CURE's members live, work, recreate and raise their families in Mono County, including in and around Mammoth Lakes. Accordingly, CURE's members would be directly affected by the Project's adverse environmental impacts. CURE's members may also work on the Project itself. They will, therefore, be first in line to be exposed to any hazardous materials, air contaminants, and other health and safety hazards that exist onsite.

II. THE EIR FAILS TO INCLUDE AN ADEQUATE PROJECT DESCRIPTION

The EIR is inadequate because it fails to include a stable Project description. The courts have repeatedly held that "an accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient [CEQA document]."⁸ Only through an accurate view of the project may affected outsiders and public decisionmakers balance the proposal's benefit against its environmental costs.⁹ In particular, the EIR fails to consistently describe the proposed Plan Amendment, conclude whether the Plan Amendment is part of the Project, and analyze alternatives to the Plan Amendment in accordance with CEQA.¹⁰ In July 2012, the County recirculated the Draft EIR for the second time to allow the public to comment on clarifying Plan Amendments proposed in the RDEIR2.¹¹ The EIR now states that Plan Amendment is no longer required and that all references to the proposed Plan Amendment have been deleted from the EIR.¹² The County's failure

⁷ As our earlier comments were previously submitted to the County and are part of the record that was before the Planning Commissions we do not resubmit them with this appeal.

⁸ *County of Inyo v. County of Los Angeles* (1977) 71 Cal.App.3d 185, 193.

⁹ *Id.* at 192-193.

¹⁰ See CURE's Comments on RDEIR2, August 6, 2012.

¹¹ See RDEIR2, at p. 29.

¹² FEIR, Response to Comment 12-03.

to consistently describe the Project throughout the environmental review process inhibits public participation and informed decisionmaking and violates CEQA.

III. THE EIR VIOLATES CEQA'S PROHIBITION ON PIECEMEAL REVIEW

CEQA mandates "that environmental considerations do not become submerged by chopping a large project into many little ones – each with a minimal potential impact on the environment – which cumulatively may have disastrous consequences."¹³ CEQA prohibits such a "piecemeal" approach and requires review of a Project's impacts as a whole.¹⁴ Accordingly, a public agency may not segment a large project into two or more smaller projects in order to mask serious environmental consequences. Here, the EIR fails to consider the entire Project by failing to analyze the Applicant's separately proposed Casa Diablo IV unit together with this Project in one EIR. This approach violates CEQA.

The *Arviv Enterprises v. South Valley Area Planning Commission* ("Arviv") case is directly on point here.¹⁵ In *Arviv*, the Court found that a housing developer's plan to divide a 21-home development into several smaller pieces – first 5 homes, then 2 homes, then 14 homes, each with successive mitigated negative declarations – violated CEQA. Concluding that the applicant had improperly described the project, the Court held that a single EIR was required to analyze and mitigate the effects of the entire 21-home development. The court explained that:

the significance of an accurate project description is manifest, where, as here, cumulative environmental impacts may be disguised or minimized by filing numerous, serial applications.¹⁶

Similarly here, the County's environmental document fails to consider the Applicant's entire plan of development and expansion for the Casa Diablo geothermal complex.

The instant Project and the concurrently proposed, but separately evaluated, Casa Diablo IV project are just another component of the ongoing, iterative

¹³ *Bozung v. Local Agency Formation Commission* (1975) 13 Cal.3d 263, 283-84; *City of Santee v. County of San Diego* (1989) 214 Cal.App.3d 1438, 1452.

¹⁴ CEQA Guidelines, § 15378, subd. (a); *Burbank-Glendale-Pasadena Airport Authority v. Hensler* (1991) 233 Cal.App.3d 577, 592.

¹⁵ *Arviv Enterprises v. South Valley Area Planning Commission* (2002) 101 Cal.App.4th 1333, 1346.

¹⁶ *Id.*

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expansion of the Casa Diablo geothermal complex. In 1986, just one year after the MP-I facility commenced operation, Mammoth Pacific L.P. ("MPLP")¹⁷ sought to develop three additional generating facilities – the 15 MW MP-II unit, the 15 MW MP-III unit, and the 15 MW PLES-I unit – totaling 45 MW in gross generating capacity adjacent to the MP-I unit. MPLP sought County authorization to develop the MP-II and MP-III units, and separately filed an application to develop the PLES-I project with the U.S. Bureau of Land Management ("BLM"). The MP-III facility was not developed as initially proposed; however, the MP-II and PLES-I facilities both commenced operation in 1990. Notably, the PLES-I unit was approved in the midst of significant controversy regarding the unit's potential impacts to surface hydrothermal features in the Casa Diablo area and its vicinity and the unit's potential impacts to the Hot Creek Hatchery and the Hot Creek Gorge.¹⁸

In 2005, MPLP sought and received local and federal approval to construct the 3-mile Basalt Canyon Pipeline to carry hot geothermal fluid from a new geothermal field in the Inyo National Forest to the MP-I and MP-II units. The Basalt Canyon Pipeline Project was undertaken by MPLP because the temperature of the geothermal resource at the MP-I and MP-II well field dropped so significantly that the well field could not sustain power generation needs.¹⁹ The Applicant and current owner of MPLP, Ormat, presently holds authorizations for additional exploratory drilling activities in the vicinity of the Casa Diablo geothermal complex.²⁰

Continuing with this trend of creeping development, the Applicant now seeks to double the generating capacity of the existing complex through the instant approval and the separate federal approval of the proposed 33 MW Casa Diablo IV

¹⁷ MPLP was acquired by Ormat in 2010.

¹⁸ The Sierra Club and the California Department of Fish and Game appealed BLM's decision to conduct limited environmental review of the project, causing BLM to prepare an Environmental Impact Statement pursuant to NEPA and to establish a detailed monitoring system to limit and avoid impacts to geothermal resources and related impacts to critical habitat for the federally-endangered Owens tui chub. PLES-I EIS/SEIR, pp. 1-2-1-3; *see also* Resolution 86-16, A Resolution of the Planning Commission of the County of Mono Urging the Bureau of Land Management to Prepare an Environmental Impact Statement for the Proposed Geothermal Expansion at Casa Diablo.

¹⁹ Basalt Canyon Pipeline Project DEIR, p. 1-2 ("Pipeline DEIR").

²⁰ In 2002 and 2005, the Applicant received approvals for additional geothermal exploration projects in the vicinity of the Casa Diablo geothermal complex. Pipeline DEIR, p. 1-5.

facility.²¹ The Project and the Casa Diablo IV project are clearly related to each other and, therefore, should have been analyzed as one project in a single EIR.²² As acknowledged in the RDEIR and the EIR, the Project and the Casa Diablo IV project are owned and will be operated by the same entity, share a common geothermal well field and will be operated out of a common control room located on the existing MP-I project.²³ The County's failure to analyze the Casa Diablo IV project together with the Project violates CEQA's prohibition on piecemealed review. The contentions in the EIR that the Project and the Casa Diablo IV are separate and independent projects – as demonstrated, for example, by the Applicant's intent to enter into separate power purchase agreements for the capacity generated by these facilities – is flawed and simply not credible.

The impacts of a larger project “may be disguised or minimized by filing numerous, serial applications;” what is relevant is the developer's actual intent.²⁴ In *Tuolumne County Citizens for Responsible Growth, Inc. v. City of Sonora*,²⁵ the court articulated “general principles” for determining whether two actions are one CEQA project, including “how closely related the acts are to the overall objective of the project,” and how closely related they are in time, physical location, and the entity undertaking the action.²⁶ The court rejected arguments that a shopping center and nearby road alignment were “separate and independent” projects, and held that (1) separate approvals do not sever the connections between two activities; (2) the broad definition of a CEQA “project” extends beyond situations where a future activity is “necessitated by” an earlier one (noting that when actions “actually will be taken,” the appropriate inquiry is whether they are related to one another, i.e. they comprise the “whole of an action” or “coordinated endeavor”); and (3) the applicable standard is not always whether two actions “could be implemented independently of each other.”²⁷

Here, the Casa Diablo IV project and the instant Project are concurrently evaluated by local permitting authorities,²⁸ would be located 0.25 miles from the

²¹ See Ormat Technologies, Inc., Form 10-k, December 31, 2011, item 1 Business, available at http://www.sec.gov/Archives/edgar/data/1296445/000119312512089532/d261816d10k.htm#tx261816_1.

²² *Plan for Arcadia v. City Council of Arcadia* (1974) 42 Cal.App.3d 712, 723, 726.

²³ See, e.g., RDEIR, p. 5-7.

²⁴ *Arviv*, supra, 101 Cal.App.4th 1333 at 1336-1337, 1343, 1344, 1346.

²⁵ (2007) 155 Cal.App.4th 1214.

²⁶ *Id.* at 1226-1227.

²⁷ *Id.* at 1228-1230 (citing CEQA Guidelines § 15378(c) and analyzing *Sierra Club v. W. Side Irr. Dist.* (2005) 128 Cal.App.4th 690, 698-700).

²⁸ In the case of Casa Diablo IV, the Great Basin Unified Air District is the CEQA lead agency.
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existing MP-I plant site,²⁹ and are proposed by one entity: Ormat. Ormat's plans for selling the capacity have no bearing on the County's requirement to analyze the whole of the project under CEQA. What is relevant, is that Ormat intends to exploit the geothermal resource at Casa Diablo to the full possible extent. The County must prepare a revised EIR that evaluates the Project's impacts together with those of the Casa Diablo IV project.

IV. THE EIR FAILS TO DISCLOSE THE ENVIRONMENTAL SETTING

The EIR employs an inaccurate and incomplete baseline, thereby skewing the impact analysis. An accurate description of the environmental setting is important because it establishes the baseline physical conditions against which a lead agency can determine whether an impact is significant. The failure to adequately describe the existing setting contravenes the fundamental purpose of the environmental review process, which is to determine whether there is a potentially substantial, adverse change, compared to the existing setting. CEQA requires the lead agency to include a description of the physical environmental conditions in the vicinity of a project as they exist at the time environmental review commences. The EIR must also describe the existing environmental setting in sufficient detail to enable a proper analysis of project impacts. The RDEIR fails on both accounts. CEQA requires the County to gather and disclose the relevant data in a revised DEIR.

A. The EIR Fails to Include Baseline Data on the Federally Endangered Owens Tui Chub

On August 5, 1985, the U.S. Fish and Wildlife Service ("FWS") listed the Owens tui chub as an endangered species under the Federal Endangered Species Act.³⁰ The Owens tui chub historically inhabited streams, rivers, springs and irrigation ditches in the Owens Basin, in Mono and Inyo Counties.³¹ Finding that the Owens tui chub had been extirpated from much of its range – viable populations are known only in two locations in Mono County –, the FWS designated a portion of

²⁹ FEIR, at p. 5-4.

³⁰ U.S. Fish and Wildlife Service, Department of the Interior, *Endangered and Threatened Wildlife and Plants; Endangered Status and Critical Habitat Designated for the Owens Tui Chub* Final Rule, 50 Fed. Reg., 31,592, August 5, 1985.

³¹ *Ibid.*

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Hot Creek as critical habitat for the Owens tui chub.³² Hot Creek is located approximately 0.6 miles from the Project site.³³

A prejudicial abuse of discretion occurs if the failure to include relevant information precludes informed decision-making and informed public participation, thereby thwarting the statutory goals of the EIR process.³⁴ An EIR must include detail sufficient to enable those who did not participate in its preparation to understand and to consider meaningfully the issues raised by the proposed project.³⁵ The EIR is inadequate because it fails to disclose information necessary to evaluate the significance of the Project's impacts on the Owens tui chub and its habitat. The EIR does not reflect any efforts on the part of the County to interpret recent biological monitoring data and disclose that information to the public and decisionmakers.

Substantial evidence shows that ongoing geothermal extraction resulted in thermal spring discharge decreases.³⁶ A study conducted in 2000 concludes that at the Hot Creek Hatchery, the thermal water component in the springs declined by 30-40% since 1990.³⁷ Because a hydrological connection exists between the Casa Diablo geothermal complex and Owens tui chub critical habitat and because the Applicant proposes to extend power production activities by replacing the aging MP-I unit, the EIR should have included baseline data regarding the Owens tui chub. The EIR omits this information.

As described in the comments of biology expert Scott Cashen, M.S., studies conducted by the USGS indicate the decline in the thermal water component and other surficial changes in the vicinity of Casa Diablo are due to geothermal development.³⁸ Further, the area of impact from geothermal development includes the known habitat of the Owens tui chub.³⁹ The EIR fails to identify these critical facts. Although the County provided hydrologic monitoring data approximately one year after the County first released the EIR for public review, the data provided is not interpreted in the EIR and does not assist the public or decisionmakers because

³² *Id.* at 31,594.

³³ RDEIR, p. 4-123.

³⁴ *Al Larson Boat Shop, Inc. v. Board of Harbor Commissioners* (1993) 18 Cal.App.4th 729, 748.

³⁵ *Association of Irrigated Residents v. County of Madera* (2003) 107 Cal.App.4th 1383, 1390.

³⁶ CURE Comments, August 26, 2011, Exhibit B, p.6.

³⁷ *Ibid.*

³⁸ Scott Cashen Comments on the Environmental Impact Report for the Mammoth Pacific I Replacement Project, October 18, 2012, at pp. 1-2 (**Attachment 1**).

³⁹ *See id.* at p. 2.

it is inconclusive with respect to impacts on the chub. As described by Scott Cashen, the data provide limited value in disclosing existing conditions because the data lack statistical analysis or interpretation of the monitoring results.⁴⁰ The County must include baseline data on both the endangered Owens tui chub and its habitat in a revised DEIR. Absent this information, the public and decisionmakers cannot consider the Project in its full environmental context.

Finally, the EIR's constant refrain that the Project "would not result in any changes to the geothermal wellfield" is irrelevant for the purpose of establishing the existing environmental setting.⁴¹ The County is required to disclose the physical environmental conditions in the vicinity of the Project, as they exist at the time of the notice of preparation is published at the time environmental analysis is commenced.⁴² It is well established that the baseline environmental setting for CEQA review is the existing environment; not the environmental setting that could exist under existing entitlements and not a hypothetical environmental setting that might possibly exist in the future.⁴³ The EIR fails to identify the existing rate of geothermal extraction, precluding the County and the public from evaluating the Project's impacts on the Owens tui chub and its habitat.⁴⁴

While the maximum physical pumping capacity of the existing Casa Diablo complex may be approximately 6,900,000 pounds per hour, the EIR fails to establish that MP-I is actually operating at its maximum physical pumping capacity.⁴⁵ The record points to the opposite conclusion. Power production at MP-I averaged less than 50% of capacity between 2007 and 2010.⁴⁶ According to the EIR, absent the Project, the Applicant would not be able to ensure continuous power generation from MP-I⁴⁷ and the principle reason for the Project is to replace the aging, leak-prone MP-I unit, whose condensing capacity has been severely restricted due to

⁴⁰ *Id.* at p. 3.

⁴¹ *See e. g.*, FEIR Response to Comment 9-10.

⁴² *See* CEQA Guidelines, § 15125 subd. (a).

⁴³ *CBE v. SCAQMD* (2010) 48 Cal.4th 310, 321-322, 322, n. 6-7.

⁴⁴ *See* CEQA Guidelines § 15125 subd. (a) ("[the existing physical environmental conditions] will normally constitute the baseline a physical conditions by which a lead agency determines whether an impact is significant").

⁴⁵ Cashen Comments, October 18, 2012, at p. 3; *see also* CURE Comments on RDEIR, March 26, 2012, Exhibit B.

⁴⁶ *Id.* at p. 3.

⁴⁷ FEIR, at p. 2-34.

the need to plug damaged condenser tubes, with the new, modern and more efficient M-1 unit.⁴⁸

The above information strongly suggests that the Project will increase power production activities and the rate of extraction as compared to existing conditions. As described by Scott Cashen, any incremental increase in pumping over the existing setting due to the Project has the potential to exacerbate changes to Owens tui chub by causing further declines in the thermal water component and, thus, significantly impact the Owens tui chub and its habitat.⁴⁹ The County failed to identify the existing conditions and to evaluate the significance of increased power production activities on the Owens tui chub in the EIR. These omissions are fatal. The County is required to provide baseline data on the Owens tui chub, and analyze the Project's impacts, as compared to existing conditions, in a revised DEIR.

B. The EIR Fails to Identify the Environmental Setting and Baseline for Air Quality Resources

The baseline environmental setting for CEQA review is the existing environment; not the environmental setting that could exist under existing entitlements and not a hypothetical environmental setting that might possibly exist in the future.⁵⁰ The EIR fails to identify the existing emissions from the MP-I Unit and erroneously concludes that the Project would reduce operational emissions of volatile organic compounds ("VOCs"), an on ozone precursor and a regulated air contaminant, as compared to existing conditions.

In particular, the FEIR states:

The operating rate of the respective plants [MP-I and M-1] during the transition period is limited by the geothermal fluid provided to each plant, and the maximum geothermal fluid available to Casa Diablo is fixed to the existing maximum geothermal fluid pumping capacity of the wellfield (6,900,000 pounds per hour). This physical pumping limit would not change with the MP-I Replacement Project (RDEIR page 2-17), and the geothermal fluid flow rates to the respective facilities would be inversely proportional. As such when geothermal fluid flow to the M-1 plant increases the geothermal fluid flow to MP-I plant

⁴⁸ *Id.* at p. 4-132.

⁴⁹ Cashen Comments, October 18, 2012 at p. 3.

⁵⁰ *CBE v. SCAQMD* (2010) 48 Cal.4th 310, 321-322, 322, n. 6-7.
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must decrease proportionally. Similarly, the combined emission of isobutane and n-pentane occurring while both plants are operating at reduced capacities would be proportional to the respective fraction that each plant is operating. Motive fluid emissions would range from about 500 pounds per day (when only the MP-I plant is operating) to zero emissions of isobutane and about 205 pounds per day of n-pentane (when only the M-1 plant is operating). In general, when the MP-I plant is operating at a higher capacity than the M-1 plant must be operating at a proportionally lower capacity and vice versa. Thus, at any time the M-1 plant is operating during the transition period there would be a reduction in the total emissions of motive fluid from the MP-I plant.⁵¹

The analysis in the EIR is in error. First, as reviewed above, the County is required to determine baseline emissions with reference to existing conditions. The EIR fails to include the required analysis. As described by technical expert Dr. Petra Pless, the condensing capacity of the aging leak-prone MP-I plant has been severely restricted due to the need to plug damaged condenser tubes, such that MP-I is operating at far less than its design capacity.⁵² Accordingly, the operational VOC emissions from the existing MP-I plant – estimated in the EIR to be emitted at a rate of 500 pounds per day (“lbs/day”) – mostly likely reflect these low capacity factors and the corresponding reduced pumping of geothermal fluid from the wellfield.⁵³ As further described by Dr. Pless, and contrary to the EIR, the proposed M-1 unit can be operated without reducing existing operations and the associated rate of VOC emissions, from the MP-I facility.⁵⁴

Second, the County is required to assess the significance of Project’s impacts with reference to existing conditions.⁵⁵ In particular, and because the addition of the M-1 unit could increase power production to the maximum capacity at the Casa Diablo complex, the County was required to add the estimated daily VOC emissions from the proposed M-1 (i.e. 205 lbs/day) unit to the estimated daily VOC operational emissions from the MP-I unit (i.e. 500 lbs/day) in order to evaluate Project impacts. Again, the EIR fails to include the required analysis. Contrary to the EIR, the Project would increase, not reduce, daily emissions of VOCs. As described by Dr.

⁵¹ FEIR, Response to Comment 9D-06, p. 40.

⁵² Comments of Petra Pless, October 17, 2012, p. 10 (Attachment 2).

⁵³ *Id.* at p. 11.

⁵⁴ *Ibid.*

⁵⁵ See CEQA Guidelines § 15125 subd. (a).

Pless, the contemporaneous operation of the existing MP-I plant and the Project would result in increased emissions of VOCs, which as ozone precursors would contribute to the region's non-attainment status of this pollutant.⁵⁶ The County is required to provide a corrected analysis in a revised DEIR.

V. THE EIR FAILS TO IDENTIFY AND ADDRESS THE PROJECT'S POTENTIALLY SIGNIFICANT IMPACTS

CEQA has two basic purposes, neither of which the EIR satisfies. First, CEQA is designed to inform decision-makers and the public about the potential, significant environmental effects of a project.⁵⁷ CEQA requires that an agency analyze potentially significant environmental impacts in an EIR.⁵⁸ The EIR should not rely on scientifically outdated information to assess the significance of impacts. The EIR's evaluation of impacts should be based on "extensive research and information gathering," including consultation with state and federal agencies, local officials, and the interested public.⁵⁹ To be adequate, the EIR should demonstrate the lead agency's good faith effort at full disclosure.⁶⁰ Its purpose is to inform the public and responsible officials of the environmental consequences of their decisions *before* they are made. For this reason, the EIR has been described as "an environmental 'alarm bell' whose purpose is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return."⁶¹ Thus, the EIR protects not only the environment but also informed self-government."⁶²

Second, CEQA directs public agencies to avoid or reduce environmental damage when possible by requiring alternatives or mitigation measures.⁶³ The EIR serves to provide public agencies, and the public in general, with information about the effect that a proposed project is likely to have on the environment and to "identify ways that environmental damage can be avoided or significantly

⁵⁶ Pless Comments, October 17, 2012, at p. 11.

⁵⁷ Cal. Code Regs., tit. 14, § 15002, subd. (a)(1) (hereafter "CEQA Guidelines").

⁵⁸ See Pub. Resources Code, § 21000; CEQA Guidelines, § 15002.

⁵⁹ *Berkeley Keep Jets Over the Bay Comm. v. Board of Port Comm.* (2001) 91 Cal. App.4th 1344, 1367 and *Schaeffer Land Trust v. San Jose City Council* (1989) 215 Cal.App.3d 612, 620.

⁶⁰ CEQA Guidelines, § 15151; see also *Laurel Heights I* (1998) 47 Cal.3d 376, 406.

⁶¹ *County of Inyo v. Yorty* (1973) 32 Cal.App.3d 795, 810.

⁶² *Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 564 (citations omitted).

⁶³ CEQA Guidelines, § 15002(a)(2)-(3); *Berkeley Keep Jets Over the Bay Comm.*, 91 Cal.App.4th at 1354.

reduced.”⁶⁴ If a project has a significant effect on the environment, the agency may approve the project only upon a finding that it has “eliminated or substantially lessened all significant effects on the environment where feasible,” and that any unavoidable significant effects on the environment are “acceptable due to overriding concerns” specified in CEQA section 21081.⁶⁵

The EIR fails to satisfy these basic purposes of CEQA. Although the record is replete with evidence regarding the Project’s unaddressed potentially significant impacts on air quality and biological resources, the EIR fails to identify and address these impacts. In particular, the Project will result in significant, unmitigated emissions of regulated pollutants, and potentially significant impacts on the endangered Owens tui chub, and biological resources and wildlife within the Project vicinity. We address several of these issues below, and incorporate by reference our prior comments.

A. The EIR Fails to Identify and Address the Project’s Significant Impacts on Air Quality

We previously commented that the Project would result in potentially significant impacts because the Project’s rate of operational emissions of VOCs, an ozone precursor, exceeds CEQA significance thresholds.⁶⁶ Further, we commented that the Project’s emissions would be significant during all operational phases of the Project – i.e. the two years of simultaneous operation of the MP-I and M-1 facilities, as well as the expected remaining 30-year lifespan of the new M-1 facility after the MP-I facility is decommissioned.⁶⁷ In response to comments, the County maintains that Project emissions are insignificant because the cited CEQA threshold of 55 lbs per day does not apply to this Project. The County’s reasoning is unsound. Because the County is in nonattainment of state ambient air quality standards for ozone, any increase in emissions can be deemed significant. However, as demonstrated by Dr. Pless, the Project’s emissions also exceed the more lenient significant threshold of 250 lbs/day relied on by the County in the EIR.

In comments to the Planning Commission during the October 11th hearing, we explained that the EIR underestimates Project operational emissions of ozone precursors. In particular, the estimates provided in the EIR fail to include

⁶⁴ CEQA Guidelines, § 15002 subd. (a)(2).

⁶⁵ CEQA Guidelines, § 15092, subd. (b)(2)(A)-(B).

⁶⁶ *See, e.g.*, FEIR, Comment 9-14, 9D-09, 9-23, 9-24.

⁶⁷ *Ibid.*

emissions from the M-1 plant's pressure relief valves, and are otherwise unreliable.⁶⁸ When accounting for fugitive emissions of ozone precursors from all Project components, Dr. Pless estimates that the Project operational VOC emissions could range from 256 lbs/day to 291.6 lbs/day, considerably in excess of the significant threshold relied upon by the County.⁶⁹ Dr. Pless concludes, in reliance on the County's preferred significance threshold of 250 lbs/day, that Project emissions are potentially significant.⁷⁰ The EIR fails to identify this significant impact or to propose mitigation to reduce Project emissions to a less than significant level. The County is required to address the Project's air quality impacts in a revised DEIR.

B. The EIR's Conclusions Regarding Projects Impacts on the Owens Tui Chub Are Unsupported

The RDEIR states that "there have been historic concerns that cumulative geothermal development in Long Valley may directly affect the subsurface hydrology associated with these springs." The RDEIR acknowledges that continued geothermal fluid production may result in potentially significant impacts to the federally endangered Owens tui chub:

the Owens tui chub and the designated critical aquatic habitat supported by these springs has the potential to be affected by changes in spring flow rate, temperature, or chemistry that could potentially result from changes to groundwater production, long-term geothermal fluid production or other factors

The EIR then dismisses the potential for a significant impact, relying on the assumption the Project would not change the existing rate of geothermal production or injection at the Casa Diablo complex and that the Project impacts would be mitigated pursuant to the County's biological and hydrological monitoring programs. The County's conclusions are invalid because they are unsupported.

First, as described above and contrary to the County, the Project would increase the rate of geothermal production and injection because the existing MP-I plant is operating significantly below maximum capacity and the proposed M-1 unit would increase production above existing conditions at the Casa Diablo complex.

⁶⁸ See Pless Comments, October 17, 2012, at pp. 5-7.

⁶⁹ *Id.* at p. 6-9.

⁷⁰ *Ibid.*

Second, the County lacks substantial evidence to support the conclusion that the monitoring program has prevented changes to the thermal component in Hot Creek and the Hot Creek Fish Hatchery and, consequently, modifications to Owens tui chub habitat. To the contrary, substantial evidence shows that changes have occurred to the resource even after the monitoring program was adopted by the County. As described by Scott Cashen there has been a significant decline in Owens tui chub populations in the Hot Creek Headsprings since 1988, the thermal water component in the springs has declined by 30-40% since 1990, and water level declines have been associated with increased power production activities.⁷¹

Substantial evidence shows that the Project may result in potentially significant, unmitigated impacts to the Owens tui chub.⁷² The Project will increase the existing rate of power production and will extend power production activities by extending the operational life of the MP-I unit through the construction of the M-1 plant. As shown by Scott Cashen, extending the duration of resource extraction could also lead to a further reduction in the thermal water component within Owens tui chub habitat.⁷³ The County is required to address the Project's potentially significant impacts to the Owens tui chub in a revised DEIR.

C. The EIR Fails to Address the Project's Potentially Significant Impacts on Biological Resources

An EIR must identify and focus on the possible significant environmental impacts of a proposed project.⁷⁴ In 2006, the USGS began collecting data on tree kills. As demonstrated by Scott Cashen in his comments on the RDEIR, there is little doubt that tree kills and vegetation depletion are linked to geothermal power production activities and this effect is documented at the Casa Diablo geothermal complex.⁷⁵ The EIR fails to consider the Project's potentially significant impacts on vegetation depletion. In particular, the EIR fails to consider the impacts on vegetation depletion, and species that depend on the habitat in the Project vicinity, due to continuing power production activities once the MP-I unit is decommissioned. Substantial evidence shows that extending the duration of resource extraction is potentially significant because it could perpetuate tree-kills and have an impact on

⁷¹ Cashen Comments, October 18, 2012, pp. 1-4; *see also* CURE Comments on DEIR, August 26, 2011, Exhibit B.

⁷² Cashen Comments, October 18, 2012, pp. 1-4; *see also* CURE Comments on DEIR, August 26, 2011, Exhibit B; *see also* Cashen Comments, October 18, 2012, pp. 4-5.

⁷³ Cashen Comments, October 18, 2012, at p. 5.
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species that depend on trees for habitat.⁷⁶ The County is required to address this Project impact in a revised DEIR.

D. The EIR's Conclusions Regarding Projects Impacts on Hydrological Resources Are Unsupported

We previously commented that the conclusion in the EIR that Project impacts to hydrological resources are insignificant lacks basis and is invalid under CEQA. In particular, the EIR assumes that because the M-1 project consists of a closed loop geothermal system, the cold geothermal fluid would be returned to the geothermal reservoir via the geothermal injection wells, essentially replacing the produced hot geothermal fluid circulated through the binary power plant facilities. Substantial evidence in the record contradicts this assumption. In particular, record evidence shows that less than 10% of the fluid injected at Casa Diablo moves into the production zone and that most flows away from the wellfield within the injection reservoir.⁷⁷ The County fails to address the impacts associated with increasing power production activities with the construction of the M-1 replacement plant.⁷⁸ Finally, the conclusion in the EIR that the County's hydrologic monitoring program will prevent potentially significant impacts to hydrological resources from power production activities is contradicted by the record. As demonstrated by technical expert Matthew Hagemann P.G. C. Hg, the monitoring program is insufficient as a preventative measure because it fails to include quantitative significance thresholds and is, therefore, unenforceable.⁷⁹

Contrary to the County, evidence submitted by CURE demonstrates that changes have occurred in the hydrological system at Casa Diablo, and that the Project may further exacerbate the degradation of geothermal resource through

⁷⁴ Pub. Resources Code, § 21100 subd. (b)(1); CEQA Guidelines, § 15126, subd. (a).

⁷⁵ CURE Comments on RDEIR, March 26, 2012, Exhibit A; *see also* CURE's Comments on RDEIR, March 26, 2012, pp. 17-18.

⁷⁶ Scott Cashen Comments, October 18, 2012, p. 5.

⁷⁷ CURE DEIR Comments, August 26, 2011, Exhibit C, at p. 4.

⁷⁸ *See* FEIR, Response to Comments 9-17, 9A-17, 9-19.

⁷⁹ Matthew Hagemann Comments, October 18, 2012 (**Attachment C**); *see also* discussion of monitoring program and how it is invalid as a matter of law in CURE's comments on the FEIR. *See* CURE Comments on the FEIR, October 10, 2012, pp. 6-7.

increased and extended power production activities.⁸⁰ The County is required to address these potentially significant impacts in a revised DEIR.

VI. THE COUNTY FAILED TO RESPOND TO COMMENTS ON THE EIR

“The evaluation and response to public comments is an essential part of the CEQA process.”⁸¹ CEQA requires the lead agency to evaluate and respond to all environmental comments it receives on draft EIRs within the public review period.⁸² The lead agency’s written responses must specifically explain its reasons for rejecting suggestions received in comments. “There must be a good faith, reasoned analysis in response. Conclusory statements unsupported by factual information will not suffice.”⁸³

The EIR fails to respond to several environmental comments, including but not limited to the following:

1. The existing environmental baseline for geothermal resource extraction and reinjection and the Project’s incremental impact on that regime due to the replacement of the aging MP-I facility;⁸⁴
2. The potentially significant impact to biological resources and special status species resulting from extending the operational life of the aging MP-I project by 30 years through the construction of the replacement M-1 facility;⁸⁵
3. The County’s failure to disclose a potentially significant impact to biological resources resulting from the Project’s conflict with the Mono County General Plan;⁸⁶
4. The potentially significant impact to biological resources through vegetation depletion and “tree kills” due to the Project’s

⁸⁰ See CURE Comments on the DEIR, August 26, 2011; CURE Comments on the RDEIR, March 26, 2012.

⁸¹ CEQA Guidelines § 15088.

⁸² See Pub. Resources Code § 21091 subd. (d)(2)(A).

⁸³ CEQA Guidelines § 15088 subd. (c).

⁸⁴ See FEIR, Comment and Response 9-12; *see also id.* at Comments and Responses 9B-01, 9-16.

⁸⁵ See FEIR, Comment and Response 9-10.

⁸⁶ See FEIR, Comment and Response 9-13.

extending the operational life of the aging MP-I project by 30 years with the construction of the replacement M-1 facility;⁸⁷

5. The County's failure to disclose the goals of applicable deer management plans to enable the public to evaluate potential conflicts with Mono County General Plan;⁸⁸ and
6. Comments regarding the potentially significant impacts to geothermal resources, including continual depletion of the resource, through prospective power production activities.⁸⁹

The County violated CEQA by failing to respond to these comments.

VII. CEQA REQUIRES THE COUNTY TO RECIRCULATE THE EIR

A lead agency is required to recirculate an EIR when "significant new information" is added to the EIR after public notice is given of the availability of the DEIR, but before certification.⁹⁰ The CEQA Guidelines define "significant new information" as changes in the project or environmental settings, as well as additional data or other information that deprives the public of a meaningful opportunity to comment on significant impacts or feasible mitigation measures.⁹¹ Specifically, "significant new information" includes: a new significant environmental impact resulting from the project or from a new mitigation measure proposed to be implemented; a substantial increase in the severity of an environmental impact unless mitigation measures are adopted that reduce the impact to a level of insignificance; and a feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.⁹² Recirculation is also appropriate if the draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment was precluded.⁹³

⁸⁷ See FEIR, Comments and Responses 9-17, 9A-17.

⁸⁸ See FEIR, Comment and Response, 9A-11.

⁸⁹ See FEIR, Comment and Response 9-19.

⁹⁰ Pub. Resources Code, § 21092.1; Cal. Code Regs. tit. 14, § 15088.5 ("CEQA Guidelines").

⁹¹ CEQA Guidelines, § 15088.5, subd. (a).

⁹² CEQA Guidelines, § 15088.5, subd. (a); see also *Laurel Heights Improvement Assn. v. Regents of Univ. of Cal.* (1993) 6 Cal.4th 1112, 1129.

⁹³ *Ibid.*

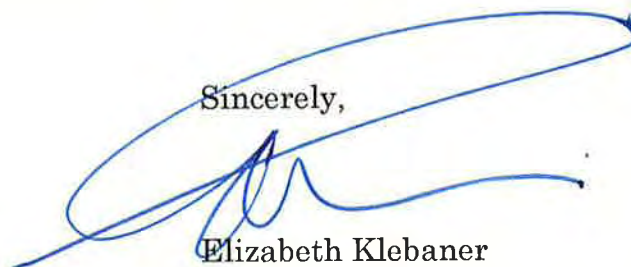
The failure to recirculate an EIR after significant new information has been added turns the process of environmental evaluation into a “useless ritual” which could jeopardize “responsible decision-making.”⁹⁴ One of the purposes of CEQA is to inform the public and its responsible officials of the environmental consequences of their decisions before they are made. Thus, the EIR protects not only the environment but also informed self-government.”⁹⁵ Both, the opportunity to comment and the preparation of written responses to those comments are crucial parts of the EIR process. In this case, recirculation is required because the FEIR, for the first time, expressly identifies a potentially significant impact to mule deer.⁹⁶ This admission was made more than one year after the County first released the EIR for public review. The identification of a new potentially significant impact on mule deer is “significant new information” requiring recirculation of the EIR. Now that the County concedes that impacts to mule deer are potentially significant, further analysis is required to ensure that the mitigation measures proposed in the FEIR will reduce impacts to a less than significant level.

VIII. ACTIONS REQUESTED

We request that the Board uphold the appeal, vacate the Planning Commission’s October 11th approvals and stay a decision on the Conditional Use Permit Application No. 12-004 until the County complies with CEQA. We further request that the Board direct the Planning Division to revise and re-circulate the EIR, consistent with this appeal letter, prior to any action approving the Project. In this way, the County can ensure that it is acting in accordance with state law and that the Project’s adverse impacts are disclosed and mitigated to the fullest extent feasible as required by CEQA.

Thank you for your consideration of this appeal.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Elizabeth Klebaner', is written over the word 'Sincerely,'.

Elizabeth Klebaner

⁹⁴ *Sutter Sensible Planning v. Sutter County Bd.* (1981) 122 Cal.App.3d 813, 822.

⁹⁵ *Citizens of Goleta Valley v. Bd. of Supervisors* (1990) 52 Cal.3d 553, 564 (citations omitted).

⁹⁶ See FEIR, Response 9-25 *cf.* RDEIR pp. 4-65-67.

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EK:clv
Attach.

Cc: Linda Roberts, Clerk of the Board of Supervisors, 74 School Street, Annex 1,
Bridgeport, CA 93517 (via overnight mail)

Attachment 1

October 18, 2012

Ms. Elizabeth Klebaner
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080

Subject: Comments on the Environmental Impact Report for the Mammoth Pacific I Replacement Project

Dear Ms. Klebaner:

This letter contains my comments on the Final Environmental Impact Report (“FEIR”) prepared for Mammoth Pacific Limited Partnership’s (“Applicant”) proposed Mammoth Pacific I Replacement Project (“Project”). I submitted comment letters in response to the Draft Environmental Impact Report and the Revised Draft Environmental Impact Report (“RDEIR”) prepared by Mono County (“County”). These comment letters established my professional qualifications and described the actions I took to evaluate the DEIR, RDEIR, and the underlying analyses, and are incorporated by reference here.

Impacts to Critical Habitat for the Owens Tui Chub

The Owens tui chub (*Gila bicolor snyderi*) is a subspecies of fish that is listed as endangered under the state and federal Endangered Species Acts. It is known to occur at only six sites, one of which is the headwaters of Hot Creek above the Hot Creek Fish Hatchery. The Hot Creek Headsprings (or Headwaters) site consists of two springs, “AB Spring” and “CD Spring,” and it is one of two sites that have been designated as critical habitat for the subspecies. In designating critical habitat for the subspecies, the U.S. Fish and Wildlife (“USFWS”) identified activities that may adversely affect critical habitat for the Owens tui chub. These include “activities that decrease available water or cause a significant change in the physical or chemical properties (e.g., temperature, pH, or dissolved gases) of the water.”¹ Hydrologic monitoring data indicate the thermal water component in the Hot Creek Headsprings has declined by 30% to 40% since 1990.² The data also indicate there has been a decline in the volume of thermal water entering the Hot Creek Headsprings since the early 1990s.³

Studies conducted by the USGS indicate the decline in the thermal water component and other surficial changes in the vicinity of Casa Diablo are due to geothermal

¹ Department of the Interior, US Fish and Wildlife Service. 1985. Endangered and Threatened Wildlife and Plants; Endangered Status and Critical Habitat Designation for the Owens Tui Chub. Final rule. Federal Register 50(150): 31592-31597.

² Sorey ML. 2000. Geothermal Development and Changes in Surficial Features: Examples from the Western United States. Proceedings of the World Geothermal Congress 2000; Kyushu - Tohoku, Japan, May 28 - June 10, 2000. pp. 705-711. See also Second Revised DEIR, Appendix M.

³ Second Revised DEIR, Appendix M.

development.⁴ For example, those studies have reported the following:

1. “[t]he hydrologic monitoring program has detected changes in the hydrologic system caused by geothermal development and variations in precipitation and recharge (Howle and Farrar, 1997). For example, we have delineated decreases in thermal-spring discharge at sites within about 5 km to the east of Casa Diablo that are caused by subsurface pressure declines at the geothermal well field. No changes have as yet been detected in the springs in Hot Creek gorge. There has also been an increase in steam discharge at Casa Diablo and sites farther west due to increased boiling in the geothermal reservoir caused by geothermal production;”⁵
2. “[w]ater levels in geothermal well CW-3 (5 km east of Casa Diablo) show the effects of pressure reductions caused by the withdrawal of geothermal fluid at Casa Diablo; water levels declined significantly in 1991 when the production rate was increased to supply two new power plants. A similar water level decline has not yet occurred in geothermal observation well CH-10B, located 9 km east of Casa Diablo;”⁶
3. “[a]t the Hot Creek Fish Hatchery, chemical-flux measurements show that the thermal-water component in the springs has declined by some 30-40% since 1990;”⁷
4. “[t]he best-documented cases [of changes in surficial thermal features] are for the Casa Diablo area in Long Valley caldera, California and for Steamboat Springs, Nevada where hydrologic monitoring programs have delineated some combination of declines in thermal-water discharge, increases in fumarolic steam discharge, and subsidence.”⁸

The Hot Creek Headsprings are located less than four kilometers east of Casa Diablo (i.e., within the area that has exhibited surficial changes due to geothermal development). However, the EIR states “no substantive impacts on the Hot Creek headsprings supporting the Owens tui chub critical habitat could be attributed to the existing geothermal development.”⁹ The EIR does not define “substantive impact.” The County also has not provided hydrologic and biologic resource monitoring analyses that would enable me to assess whether the impacts attributable to geothermal development would

⁴ Sorey ML. 2000. Geothermal Development and Changes in Surficial Features: Examples from the Western United States. Proceedings of the World Geothermal Congress 2000; Kyushu - Tohoku, Japan, May 28 - June 10, 2000. pp. 705-711. See also US Geological Service. n.d. Long Valley Caldera Hydrologic Studies [internet]. Available at:

<http://pubs.usgs.gov/dds/dds-81/Intro/MonitoringData/Hydrologic/Hydro.html>.

⁵ USGS. N.d. Long Valley Caldera Hydrologic Studies [internet]. Available at: <http://pubs.usgs.gov/dds/dds-81/Intro/MonitoringData/Hydrologic/Hydro.html>.

⁶ *Ibid.*

⁷ Sorey ML. 2000. Geothermal Development and Changes in Surficial Features: Examples from the Western United States. Proceedings of the World Geothermal Congress 2000; Kyushu - Tohoku, Japan, May 28 - June 10, 2000. pp. 705-711.

⁸ *Ibid.*

⁹ RDEIR, p. 4-71.

be potentially significant to biological resources such as the Owens tui chub. For example, although the Second RDEIR included hydrologic monitoring data, these data were limited to graphs depicting the relationship between a dependent variable (e.g., water temperature) and independent variable (e.g., year). The graphs provide limited value in assessing potential impacts to biological resources without: (a) statistical analysis, and (b) analytical interpretation of the results.

For example, the graphs depict what appears to be a *statistically significant* drop in the thermal water component in the AB Spring and CD Spring beginning in 1993. In 1988, prior to the decrease in thermal water to the springs, the population estimate for Owens tui chub in the AB Spring was 334 ± 105 , and it was 523 ± 146 in the CD Spring.¹⁰ In 1999, after the decrease in thermal water, the population estimate for the AB Spring was 180 to 245, and no tui chub were detected in the CD Spring.¹¹ The EIR fails to analyze whether the apparent decline in the tui chub populations was related to (a) the corresponding drop in the thermal water component; or (b) other factors (e.g., predation). Thermal water entering the Hot Creek Headsprings has a different chemical composition than non-thermal water, and information provided by the USFWS suggests the chemicals present in the thermal water benefit the Owens tui chub.¹² Consequently, one can infer that the apparent decline in the Owens tui chub populations *could* be due to the decline in the thermal water component.

According to the EIR, the maximum physical pumping capacity for the Casa Diablo complex is approximately 6,900,000 pounds per hour.¹³ However, the EIR fails to establish whether the Casa Diablo complex is now operating at full capacity. Comments submitted in response to the RDEIR indicate power production at the existing MP-I facility averaged less than 50 percent of its capacity between 2007 and 2010.¹⁴ This suggests that: (a) pumping from the production wells has also been below capacity; and/or (b) pumping has been at capacity, but the existing MP-I facility has been incapable of producing power at its original capacity due to operational inefficiencies (e.g., degraded equipment). Any incremental increase in pumping due to the Project, as compared to existing conditions, has the potential to exacerbate changes to critical habitat for the Owens tui chub by causing further declines in the thermal water component.

Biologic and Hydrologic Monitoring

The County has indicated that the Project will be subject to the same hydrologic and biologic monitoring and remedial action program requirements as those that are required for MP-II and PLES-I. According to the RDEIR, “[t]he adoption of the prescribed hydrologic and biologic monitoring and mitigation measure program by the MP-I Project would reduce the potential adverse effects of the Project on the Owens tui chub critical

¹⁰ US Fish and Wildlife Service. 2009. Owens Tui Chub: 5-Year Review and Evaluation, Table 1.

¹¹ *Ibid.*

¹² U.S. Fish and Wildlife Service. 1998. Owens Basin Wetland and Aquatic Species Recovery Plan, Inyo and Mono Counties, California. Portland, Oregon, p. 92.

¹³ FEIR, Response to Comment 9-12.

¹⁴ RDEIR Comment 9-12 and 9B-1.

habitat [and Hot Creek Fish Hatchery] to below the level of significance.”¹⁵ This statement cannot be verified because the FEIR does not describe the current rate of power production, and the impacts that increasing production above current conditions would have on the Owens tui chub. In addition, the conclusion in the FEIR that impacts would be reduced to below the level of significance is contradicted by the fact that (a) the monitoring and mitigation referenced in the RDEIR was ineffective in reversing the decline of thermal water to the Hot Creek Headsprings that began in 1993; and (b) there appears to have been a significant decline in Owens tui chub populations in the Hot Creek Headsprings that may be due to the decline of thermal water.

Furthermore, the hydrologic and biologic monitoring and mitigation program required for MP-II and PLES-I may be inconsistent with USFWS Recovery Plan for the Owen tui chub. In particular, Recovery Task 2.4.2 is:

Protect spring discharge. Geothermal development and groundwater pumping in Long Valley may alter aquifer dynamics. **Springs supporting Hot Creek should be protected from adverse impacts of decreased discharge, and changes in the thermal and chemical characteristics of water.** Monitoring programs should be [designed to] determine characteristics (temporal, chemical, physical) of natural spring discharge, if spring discharge is being affected, and the location of activities causing adverse effects. Actions should be taken to protect discharge at 1998 levels.¹⁶

Based on my review, the hydrological and biological monitoring program has not ensured consistency with the Recovery Task (i.e., it has not prevented potential adverse impacts associated with changes in the thermal and chemical characteristics of water in AB Spring and CD Spring), or that actions are, have been or, or will be taken to protect discharge at 1998 levels.

Impacts Due to Increased Pumping and Project Lifespan

The principal reason for the M-1 Replacement Project is to replace the aging, leak-prone MP-I unit, whose condensing capacity has been severely restricted due to the need to plug damaged condenser tubes.¹⁷ According to the RDEIR, “[t]he aging MP-I power plant would be expected to continue to operate as long as repair and restoration of the facility remains economically practical, but the long-term continuing utilization of the MP-I project geothermal resources could be shortened due to eventual equipment failure.”¹⁸ The aforementioned information contradicts the statement in the FEIR that the existing MP-I Project would continue to operate *indefinitely* if the MP-I Replacement Project is not approved.¹⁹ It is reasonable to assume that the Project will extend the duration of geothermal resource extraction from the existing wellfield long after the MP-I unit’s operational life.

¹⁵ RDEIR, p. 12.

¹⁶ U.S. Fish and Wildlife Service. 1998. Owens Basin Wetland and Aquatic Species Recovery Plan, Inyo and Mono Counties, California. Portland, Oregon, p. 92. [emphasis added].

¹⁷ RDEIR, p. 4-131.

¹⁸ RDEIR, p. 2-32.

¹⁹ FEIR, p. 33.

Extending the duration of resource extraction could perpetuate tree-kills, as discussed in my earlier comments, and have an impact on sensitive species that depend on live trees for habitat. Extending the duration of resource extraction could also lead to a further reduction in the thermal water component within critical habitat for the Owens tui chub. Indeed, the RDEIR indicates *extended geothermal resource production and injection activities from the MP-I Project* could result in changes in the temperature, flow rate or quality of the Hot Creek headsprings, and that these changes could be a potentially significant impact under CEQA.²⁰ The EIR fails to address these potentially significant impacts.

The FEIR does not provide a mitigation and monitoring program for tree-kills that may be influenced by the Project. In addition, it is my professional opinion that the hydrologic and biologic monitoring and remedial action program imposed by the County currently lacks the ability to ensure that the Project would not have a significant impact to critical habitat for the Owens tui chub in the Hot Creek Headsprings.

Sincerely,

A handwritten signature in black ink, appearing to read "Scott Cashen", with a stylized, flowing script.

Scott Cashen, M.S.
Senior Biologist

²⁰ RDEIR, p. 4-135.

Scott Cashen, M.S.

Senior Biologist / Forest Ecologist

3264 Hudson Avenue, Walnut Creek, CA 94597. (925) 256-9185. scottcashen@gmail.com

Scott Cashen has 20 years of professional experience in natural resources management. During that time he has worked as a field biologist, forester, environmental consultant, and instructor of Wildlife Management. Mr. Cashen currently operates an independent consulting business that focuses on CEQA/NEPA compliance issues, endangered species, scientific field studies, and other topics that require a high level of scientific expertise.

Mr. Cashen has knowledge and experience with many taxa, biological resource issues, and environmental regulations. This knowledge and experience has made him a highly sought after biological resources expert. To date, he has been retained as a biological resources expert for over 40 projects. Mr. Cashen's role in this capacity has encompassed all stages of the environmental review process, from initial document review through litigation support and expert witness testimony.

Mr. Cashen is a recognized expert on the environmental impacts of renewable energy development. He has been involved in the environmental review process for 28 renewable energy projects, and he has been a biological resources expert for more of California's solar energy projects than any other private consultant. In 2010, Mr. Cashen testified on 5 of the Department of the Interior's "Top 6 Fast-tracked Solar Projects" and his testimony influenced the outcome of each of these projects.

Mr. Cashen is a versatile scientist capable of addressing numerous aspects of natural resource management simultaneously. Because of Mr. Cashen's expertise in both forestry and biology, Calfire had him prepare the biological resource assessments for all of its fuels treatment projects in Riverside and San Diego Counties following the 2003 Cedar Fire. Mr. Cashen has led field studies on several special-status species, including plants, fish, reptiles, amphibians, birds, and mammals. Mr. Cashen has been the technical editor of several resource management documents, and his strong scientific writing skills have enabled him to secure grant funding for several clients.

AREAS OF EXPERTISE

- CEQA, NEPA, and Endangered Species Act compliance issues
- Comprehensive biological resource assessments
- Endangered species management
- Renewable energy
- Forest fuels reduction and timber harvesting
- Scientific field studies, grant writing and technical editing

EDUCATION

M.S. Wildlife and Fisheries Science - The Pennsylvania State University (1998)

B.S. Resource Management - The University of California, Berkeley (1992)

PROFESSIONAL EXPERIENCE

Litigation Support / Expert Witness

As a biological resources expert, Mr. Cashen reviews CEQA/NEPA documents and provides his client(s) with an assessment of biological resource issues. He then prepares written comments on the scientific and legal adequacy of the project's environmental documents (e.g., EIR). For projects requiring California Energy Commission (CEC) approval, Mr. Cashen has submitted written testimony (opening and rebuttal) in conjunction with oral testimony before the CEC.

Mr. Cashen can lead field studies to generate evidence for legal testimony, and he can incorporate testimony from his deep network of species-specific experts. Mr. Cashen's clients have included law firms, non-profit organizations, and citizen groups.

REPRESENTATIVE EXPERIENCE

Solar Energy Facilities

- Abengoa Mojave Solar Project
- Avenal Energy Power Plant
- Beacon Solar Energy Project
- Blythe Solar Power Project
- Calico Solar Project
- Calipatria Solar Farm II
- Carrizo Energy Solar Farm
- Catalina Renewable Energy Project
- Fink Road Solar Farm
- Genesis Solar Energy Project
- Heber Solar Energy Facility
- Imperial Valley Solar Project
- Ivanpah Solar Electric Generating
- Maricopa Sun Solar Complex
- Mt. Signal and Calexico Solar
- San Joaquin Solar I & II
- Solar Gen II Projects
- SR Solis Oro Loma
- Vestal Solar Facilities
- Victorville 2 Power Project

Geothermal Energy Facilities

- East Brawley Geothermal
- Mammoth Pacific 1 Replacement
- Western GeoPower Plant and

Wind Energy Facilities

- Catalina Renewable Energy Project
- Ocotillo Express Wind Energy
- San Diego County Wind Ordinance
- Tres Vaqueros Repowering Project
- Vasco Winds Relicensing Project

Biomass Facilities

- Tracy Green Energy Project

Development Projects

- Alves Ranch
- Aviano
- Chula Vista Bayfront Master Plan
- Columbus Salame
- Concord Naval Weapons Station
- Faria Annexation
- Live Oak Master Plan
- Napa Pipe
- Roddy Ranch
- Rollingwood
- Sprint-Nextel Tower

Project Management

Mr. Cashen has managed several large-scale wildlife, forestry, and natural resource management projects. Many of these projects have required hiring and training field crews, coordinating with other professionals, and communicating with project stakeholders. Mr. Cashen's experience in study design, data collection, and scientific writing make him an effective project manager, and his background in several different natural resource disciplines enable him to address the many facets of contemporary land management in a cost-effective manner.

REPRESENTATIVE EXPERIENCE

Wildlife Studies

- Peninsular Bighorn Sheep Resource Use and Behavior Study: (CA State Parks)
- "KV" Spotted Owl and Northern Goshawk Inventory: (USFS, Plumas NF)
- Amphibian Inventory Project: (USFS, Plumas NF)
- San Mateo Creek Steelhead Restoration Project: (Trout Unlimited and CA Coastal Conservancy, Orange County)
- Delta Meadows State Park Special-status Species Inventory: (CA State Parks, Locke)

Natural Resources Management

- Mather Lake Resource Management Study and Plan – (Sacramento County)
- Placer County Vernal Pool Study – (Placer County)
- Weidemann Ranch Mitigation Project – (Toll Brothers, Inc., San Ramon)
- Ion Communities Biological Resource Assessments – (Ion Communities, Riverside and San Bernardino Counties)
- Del Rio Hills Biological Resource Assessment – (The Wyro Company, Rio Vista)

Forestry

- Forest Health Improvement Projects – (CalFire, SD and Riverside Counties)
- San Diego Bark Beetle Tree Removal Project – (SDG&E, San Diego Co.)
- San Diego Bark Beetle Tree Removal Project – (San Diego County/NRCS)
- Hillslope Monitoring Project – (CalFire, throughout California)

Biological Resources

Mr. Cashen has a diverse background with biological resources. He has conducted comprehensive biological resource assessments, habitat evaluations, species inventories, and scientific peer review. Mr. Cashen has led investigations on several special-status species, including ones focusing on the foothill yellow-legged frog, mountain yellow-legged frog, desert tortoise, steelhead, burrowing owl, California spotted owl, northern goshawk, willow flycatcher, Peninsular bighorn sheep, red panda, and forest carnivores.

REPRESENTATIVE EXPERIENCE

Avian

- Study design and Lead Investigator - Delta Meadows State Park Special-Status Species Inventory (*CA State Parks: Locke*)
- Study design and lead bird surveyor - Placer County Vernal Pool Study (*Placer County: throughout Placer County*)
- Surveyor - Willow flycatcher habitat mapping (*USFS: Plumas NF*)
- Independent surveyor - Tolay Creek, Cullinan Ranch, and Guadacanal Village restoration projects (*Ducks Unlimited/USGS: San Pablo Bay*)
- Study design and Lead Investigator - Bird use of restored wetlands research (*Pennsylvania Game Commission: throughout Pennsylvania*)
- Study design and surveyor - Baseline inventory of bird species at a 400-acre site in Napa County (*HCV Associates: Napa*)
- Surveyor - Baseline inventory of bird abundance following diesel spill (*LFR Levine-Fricke: Suisun Bay*)
- Study design and lead bird surveyor - Green Valley Creek Riparian Restoration Site (*City of Fairfield: Fairfield, CA*)
- Surveyor - Burrowing owl relocation and monitoring (*US Navy: Dixon, CA*)
- Surveyor - Pre-construction raptor and burrowing owl surveys (*various clients and locations*)
- Surveyor - Backcountry bird inventory (*National Park Service: Eagle, Alaska*)
- Lead surveyor - Tidal salt marsh bird surveys (*Point Reyes Bird Observatory: throughout Bay Area*)
- Surveyor - Pre-construction surveys for nesting birds (*various clients and locations*)

Amphibian

- Crew Leader - Red-legged frog, foothill yellow-legged frog, and mountain yellow-legged frog surveys (*USFS: Plumas NF*)

- Surveyor - Foothill yellow-legged frog surveys (*PG&E: North Fork Feather River*)
- Surveyor - Mountain yellow-legged frog surveys (*El Dorado Irrigation District: Desolation Wilderness*)
- Crew Leader - Bullfrog eradication (*Trout Unlimited: Cleveland NF*)

Fish and Aquatic Resources

- Surveyor - Hardhead minnow and other fish surveys (*USFS: Plumas NF*)
- Surveyor - Weber Creek aquatic habitat mapping (*El Dorado Irrigation District: Placerville, CA*)
- Surveyor - Green Valley Creek aquatic habitat mapping (*City of Fairfield: Fairfield, CA*)
- GPS Specialist - Salmonid spawning habitat mapping (*CDFG: Sacramento River*)
- Surveyor - Fish composition and abundance study (*PG&E: Upper North Fork Feather River and Lake Almanor*)
- Crew Leader - Surveys of steelhead abundance and habitat use (*CA Coastal Conservancy: Gualala River estuary*)
- Crew Leader - Exotic species identification and eradication (*Trout Unlimited: Cleveland NF*)

Mammals

- Principal Investigator – Peninsular bighorn sheep resource use and behavior study (*California State Parks: Freeman Properties*)
- Scientific Advisor – Study on red panda occupancy and abundance in eastern Nepal (*The Red Panda Network: CA and Nepal*)
- Surveyor - Forest carnivore surveys (*University of CA: Tahoe NF*)
- Surveyor - Relocation and monitoring of salt marsh harvest mice and other small mammals (*US Navy: Skagg's Island, CA*)
- Surveyor – Surveys for Monterey dusky-footed woodrat. Relocation of woodrat houses (*Touré Associates: Prunedale*)

Natural Resource Investigations / Multiple Species Studies

- Scientific Review Team Member – Member of the science review team assessing the effectiveness of the US Forest Service's implementation of the Herger-Feinstein Quincy Library Group Act.
- Lead Consultant - Baseline biological resource assessments and habitat mapping for CDF management units (*CDF: San Diego, San Bernardino, and Riverside Counties*)

- Biological Resources Expert – Peer review of CEQA/NEPA documents (*Adams Broadwell Joseph & Cardoza: California*)
- Lead Consultant - Pre- and post-harvest biological resource assessments of tree removal sites (*SDG&E: San Diego County*)
- Crew Leader - T&E species habitat evaluations for Biological Assessment in support of a steelhead restoration plan (*Trout Unlimited: Cleveland NF*)
- Lead Investigator - Resource Management Study and Plan for Mather Lake Regional Park (*County of Sacramento: Sacramento, CA*)
- Lead Investigator - Biological Resources Assessment for 1,070-acre Alfaro Ranch property (*Yuba County, CA*)
- Lead Investigator - Wildlife Strike Hazard Management Plan (*HCV Associates: Napa*)
- Lead Investigator - Del Rio Hills Biological Resource Assessment (*The Wyro Company: Rio Vista, CA*)
- Lead Investigator – Ion Communities project sites (*Ion Communities: Riverside and San Bernardino Counties*)
- Surveyor – Tahoe Pilot Project: Validation of California’s Wildlife Habitat Relationships (CWHR) Model (*University of California: Tahoe NF*)

Forestry

Mr. Cashen has five years of experience working as a consulting forester on projects throughout California. Mr. Cashen has consulted with landowners and timber operators on forest management practices; and he has worked on a variety of forestry tasks including selective tree marking, forest inventory, harvest layout, erosion control, and supervision of logging operations. Mr. Cashen’s experience with many different natural resources enable him to provide a holistic approach to forest management, rather than just management of timber resources.

REPRESENTATIVE EXPERIENCE

- Lead Consultant - CalFire fuels treatment projects (*SD and Riverside Counties*)
- Lead Consultant and supervisor of harvest activities – San Diego Gas and Electric Bark Beetle Tree Removal Project (*San Diego*)
- Crew Leader - Hillslope Monitoring Program (*CalFire: throughout California*)
- Consulting Forester – Forest inventories and timber harvest projects (*various clients throughout California*)

Grant Writing and Technical Editing

Mr. Cashen has prepared and submitted over 50 proposals and grant applications. Many of the projects listed herein were acquired through proposals he wrote. Mr. Cashen's clients and colleagues have recognized his strong scientific writing skills and ability to generate technically superior proposal packages. Consequently, he routinely prepares funding applications and conducts technical editing for various clients.

PERMITS

U.S. Fish and Wildlife Service Section 10(a)(1)(A) Recovery Permit for the Peninsular bighorn sheep

CA Department of Fish and Game Scientific Collecting Permit

PROFESSIONAL ORGANIZATIONS / ASSOCIATIONS

The Wildlife Society (Conservation Affairs Committee member)

Cal Alumni Foresters

Mt. Diablo Audubon Society

OTHER AFFILIATIONS

Scientific Advisor and Grant Writer – *The Red Panda Network*

Scientific Advisor – *Mt. Diablo Audubon Society*

Grant Writer – *American Conservation Experience*

Scientific Advisor and Land Committee Member – *Save Mt. Diablo*

TEACHING EXPERIENCE

Instructor: Wildlife Management - The Pennsylvania State University, 1998

Teaching Assistant: Ornithology - The Pennsylvania State University, 1996-1997

Attachment 2

Pless Environmental, Inc.

440 Nova Albion Way, Suite 2
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BY EMAIL

October 17, 2012

Elizabeth Klebaner
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080

*Re: Comments on Final Environmental Impact Report for Mammoth Pacific I
Replacement Project*

Dear Ms. Klebaner,

Per your request, I have reviewed the Final Environmental Impact Report ("FEIR") for the Mammoth Pacific I Replacement Project ("Project") published by the County of Mono ("County") as the lead agency under the California Environmental Quality Act ("CEQA")¹ and related documents.^{2,3,4} My review focuses on the Project's impacts related to air quality and hazardous materials.

I. Background

Mammoth Pacific L.P. ("MPLP" or "Applicant"), a subsidiary of Ormat Nevada, Inc. ("Ormat"), proposes to replace its aging Mammoth Pacific Unit I ("MP-I") geothermal power plant located near Casa Diablo Hot Springs in Mono County, CA,

¹ County of Mono, Mammoth Pacific I Replacement Project, Final Environmental Impact Report, California Clearinghouse Number 2011022020, September 2012.

² County of Mono, Mammoth Pacific I Replacement Project, Second Revised Draft Environmental Impact Report, California Clearinghouse Number 2011022020, July 2012.

³ County of Mono, Mammoth Pacific I Replacement Project, Revised Draft Environmental Impact Report, California Clearinghouse Number 2011022020, February 2012; hereinafter "RDEIR."

⁴ County of Mono, Mammoth Pacific I Replacement Project Draft Environmental Impact Report, California Clearinghouse Number 2011022020, July 2011; hereinafter "DEIR."

with a new, more modern and efficient power plant while maintaining the existing geothermal wellfield, pipeline system and ancillary facilities.⁵

The existing MP-I plant, which is located approximately 1,200 feet northeast of the intersection of U.S. Highway 395 and California State Route 203 on 90 acres of private land owned by Ormat, has a design capacity of approximately 14 megawatts ("MW")⁶ and consists of a binary power plant⁷, a geothermal wellfield, production and injection fluid pipelines, and ancillary facilities.⁸ The existing MP-I plant, permitted by the County in 1982 and in operation since 1984, is one of three existing geothermal power plants (MP-I, MP-II, and PLES-I) located in the Casa Diablo geothermal development complex. The three existing plants are operated out of a single control room located adjacent to the existing MP-I generation facilities⁹ and share a common geothermal wellfield.¹⁰ The principal reason for the Project is to replace the aging, leak prone MP-I generation unit, whose condensing capacity has been severely restricted due to the need to plug damaged condenser tubes.¹¹

The M-1 replacement plant, proposed to be located on private land about 500 feet northeast of the existing MP-I generation facilities and immediately adjacent to the existing MP-II generation facilities¹², would have a generating capacity of approximately 18.8 MW (net).¹³ The Project includes: the construction of the new M-1 plant generation facilities; the demolition and decommissioning of the existing MP-I generation facilities; the construction of new paved access roads; the installation of a fire

⁵ FEIR, at p. 1.

⁶ The California Energy Commission's

⁷ A binary cycle power plant is a type of geothermal power plant that allows cooler geothermal reservoirs to be used than with dry steam and flash steam plants. With binary cycle geothermal power plants, pumps are used to pump hot water from a geothermal well, through a heat exchanger, and the cooled water is returned to the underground reservoir. A second "working" or "binary" fluid with a low boiling point, typically a butane or pentane hydrocarbon, is pumped at fairly high pressure through a heat exchanger, where it is vaporized and then directed through a turbine. The vapor exiting the turbine is then condensed by cold air radiators or cold water and cycled back through the heat exchanger. (Description excerpted from Wikipedia.)

⁸ FEIR, at p. 1.

⁹ DEIR, at p. 5-2.

¹⁰ *Id.*, at p. 5-7.

¹¹ *Id.* at p. 4-131.

¹² FEIR, at p. 1.

¹³ FEIR, at p. 4.

water storage tank and motive fluid storage tanks; the construction of an electrical shelter, a machinery room a main electrical room, an electrical substation, interconnection transmission to connect the M-1 plant to the existing Southern California Edison Casa Diablo substation, and two aboveground interconnection pipelines to interconnect the existing geothermal production and injection pipelines to the M-1 plant site.¹⁴ According to the EIR, the Project would not include changes to the existing wellfield or wellfield operations.¹⁵

Geothermal fluids from the existing production wells would be transported to the proposed M-1 geothermal plant through existing production pipelines. The M-1 plant would utilize Ormat Energy Converter ("OEC") technology, a proprietary modular binary geothermal power generation equipment that uses an organic "working" or "motive" fluid for non-contact heat transfer from the geothermal fluid. Specifically, the Project would use an Integrated Two Level Unit ("ITLU"), which provides two levels of heat extraction from the geothermal fluid in a series with a higher temperature and pressure unit, Level 1, and a lower temperature and pressure unit, Level 2. The geothermal heat vaporizes the motive fluid which then turns a binary turbine, which together would turn a common generator producing electricity that would be delivered to the substation and transferred to the interconnection transmission line. The vaporized motive fluid exits the turbine and is condensed in an air-cooled condenser system that uses large fans to pull a cooling air stream 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.¹⁶

The existing MP-I plant uses isobutane as the motive fluid in its binary power generation equipment. The new M-1 plant would use normal pentane (n-pentane) as the binary motive fluid.¹⁷ Both working fluids, isobutane and n-pentane, are volatile organic compounds, which are precursors for the formation of ozone, a regulated air

¹⁴ DEIR, at pp. 2-4-2-17.

¹⁵ *Id.* at p. 1-1.

¹⁶ DEIR, pp. 2-1-2-2.

¹⁷ DEIR, p. 2-2.

pollutant¹⁸ for which short- and long-term state and national ambient air quality standards have been established.¹⁹

The OEC unit contains approximately 250,000 pounds of motive fluid (in the vaporizers, preheaters, condensers and piping) in a closed-loop system, with no significant, routine release or discharge of motive fluid.²⁰ Bulk quantities of n-pentane would be stored in pressure vessels and bulk storage containers on the M-1 power plant site.²¹ During operations, vaporized n-pentane would be condensed in an air-cooled tube condenser and returned to the preheaters and vaporizers to repeat the cycle. Any non-condensable gases which may leak into the motive fluid system would collect in the OEC condenser and removed through a vapor recovery unit ("VRU"). During purging, the majority of the n-pentane vapors would be condensed into liquid n-pentane and returned to the OEC unit. The noncondensable gases and the remaining, uncontrolled n-pentane vapors would be discharged into the atmosphere.²² Like the existing MP-I facility, the M-1 plant would release fugitive emissions into the atmosphere. These emissions would be released from leaks of n-pentane through leaking valves, flanges, seals, and other connections.

According to the EIR, the M-1 plant would emit fugitive emissions of n-pentane at a rate of 205 pounds per day ("lbs/day") or 37.4 tons per year ("tons/year").²³ Fugitive emissions of isobutene from the existing MP-I facility are estimated by Ormat to occur at a rate of 500 lbs/day or 91.3 tons/year.²⁴

During M-1 plant startup operations, the existing MP-I plant would continue to operate until the new M-1 replacement plant becomes commercial.²⁵ The period of simultaneous operation authorized in the FEIR is two years. Once the M-1 plant becomes commercial, the MP-I plant will be dismantled and the plant facilities would be removed from the site, the site would be regraded, covered with gravel and

¹⁸ DEIR, pp. 2-19 and 4-36.

¹⁹ California Air Resources Board, Ambient Air Quality Standards, June 7, 2012; <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>.

²⁰ DEIR, pp. 2-15-2-16.

²¹ *Id.*, at p. 2-2.

²² *Id.*, at p. 2-18.

²³ *Id.* at p. 4-38.

²⁴ *Ibid.*

²⁵ *Id.* at p. 1-1.

converted to a fenced equipment storage yard that would be used periodically for overflow parking.²⁶

II. Emission Estimates of Volatile Organic Compounds from Project Operation Are Not Adequately Documented

In response to a comment by James Clark, PhD, on the RDEIR's lack of documentation validating the VOC emission estimates²⁷ due to fugitive losses of motive fluid from the existing MP-I and the proposed M-1 facilities, the FEIR explains that: a) the inventory loss of 500 lb/day isobutane from MP-I was based on historical plant inventory losses based on proprietary isobutane purchase records; and b) the inventory loss of 205 lb/day n-pentane from M-1 was based on emission estimate methods for VOC leaks from equipment leaks and proprietary engineering estimates developed by the U.S. Environmental Protection Agency ("USEPA") using operational information on Ormat-manufactured equipment in operation at other locations.²⁸ The FEIR's explanation how the respective emission estimates for fugitive losses of motive fluids from the existing and proposed facilities were derived is unsatisfactory and fails to constitute adequate documentation and, further, is suspect, as detailed below.

Existing MP-I Facility

For the existing MP-I facility, the FEIR fails to document whether the estimated 500 lb/day of VOC emissions were derived as the maximum or average daily inventory losses based on historical plant purchase records. If average daily inventory losses were used as the basis, then the FEIR must indicate the timeframe over which the purchase records were averaged. When relying on purchase records to derive emissions, the Applicant should, at a minimum, provide a table listing either the gallons per purchase record or annualized inventory losses based on the facility's purchase records and demonstrate how the estimate of 500 lb/day of VOC emissions were derived. CEQA

²⁶ *Ibid.*

²⁷ In his letter, Dr. Clark refers to photochemically reactive compounds as "reactive organic gases" or "ROG," rather than "VOCs." The term ROG is used by the California Air Resources Board ("CARB") for chemical compounds with photochemical reactivity and is, for example, used for purposes of the agency's emission inventory for the state. The term "VOCs" is used by the U.S. Environmental Protection Agency ("USEPA") for photochemically reactive chemical compounds. The CARB's and USEPA's definitions of VOCs and ROGs differ somewhat with respect to in/excluded compounds but both agencies include isobutane and n-pentane as photochemically reactive compounds. Therefore, the terms ROG and VOCs are used interchangeably for purposes of this comment letter.

²⁸ FEIR, Response to Comment 9D-04, at p. 39.

requires that an environmental review document be adequately supported and that persons not involved in preparing the EIR understand the conclusion reached in the EIR. Here, the information provided requires the reviewer to accept this estimate in blind faith.

Project M-1 Facility

The FEIR's approach deriving a total of 205 lb/day of VOC (n-pentane) emissions for the new Project M-1 facility is problematic for a number of reasons:

First, the FEIR's estimates of fugitive emissions of n-pentane from Project equipment including valves, pump seals, turbine seals, flanges, connectors, and the purge system were allegedly based on emission factors reported in USEPA's 1995 *Protocol for Equipment Leak Emission Estimates* (EPA-453/R-95-017). Review of this document shows that the FEIR relied on average emission factors (leak rates) for refinery equipment for estimating emissions from the Project's six valves in gas service, five valves in liquid service, five pump seals, two turbine seals, and 220 flanges and connectors. The FEIR fails to discuss the applicability of the *average emission factors for refineries* from the USEPA's document to the Project's equipment. Further, for the eight components of the purge system (normal operations), the FEIR relies on a VOC emission factor of 0.005 kilograms per hour per source ("kg/hr/source") which is nowhere to be found in the USEPA's document. The FEIR fails to explain how it derived this emission factor, leaving the reviewer once again with no other option than to accept this estimate in blind faith. In addition, the FEIR's equipment list fails to include the facility's pressure relief valves, which the DEIR indicates would be used at the facility.²⁹ Emissions from these pressure relief valves must be included in the emission estimates. (See Comment III below.)

Second, the FEIR's estimates of operational losses of n-pentane from fill, drain, and lube leaks of 92 lb/day³⁰ were based on "Ormat operating experience."³¹ The FEIR provides no documentation whatsoever for this operating experience or information on what basis this estimate was derived, e.g., the number of facilities inventoried; their respective MW-output and number and type of OEC(s) (e.g., single-level or integrated

²⁹ DEIR, at p. 2-18: "Safeguards inherent to the design of the power plant would include *relief valves*, manual and automatic shutoffs, interlocks, vents, and check valves." (*Emphasis added.*)

³⁰ FEIR, table "Fugitive n-Pentane Emission Calculations – Typical 16 MW Air-Cooled OEC (Reference Methodology EPA453/R-95-017 Protocol for Equipment Leak Emissions)", at p. 39.

³¹ FEIR, footnote * to table "Fugitive n-Pentane Emission Calculations – Typical 16 MW Air-Cooled OEC (Reference Methodology EPA453/R-95-017 Protocol for Equipment Leak Emissions)", at p. 39.

two-level unit); the type and quantity of motive fluid (isobutane, n-pentane, or other) in the facilities' systems; the number of years the information was collected; etc. Finally, it begs the question, why the FEIR estimates emissions from the existing MP-I plant and losses of n-pentane from "fill drain, and lube leaks" from the new M-1 plant based on "operating experience" and "purchase records" at other Ormat facilities but estimates fugitive equipment leaks from the Project's valves, pump seals, turbine seals, flanges, connectors, and the purge system based on the USEPA methodology. At the very least, the EIR should be revised to a) include a discussion why it considered the approaches it chose to estimate emissions applicable the respective emission sources and b) validate the use of USEPA's emission factors for refineries for estimating fugitive equipment leaks from M-1 with information based on experience and purchase records gathered at other geothermal facilities, preferably ones that also use integrated two-level binary OEC technology.

Third, the VOC (n-pentane) emission calculations presented by the FEIR in Response to Comment 9D-04 were based on a "Typical 16 MW Air-Cooled OEC;" the Project's OEC would generate 18.8 MW. The FEIR fails to specify whether the number of equipment components (valves, pump seals, turbine seals, flanges, connectors, and purge system) used to calculate fugitive equipment leak emissions were based on this "typical" 16-MW OEC or rather based on site-specific information for the Project. Further, the FEIR failed to appropriately scale the "OEC operational losses" from the "typical" 16 MW equipment to the 18.8-MW Project equipment. To address these deficiencies, the EIR should be revised, if necessary, to provide emission estimates specific to the components of the 18.8 MW Project rather than for a generic 16-MW plant.

III. Emissions of Volatile Organic Compounds from Project Operation Are Likely Underestimated, Potentially Significant and Unmitigated

As discussed in the following, information available for similar plants indicates that the FEIR underestimates emissions of VOCs from Project operations.

Emission Estimates for Fugitive Losses of Volatile Organic Compounds from Pressure Relief Valves

As discussed above, the FEIR did not estimate VOC emissions from pressure relief valves and the record does not contain information on how many pressure relief valves would be in service at the facility. However, information available for another geothermal plant that uses OEC technology for one of its four units, the Brady Geothermal Plant in Fallon, NV, indicates that relief valves are located on the n-pentane storage tank and on the OEC vaporizers and condensers. Each pressure relief valve relieves directly to atmosphere. The OEC at the Brady Geothermal Plant is a 5-MW

unit.³² Here, the 18.8 MW M-1 Project would require three n-pentane storage tanks³³, two vaporizers (one each for level 1 and level 2 of the OEC unit)³⁴, and air-cooled tube condenser system. Thus, it can be conservatively assumed that the Project would have at least six pressure relief valves, one for each of the above-listed plant components.

Based on a leak rate of 0.16 kg/hr/source for VOC emissions from pressure relief valves from USEPA's 1995 *Protocol for Equipment Leak Emission Estimates*, fugitive losses of n-pentane from six pressure relief valves can be estimated at 50.8 lb/day.³⁵ Adding this estimate for emissions from six pressure relief valves to the FEIR's estimate of total VOC emissions (205 lb/day) results in a revised total of 256 lb/day. This estimate exceeds the 250 lb/day threshold for VOC emissions from stationary sources established by the Great Basin Unified Air Pollution Control District ("GBUAPCD") for requiring best available control technology ("BACT").

Emission Estimates for Fugitive Losses of Volatile Organic Compounds from Proposed CD-4 Geothermal Project

Comparison with the VOC emission estimate provided by the Applicant for the proposed CD-4 geothermal project further supports the supposition that emissions from the M-1 Project are underestimated: Based on the FEIR's emissions estimate of 512 lb/day VOC emissions for the 33-MW CD-4 project, it can be calculated that the facility generates more than 15 pounds per MW and day ("lb/MW-day") of VOC emissions³⁶; in comparison, based on the FEIR's estimate of 205 lb/day of VOC emissions, the 18.8-MW Project would generate less than 11 lb/MW-day of VOC emissions.³⁷ Based on these calculated pro-rated (MW-based) daily VOC emission factor for the proposed CD-4 project of 15.5 lb/MW-day and the Project's design capacity of 18 MW, VOC emissions from the Project can be estimated at 291.7 lb/day³⁸, more than

³² The Right-to-Know Network, Risk Management Plan (RMP) Database, Brady Geothermal Plant; http://data.rtknet.org/rmp/rmp.php?database=rmp&detail=3&datatype=T&facility_id=100000183428.

³³ See FEIR, Figures 5, 6, 9, 13, and 26.

³⁴ See FEIR, Figure 4.

³⁵ $(0.16 \text{ kg/hr/pressure relief valve}) \times (6 \text{ pressure relief valves}) \times (24 \text{ hours/day}) \times (2.20462 \text{ lb/kg}) = 50.79 \text{ lb/day}$.

³⁶ CD-4 plant pro-rated emissions: $(512 \text{ lb/day}) / (33 \text{ MW}) = 15.5 \text{ lb/MW-day}$.

³⁷ Project M-1 plant pro-rated emissions: $(205 \text{ lb/day}) / (18.8 \text{ MW}) = 10.9 \text{ lb/MW-day}$.

³⁸ Revised Project M-1 plant emissions based on CD-4 pro-rated emission factor and design capacity: $(15.5 \text{ lb/MW-day}) \times (18.8 \text{ MW}) = 291.7 \text{ lb/day}$.

40 percent higher than the FEIR's estimate of 205 lb/day.³⁹ This emission estimate considerably exceeds the GBUAPCD's BACT threshold of 250 lbs/day for VOC emissions from stationary sources.

Recommendation for Revision of FEIR to Address Potentially Significant Operational VOC Emission Estimates

I recommend that the County revise the EIR to include emission estimates based on an accurate Project-specific component count, validated by experience at other Ormat facilities using the proposed technology. If revised Project VOC emissions should exceed the GBUAPCD's BACT significance threshold of 250 lbs/day of VOC emissions from stationary sources, a BACT analysis should be prepared for the Project's equipment to minimize fugitive losses from equipment leaks. Technologies that should be evaluated in such a BACT analysis include, *e.g.*, leakless components.

IV. The FEIR Fails to Identify and Mitigate Significant Impacts on Air Quality due to VOC Emissions from Project Operations

The Project would replace the existing MP-I plant which has been operating for 28 years (since 1984) and is nearing the end of its useful life. During the startup of the Project there would be an up to two-year transition period during which both the MP-I and M-1 plant operations would overlap. In comment letters on the RDEIR, your office and James Clark, PhD, discussed the document's failure to disclose the potential increase in VOC emissions during this transition period.⁴⁰ In response, the FEIR claims that emissions from contemporaneous operation of the two plants would not increase fugitive (VOC) motive fluid emissions:

The operating rate of the respective plants during the transition period is limited by the geothermal fluid provided to each plant, and the maximum geothermal fluid available to Casa Diablo is fixed to the existing maximum geothermal fluid pumping capacity of the wellfield (6,900,000 pounds per hour). This physical pumping limit would not change with the MP-I Replacement Project (RDEIR page 2-17), and the geothermal fluid flow rates to the respective facilities would be inversely proportional. As such when geothermal fluid flow to the M-1 plant increases the geothermal fluid flow to MP-I plant must decrease proportionally. Similarly, the combined emissions of isobutane and n-pentane occurring while both plants are operating at reduced capacities would be proportional to the

³⁹ $(291.7 \text{ lb/day}) / (205 \text{ lb/day}) = 1.43$.

⁴⁰ See FEIR, Comment 9-14 and Comment 9D-06.

respective fraction that each plant is operating. Motive fluid emissions would range from about 500 pounds per day (when only the MP-I plant is operating) to zero emissions of isobutane and about 205 pounds per day of n-pentane (when only the M-1 plant is operating). In general, when the MP-I plant is operating at a higher capacity than the M-1 plant must be operating at a proportionally lower capacity and vice versa. Thus, at any time the M-1 plant is operating during the transition period there would be a reduction in the total emissions of motive fluid from the MP-I plant.⁴¹

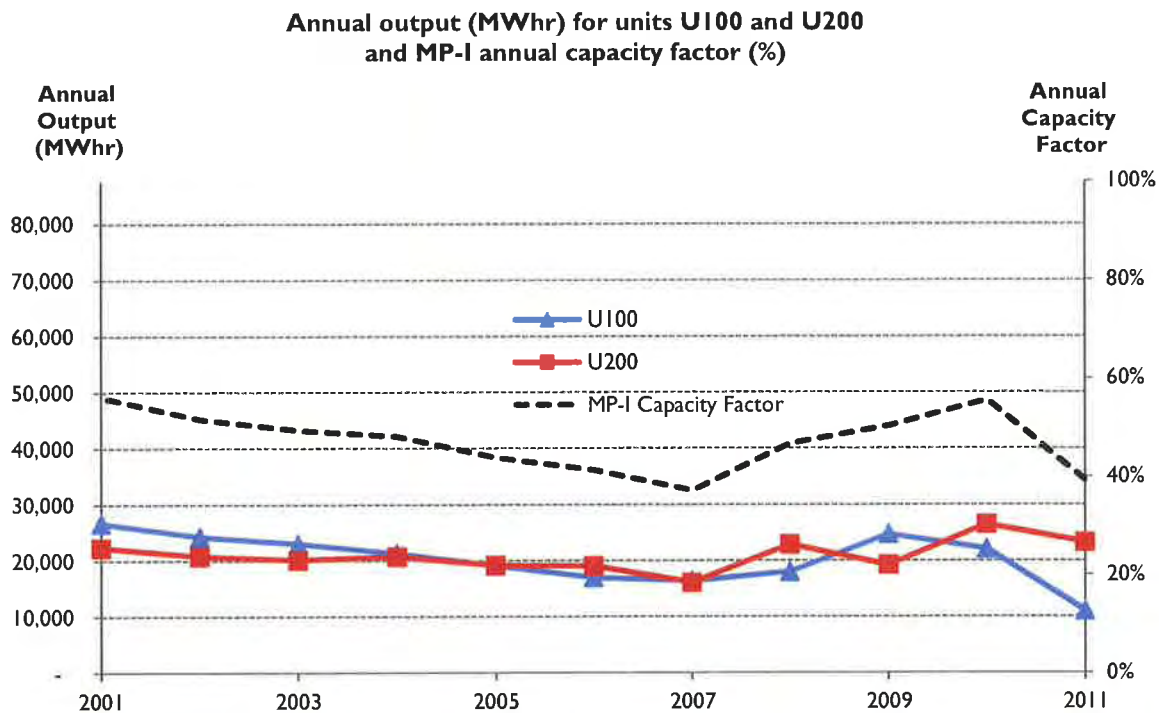
This explanation fails to acknowledge that the existing MP-I plant has been operating at far less than its design capacity over the past decade and therefore is likely not drawing geothermal fluid at the maximum design capacity rate, but instead only a fraction thereof. As discussed in the DEIR, the condensing capacity of the aging, leak prone MP-I generation unit has been severely restricted due to the need to plug damaged condenser tubes.⁴² As a result, both of the 5-MW generation units (U100 and U200) have been operating at substantially reduced capacity, as previously discussed in the March 15, 2012 comment letter on the RDEIR by David Marcus.⁴³ In the past decade, the annual capacity factor⁴⁴ for Unit 1 (U100) ranged from 61% to 21%; the annual capacity factor for Unit 2 (U200) ranged from 60% to 37%. The combined capacity factor for the MP-I plant ranged from 56% to 37%, as shown in the inset figure below.

⁴¹ FEIR, Response to Comment 9D-06, p. 40.

⁴² *Id.* at p. 4-131.

⁴³ See FEIR, Comment Letter 9B.

⁴⁴ The capacity factor is the ratio of actual output to potential output if operated continuously at 100 percent of rated capacity.



Annual output for MP-I generation units U100 (5 MW) and U200 (5 MW) from: California Energy Commission, Energy Almanac at http://energyalmanac.ca.gov/electricity/web_qfer/plant_stats_2.php.

Annual capacity factor for MP-I (10 MW) calculated as: (annual output U100 + annual output U200) / (10 MW × 8,760 hours)

Because VOC emissions from the existing MP-I plant of 500 lbs/day were calculated as inventory losses based on historical plant purchase records (*see* Comment I), these emission estimates most likely reflect these low capacity factors and corresponding reduced pumping of geothermal fluid from the wellfield. Conservatively assuming that the geothermal wellfield and associated piping were sized to supply 100% of the existing MP-I plant's design capacity (to ensure operating reliability, the wellfield capacity was likely sized considerably larger), means that there is unused pumping capacity available for the new M-1 plant without reducing current operations of the existing MP-I plant. Thus, VOC emissions from the new plant must be added to the 500 lbs/day of VOC emissions from the existing plant (or the revised emissions based on Comments II and III).

Consequently, the contemporaneous operation of the existing MP-I plant and the Project would result in increased emissions of VOCs, which as ozone precursors would contribute to the region's non-attainment status of this pollutant. This is a significant impact on air quality (*i.e.*, additional VOC emissions up to the full pumping capacity of the wellfield has been reached) that the FEIR fails to identify and mitigate. I recommend that the County prepare a revised EIR that addresses this issue.

V. The EIR Fails to Provide an Off-Site Consequence Analysis for the Flammable Motive Fluid n-Pentane

As discussed previously, the existing MP-I plant uses isobutane as the motive fluid, whereas the Project M-1 plant would use n-pentane. As the FEIR readily acknowledges, these chemicals have considerably different chemical and physical properties: *e.g.*, isobutane is a flammable gas at standard temperature and pressure; in contrast, n-pentane is a flammable liquid at standard temperature and pressure.⁴⁵ Due to their different chemical and physical properties, these chemicals require different handling and equipment during transportation, transfer, and storage.

The record for the FEIR does not include an off-site consequence analysis for the Project's highly flammable motive fluid, n-pentane, as required by the Chemical Accident Prevention Provisions under USEPA's Risk Management Plan ("RMP") rule (Section 112(r) of the federal Clean Air Act).⁴⁶ The DEIR acknowledges that the chemical is flammable and recognizes that the Project is subject to the USEPA's RMP rule. Yet, rather than providing an off-site consequence analysis for n-pentane, the DEIR states that MPLP would revise and update its "integrated program" for the existing three plants (which is intended to meet the requirements of the California Accidental Release Prevention program, the USEPA's RMP, and the federal Occupational Safety and Health Administration's Process Safety Management Program) "[p]rior to delivery of n-pentane, to reflect the new M-1 plant"⁴⁷ This approach improperly defers an analysis that should be part of the CEQA review process for the Project into the future.

I recommend that the County revise the EIR to provide an off-site consequence analysis for the flammable motive fluid n-pentane using USEPA's RMP*Comp model as required by the USEPA's RMP to satisfy the requirements of CEQA and disclose all potential impacts to the public.

⁴⁵ FEIR, Response to Comment 9D-02, at pp. 38-39.

⁴⁶ U.S. Environmental Protection Agency, Risk Management Plan (RMP) Rule; <http://epa.gov/emergencies/content/rmp/index.htm>.

⁴⁷ DEIR, at p. 2-17.

VI. Recommendation

I recommend that the County prepare a revised EIR for review and comment by the public that addresses the above issues.

Please feel free to call me at (415) 492-2131 or e-mail at petra.pless@gmail.com if you have any questions.

With best regards,

A handwritten signature in black ink, appearing to read 'Petra Pless', with a stylized flourish at the end.

Petra Pless, D.Env.

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Dr. Pless is a court-recognized expert with over 20 years of experience in environmental consulting conducting and managing interdisciplinary environmental research projects and preparing and reviewing environmental permits and other documents for U.S. and European stakeholder groups. Her broad-based experience includes air quality and air pollution control; water quality, water supply, and water pollution control; biological resources; public health and safety; noise studies; California Environmental Quality Act ("CEQA"), Clean Air Act ("CAA"), and National Environmental Policy Act ("NEPA") review; industrial ecology and risk assessment; and use of a wide range of environmental software.

EDUCATION

Doctorate in Environmental Science and Engineering (D.Env.), University of California
Los Angeles, 2001

Master of Science (equivalent) in Biology, Technical University of Munich, Germany, 1991

PROFESSIONAL HISTORY

Pless Environmental, Inc., Principal, 2008–present

Environmental Consultant, Sole Proprietor, 2006–2008

Leson & Associates (previously Leson Environmental Consulting), Kensington, CA,
Environmental Scientist/Project Manager, 1997–2005

University of California Los Angeles, Graduate Research Assistant/Teaching Assistant, 1994–1996

ECON Research and Development, Environmental Scientist, Ingelheim, Germany, 1992–1993

Biocontrol, Environmental Projects Manager, Ingelheim, Germany, 1991–1992

REPRESENTATIVE EXPERIENCE

Air Quality and Pollution Control

Projects include CEQA/NEPA review; CAA attainment and non-attainment new source review; prevention of significant deterioration ("PSD") and Title V permitting; control technology analyses (BACT, LAER, RACT, BARCT, BART, MACT); technology evaluations and cost-effectiveness analyses; criteria and toxic pollutant and greenhouse gas emission inventories; emission offsets; ambient and source monitoring; analysis of emissions estimates and ambient air pollutant concentration modeling. Some typical projects include:

- Critically reviewed and prepared technical comments on the air quality, biology, noise, water quality, and public health and safety sections of CEQA/NEPA documents for numerous

commercial, residential, and industrial projects (e.g., power plants, airports, residential developments, retail developments, university expansions, hospitals, refineries, slaughterhouses, asphalt plants, food processing facilities, printing facilities, mines, quarries, and recycling facilities) and provided litigation support in a number of cases filed under CEQA.

- Critically reviewed and prepared technical comments on the air quality and public health sections of the Los Angeles Airport Master Plan (Draft, Supplement, and Final Environmental Impact Statement/Environmental Impact Report) for the City of El Segundo. Provided technical comments on the Draft and Final General Conformity Determination for the preferred alternative submitted to the Federal Aviation Administration.
- Prepared comments on proposed PSD and Title V permit best available control technology ("BACT") analysis for greenhouse gas emissions from a proposed direct reduced iron facility in Louisiana.
- Prepared technical comments on the potential air quality impacts of the California Air Resources Board's *Proposed Actions to Further Reduce Particulate Matter at High Priority California Railyards*.
- For several California refineries, evaluated compliance of fired sources with Bay Area Air Quality Management District Rule 9-10. This required evaluation and review of hundreds of source tests to determine if refinery-wide emission caps and compliance monitoring provisions were being met.
- Critically reviewed and prepared technical comments on draft Title V permits for several refineries and other industrial facilities in California.
- Evaluated the public health impacts of locating big-box retail developments in densely populated areas in California and Hawaii. Monitored and evaluated impacts of diesel exhaust emissions and noise on surrounding residential communities.
- In conjunction with the permitting of several residential and commercial developments, conducted studies to determine baseline concentrations of diesel exhaust particulate matter using an aethalometer.
- For an Indiana steel mill, evaluated technology to control NO_x and CO emissions from fired sources, including electric arc furnaces and reheat furnaces, to establish BACT. This required a comprehensive review of U.S. and European operating experience. The lowest emission levels were being achieved by steel mills using selective catalytic reduction ("SCR") and selective non-catalytic reduction ("SNCR") in Sweden and The Netherlands.
- For a California petroleum coke calciner, evaluated technology to control NO_x, CO, VOCs, and PM₁₀ emissions from the kiln and pyroscrubbers to establish BACT and LAER. This required a review of state and federal clearinghouses, working with regulatory agencies and pollution control vendors, and obtaining and reviewing permits and emissions data from other similar facilities. The best-controlled facilities were located in the South Coast Air Quality Management District.
- For a Kentucky coal-fired power plant, identified the lowest NO_x levels that had been permitted and demonstrated in practice to establish BACT. Reviewed operating experience of European, Japanese, and U.S. facilities and evaluated continuous emission monitoring data. The lowest NO_x levels had been permitted and achieved in Denmark and in the U.S. in Texas and New York.

- In support of efforts to lower the CO BACT level for power plant emissions, evaluated the contribution of CO emissions to tropospheric ozone formation and co-authored report on same.
- Critically reviewed and prepared technical comments on applications for certification ("AFCs") for numerous natural-gas fired, solar, biomass, and geothermal power plants in California permitted by the California Energy Commission. The comments addressed construction and operational emissions inventories and dispersion modeling, BACT determinations for combustion turbine generators, fluidized bed combustors, diesel emergency generators, etc.
- Critically reviewed and prepared technical comments on draft PSD permits for several natural gas-fired power plants in California, Indiana, and Oregon. The comments addressed emission inventories, greenhouse gas emissions, BACT, case-by-case MACT, compliance monitoring, cost-effectiveness analyses, and enforceability of permit limits.
- For a California refinery, evaluated technology to control NO_x and CO emissions from CO Boilers to establish RACT/BARCT to comply with BAAQMD Rule 9-10. This required a review of BACT/RACT/LAER clearinghouses, working with regulatory agencies across the U.S., and reviewing federal and state regulations and State Implementation Plans ("SIPs"). The lowest levels were required in a South Coast Air Quality Management District rule and in the Texas SIP.
- In support of several federal lawsuits filed under the federal Clean Air Act, prepared cost-effectiveness analyses for SCR and oxidation catalysts for simple cycle gas turbines and evaluated opacity data.
- Provided litigation support for a CEQA lawsuit addressing the adequacy of pollution control equipment at a biomass cogeneration plant.
- Prepared comments and provided litigation support on several proposed regulations including the Mojave Desert Air Quality Management District Rule 1406 (fugitive dust emission reduction credits for road paving); South Coast Air Quality Management District Rule 1316, San Joaquin Valley Air Pollution Control District Rule 2201, Antelope Valley Air Quality Management District Regulation XIII, and Mojave Desert Air Quality Management District Regulation XIII (implementation of December 2002 amendments to the federal Clean Air Act).
- Critically reviewed draft permits for several ethanol plants in California, Indiana, Ohio, and Illinois and prepared technical comments.
- Reviewed state-wide average emissions, state-of-the-art control devices, and emissions standards for construction equipment and developed recommendations for mitigation measures for numerous large construction projects.
- Researched sustainable building concepts and alternative energy and determined their feasibility for residential and commercial developments, *e.g.*, regional shopping malls and hospitals.
- Provided comprehensive environmental and regulatory services for an industrial laundry chain. Facilitated permit process with the South Coast Air Quality Management District. Developed test protocol for VOC emissions, conducted field tests, and used mass balance methods to estimate emissions. Reduced disposal costs for solvent-containing waste streams by identifying alternative disposal options. Performed health risk screening for air toxics

emissions. Provided permitting support. Renegotiated sewer surcharges with wastewater treatment plant. Identified new customers for shop-towel recycling services.

- Designed computer model to predict performance of biological air pollution control (biofilters) as part of a collaborative technology assessment project, co-funded by several major chemical manufacturers.
- Experience using a wide range of environmental software, including air dispersion models, air emission modeling software, database programs, and geographic information systems.

Water Quality and Pollution Control

Experience in water quality and pollution control, including surface water and ground water quality and supply studies, evaluating water and wastewater treatment technologies, and identifying, evaluating and implementing pollution controls. Some typical projects include:

- Evaluated impacts of on-shore oil drilling activities on large-scale coastal erosion in Nigeria.
- For a 500-MW combined-cycle power plant, prepared a study to evaluate the impact of proposed groundwater pumping on local water quality and supply, including a nearby stream, springs, and a spring-fed waterfall. The study was docketed with the California Energy Commission.
- For a 500-MW combined-cycle power plant, identified and evaluated methods to reduce water use and water quality impacts. These included the use of zero-liquid-discharge systems and alternative cooling technologies, including dry and parallel wet-dry cooling. Prepared cost analyses and evaluated impact of options on water resources. This work led to a settlement in which parallel wet dry cooling and a crystallizer were selected, replacing 100 percent groundwater pumping and wastewater disposal to evaporation ponds.
- For a homeowner's association, reviewed a California Coastal Commission staff report on the replacement of 12,000 linear feet of wooden bulkhead with PVC sheet pile armor. Researched and evaluated impact of proposed project on lagoon water quality, including sediment resuspension, potential leaching of additives and sealants, and long-term stability. Summarized results in technical report.

Applied Ecology, Industrial Ecology and Risk Assessment

Experience in applied ecology, industrial ecology and risk assessment, including human and ecological risk assessments, life cycle assessment, evaluation and licensing of new chemicals, and fate and transport studies of contaminants. Experienced in botanical, phytoplankton, and intertidal species identification and water chemistry analyses. Some typical projects include:

- Conducted technical, ecological, and economic assessments of product lines from agricultural fiber crops for European equipment manufacturer; co-authored proprietary client reports.
- Developed life cycle assessment methodology for industrial products, including agricultural fiber crops and mineral fibers; analyzed technical feasibility and markets for thermal insulation materials from natural plant fibers and conducted comparative life cycle assessments.
- For the California Coastal Conservancy, San Francisco Estuary Institute, Invasive *Spartina* Project, evaluated the potential use of a new aquatic pesticide for eradication of non-native, invasive cordgrass (*Spartina spp.*) species in the San Francisco Estuary with respect to water

quality, biological resources, and human health and safety. Assisted staff in preparing an amendment to the Final EIR.

- Evaluated likelihood that organochlorine pesticide concentrations detected at a U.S. naval air station are residuals from past applications of these pesticides consistent with manufacturers' recommendations. Retained as expert witness in federal court case.
- Prepared human health risk assessments of air pollutant emissions from several industrial and commercial establishments, including power plants, refineries, and commercial laundries.
- Managed and conducted laboratory studies to license pesticides. This work included the evaluation of the adequacy and identification of deficiencies in existing physical/chemical and health effects data sets, initiating and supervising studies to fill data gaps, conducting environmental fate and transport studies, and QA/QC compliance at subcontractor laboratories. Prepared licensing applications and coordinated the registration process with German environmental protection agencies. This work led to regulatory approval of several pesticide applications in less than six months.
- Designed and implemented database on physical/chemical properties, environmental fate, and health impacts of pesticides for a major multi-national pesticide manufacturer.
- Designed and managed experimental toxicological study on potential interference of delta-9-tetrahydrocannabinol in food products with U.S. employee drug testing; co-authored peer-reviewed publication.
- Critically reviewed and prepared technical comments on applications for certification for several natural-gas fired, solar, and geothermal power plants and transmission lines in California permitted by the California Energy Commission. The comments addressed avian collisions and electrocution, construction and operational noise impacts on wildlife, risks from brine ponds, and impacts on endangered species.
- For a 180-MW geothermal power plant, evaluated the impacts of plant construction and operation on the fragile desert ecosystem in the Salton Sea area. This work included baseline noise monitoring and assessing the impact of noise, brine handling and disposal, and air emissions on local biota, public health, and welfare.
- Designed research protocols for a coastal ecological inventory in Southern California; developed sampling methodologies, coordinated field sampling, determined species abundance and distribution in intertidal zone, and conducted statistical data analyses.
- Designed and conducted limnological study on effects of physical/chemical parameters on phytoplankton succession; performed water chemistry analyses and identified phytoplankton species; co-authored two journal articles on results.

PRO BONO ACTIVITIES

Founding member of "SecondAid," a non-profit organization providing tsunami relief for the recovery of small family businesses in Sri Lanka. (www.secondaidth.org.)

PUBLICATIONS & RECOMMENDATIONS

Available upon request.

Attachment 3



Technical Consultation, Data Analysis and
Litigation Support for the Environment

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Matt Hagemann
Tel: (949) 887-9013
Email: mhagemann@swape.com

October 18, 2012

Elizabeth Klebaner
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080-7037

**Subject: Comments on the Proposed Mammoth Pacific I Replacement Project Final
Environmental Impact Report**

Dear Ms. Klebaner:

I have reviewed the September 2012 Final Environmental Impact Report (FEIR) for the proposed Mammoth Pacific I Replacement Project (Project). The FEIR includes responses to comments (Responses) we made on the February 2012 Revised Draft EIR on the issue of cumulative impacts to geothermal resources from development of the Project along with development of other projects in the area. The FEIR fails to adequately address our comments.

We prepared separate, timely comments, dated August 25, 2011, in response to the July 2011 DEIR. We also prepared comments, dated March 22, 2012 on the February 2012 Revised Draft Environmental Impact Report. Our comments on the DEIR and RDEIR are incorporated by reference.

1. Failure to Disclose Cumulative Impacts to Geothermal Resources

Comments we made on the cumulative impacts to water resources focused on extraction of fluids from 14 production wells that would be utilized over the lifetime of the proposed 33 MW CD-4 facility.¹ Currently, five production wells are utilized in the Casa Diablo area; the addition of 14 production wells may have significant impacts on thermal discharge from the Hot Creek Headsprings and on the geothermal aquifer.

When CD-4 is completed, fluids will be withdrawn from 17 wells, not from five as occurs under current conditions². Withdrawal from all wells needs to be cumulatively considered, especially in light of

¹ February 2012 RDEIR, p. 5-17

² February 2012 RDEIR, Fig. 39

declines in thermal water discharges from 1990 to 2000 of 30-40% at the Fish Hatchery, according to the U.S. Geological Survey.³ Declines in reservoir pressure and temperature have been attributed to geothermal development by the U.S. Geological Survey.⁴

Contrary to the FEIR's conclusions, the County's reliance on Cumulative Hydro Mitigation Measure 1 will not reduce potentially significant impacts to a level of insignificance. Monitoring is a retrospective program and changes that could be detected would occur only after impacts would have occurred to the reservoir. If management response to monitoring data is not swift, impacts to the reservoir may degrade ecological habitat before conditions are restored.

A swift and appropriate management response can be ensured through the establishment of numeric temperature and pressure criteria that would automatically trigger changes in reservoir utilization. For example, if thermal temperature declines exceeded a trigger level, management actions may include a reduction or even a stoppage in pumping until conditions are restored. No such triggers exist in the monitoring plans I reviewed in association with the Project.

I reviewed monitoring provisions in the Conditional Use Permit Conditions for the Existing MP-II Geothermal Project (Appendix K to the February 2012 RDEIR). Condition D9 (Hydrology and Water Quality)⁵ requires the implementation of a Hydrologic Resource Monitoring Plan "to monitor baseline conditions and detect changes in the existing hydrothermal reservoir pressures and shallow aquifer water levels, as well as the discharge and temperatures of selected thermal springs in the Long Valley Caldera." This plan, however, does not include quantitative temperature or pressure thresholds and is therefore unenforceable. Condition 13 only vaguely states that "if scientific evidence demonstrates that project operations are significantly threatening, or causing, pressure or temperature changes to the Hot creek Gorge springs or Hot Creek Hatchery springs, the Permit Holder shall implement such additional mitigation measures as are reasonably required by the MCEMD."

I also reviewed a plan provided by Mono County entitled "Baseline Hydrologic Monitoring Plan" which governs surface water, springflow, and groundwater sampling (attached). This plan also fails to identify any numeric limits for temperature and pressure that would prompt a management response to restore reservoir conditions.

The language in the Conditional Use Permit conditions and the Baseline Hydrologic Monitoring Plan is not protective of geothermal resources because of the failure to include specific temperature and pressure thresholds that would result in management actions such as reduction or cessation of pumping. Additionally, monitoring that is in place for the existing five production wells would be inadequate for an expanded production well field constituted by 17 wells. Reversal of pressure and temperature changes would take time and would have to rely upon such management responses for

³ <http://www.geothermal-energy.org/pdf/IGAstandard/WGC/2000/R0149.PDF>, p. 706.

⁴ Ibid.

⁵ Appendix K references Exhibit B, Hydrologic Monitoring Plan. Although Exhibit B was not included in the RDEIR, or the FEIR, the County provided Exhibit B in response to a Public Records Act request. I have reviewed the document provided by the County, and have attached it for the County's reference.

which there are no triggers. In the interim, prior to recovery of pressure or temperature impacts, degradation to ecological habitat could occur.

A recirculated EIR should include a monitoring plan to identify impacts on geothermal resources from existing and proposed power production activities at the Casa Diablo geothermal complex. The monitoring plan should include numeric thresholds for triggering management response to observed changes in geothermal reservoir pressure and temperature, including reduction or cessation of pumping until reservoir conditions are reestablished. Mitigation measures should be included in the recirculated EIR to compensate for loss of fisheries and for other ecological effects that would result from declines in thermal discharge, for example, until conditions in the reservoir are restored through management actions.

Sincerely,

A handwritten signature in cursive script, appearing to read "M Hagemann", written in dark ink.

Matt Hagemann, P.G., C.Hg.

U.S. Geological Survey
California Water Science Center
6000 J Street, Placer Hall
California State University
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Phone: (916) 278-3000 Fax: (916) 278-3070
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Mr. Daniel L. Lyster, Director
Mono County Economic Development Department
Post Office Box 2415
Mammoth Lakes, California 93546

Baseline Hydrologic Monitoring Plan

I. Surface water discharge and water-quality measurements

- A. Discharge measurements will be made and water samples collected quarterly at two sites on Mammoth Creek (stations 10265130 and 10265143). Annual (April) water samples will be analyzed for major ions, nutrients, arsenic, boron, fluoride, and lithium. Field measurements of water temperature, specific conductance, pH, and alkalinity will be made at the time of sampling. Quarterly (January, April, July, and October) water samples will be analyzed for dissolved chloride and boron concentrations; field measurements of water temperature and specific conductance will be made.
- B. Discharge measurements will be made quarterly at Hot Creek above Gorge Geyser near Mammoth Lakes (station 10265147).
- C. Discharge measurements will be made quarterly at the Hot Creek flume near Mammoth Lakes (station 10265150).
- D. Water quality samples will be collected quarterly at stations 10265147 (HCA) and 10265150 (HCF). The samples will be analyzed for dissolved chloride and boron concentrations and the data will be used to estimate thermal spring discharge in Hot Creek Gorge.

II. Spring flow and water-quality measurements

- A. Continuous stage and water temperature measurements will be recorded at the Fish Hatchery Spring groups, AB, CD, and H-2, 3. Stage will be used to compute daily mean flow rates. Discharge ratings will be confirmed by making meter measurements as required. Water samples will be collected annually at spring groups AB, CD, and H-2, 3, these will be analyzed for major ions, nutrients, arsenic, boron, fluoride, and lithium. Field measurements of water temperature, specific conductance, pH, and alkalinity will be made at the time of sampling. Quarterly (January, April, July, and October) water samples will be collected at AB and CD - these samples will be analyzed for dissolved chloride and boron and field measurements of specific conductance and water temperature will be made.
- B. Water samples from a thermal spring in Hot Creek gorge will be collected and analyzed quarterly for dissolved boron, chloride, water temperature, and specific conductance.

III. Ground-water levels

Quarterly ground-water level measurements will be made in wells CH10B and LV-19.

IV. Precipitation data

Daily precipitation records provided by USFS for a site near the Mammoth Ranger Station in Mammoth Lakes will be tabulated.

V. Methods

Field data collection will be carried out following standard USGS methods. All laboratory analyses of water samples will be done at the USGS National Water Quality Laboratory in Denver, Colorado.

VI. Reporting

Preliminary USGS data summaries, compiling the above described data, will be provided to the Long Valley Hydrologic Advisory Committee on a bi-annual basis. All data collected under this monitoring plan will be entered into the USGS National Water Information System (NWIS) database.



Technical Consultation, Data Analysis and
Litigation Support for the Environment

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Matthew F. Hagemann, P.G., C.Hg., QSD, QSP

**Geologic and Hydrogeologic Characterization
Industrial Stormwater Compliance
CEQA Review
Investigation and Remediation Strategies
Litigation Support and Testifying Expert**

Education:

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.

B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certification:

California Professional Geologist

California Certified Hydrogeologist

Qualified SWPPP Developer and Practitioner

Professional Experience:

Matt has 25 years of experience in environmental policy, assessment and remediation. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) while also working with permit holders to improve hydrogeologic characterization and water quality monitoring.

Matt has worked closely with U.S. EPA legal counsel and the technical staff of several states in the application and enforcement of RCRA, Safe Drinking Water Act and Clean Water Act regulations. Matt has trained the technical staff in the States of California, Hawaii, Nevada, Arizona and the Territory of Guam in the conduct of investigations, groundwater fundamentals, and sampling techniques.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – present;
- Senior Environmental Analyst, Komex H₂O Science, Inc (2000 -- 2003);

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

Partner, SWAPE:

With SWAPE, Matt's responsibilities have included:

- Lead analyst and testifying expert in the review of numerous environmental impact reports under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, greenhouse gas emissions and geologic hazards.
- Stormwater analysis, sampling and best management practice evaluation at industrial facilities.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Technical assistance and litigation support for vapor intrusion concerns.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.
- Expert witness on two cases involving MTBE litigation.
- Expert witness and litigation support on the impact of air toxins and hazards at a school.
- Expert witness in litigation at a former plywood plant.

With Komex H2O Science Inc., Matt's duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.
- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.
- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

Hydrogeology:

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nation-wide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

Policy:

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9. Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, Oxygenates in Water: Critical Information and Research Needs.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

Geology:

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

Teaching:

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt currently teaches Physical Geology (lecture and lab) to students at Golden West College in Huntington Beach, California.

Invited Testimony, Reports, Papers and Presentations:

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

Hagemann, M.F., 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Colorado.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

Hagemann, M.F., 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and Hagemann, M., 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal representatives, Parker, AZ.

Hagemann, M.F., 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

Hagemann, M.F., 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

Hagemann, M.F., 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

Hagemann, M.F., 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

Hagemann, M.F., 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

Hagemann, M.F., 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

Hagemann, M.F., 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

Hagemann, M.F., 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

Hagemann, M.F., and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and Hagemann, M.F. 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

Hagemann, M.F., 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

Hagemann, M.F., 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

Hagemann, M.F., and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

Hagemann, M.F., Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

Hagemann, M. F., Fukunaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

Hagemann, M.F., 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

Hagemann, M.F. and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

Hagemann, M.F., 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

Other Experience:

Selected as subject matter expert for the California Professional Geologist licensing examination, 2009-2011.

MONO COUNTY PLANNING COMMISSION

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DRAFT MINUTES OCTOBER 11, 2012

COMMISSIONERS PRESENT: Scott Bush, Chris Lizza, Mary Pipersky, Dan Roberts, Steve Shipley.

STAFF PRESENT: Scott Burns, CDD director; Gerry Le Francois, principal planner; Courtney Weiche, associate planner; Garrett Higerd, public works; Stacey Simon, assistant county counsel; C.D. Ritter, commission secretary

1. **CALL TO ORDER & PLEDGE OF ALLEGIANCE:** Chair Steve Shipley called the meeting to order at the Town/County Conference Room, Minaret Village Mall, Mammoth Lakes at 10: a.m. and led the pledge of allegiance.
2. **PUBLIC COMMENT:** None.
3. **MEETING MINUTES:**

MOTION: Adopt minutes of September 13, 2012, as submitted:
(Lizza/Roberts. Ayes: 3. Absent: Pipersky. Abstain due to absence: Bush.)

4. **PUBLIC HEARING:**

A. GENERAL PLAN AMENDMENT 12-003 (a) & USE PERMIT 12-003 with associated Deed Restriction/Foster. The proposal is to change the land use designation of APN 015-060-047 from Single-Family Residence to Commercial Lodging, High, subject to restrictions contained in Conditional Use Permit (CUP) 12-003 and deed restriction to allow for transient rentals. Any other use, beyond the approved CUP 12-003 and deed restriction, under the CL-H designation would require further planning review and permitting. The .68-acre parcel is located at 4835 Hwy. 158 in the Down Canyon area of June Lake. The CUP includes conditions for future permitted land uses, and is subject to GPA approval by the Board of Supervisors. The Planning Commission may recommend that the Board of Supervisors approve the proposed General Plan Amendment subject to the conditions of approval for CUP 12-003 and deed restriction. The project qualifies as a CEQA exemption. *Staff: Courtney Weiche, associate planner*

Courtney Weiche reviewed the project, and applicants were present. Entire house would be rented, so it's not a bed-and-breakfast. Use is restricted solely to transient rental, not any other CL-H uses. Jacuzzi will be drained after each rental use.

Commissioner Shipley wondered if the land use designation change would migrate to adjoining properties. *Always an option; the area could go from SFR to commercial.*

Commissioner Roberts recalled that Carson Peak Inn was contentious. Some didn't want commercial, but historically, it's a commercial node.

OPEN PUBLIC COMMENT: Robert Foster, applicant, cited his parents' long-term presence in the community when involved with June Mountain. With an entrepreneurial streak for himself and June Lake, he wanted a high-end home to rent to high-end clientele. He's trying to go green, be above-board. Six cars would fit, but he wants only three. Adjacent to Four Seasons and Carson Peak Inn, neighbors likely are not interested. He has a strong interest in sustainable economic growth and wants to keep property as part of his heritage.

Simon requested a legal description of the property.

DISTRICT #1
COMMISSIONER
Mary Pipersky

DISTRICT #2
COMMISSIONER
Steve Shipley

DISTRICT #3
COMMISSIONER
Daniel Roberts

DISTRICT #4
COMMISSIONER
Scott Bush

DISTRICT #5
COMMISSIONER
Chris Lizza

Nadia Foster, co-applicant, cited the time invested in transforming the home into a beautiful retreat and preserving its qualities. It loses luxury feel if more than eight people stay. The Fosters' personal restrictions are more severe than Mono's. **CLOSE PUBLIC COMMENT.**

MOTION: Find that the project is exempt from CEQA as a Categorical Exemption and direct staff to file a Categorical Exemption; approve Resolution R12-04; recommend approval of GPA 12-003(a) to the Mono Supervisors (BOS); and make required findings in project staff report; and approve Conditional Use Permit 12-003 subject to Conditions of Approval with associated deed restriction. The permit takes effect upon BOS approval. (Bush/Lizza. Ayes: 4. Absent: Pipersky.)

ADJOURN TO SITE VISIT AT GEOTHERMAL PLANT: 10:37 a.m.

- 5. SITE VISIT OF MAMMOTH PACIFIC I REPLACEMENT PROJECT.** The site visit was for the provision of visual information regarding the site only – no action was taken nor comments received.

--- LUNCH BREAK ---

6. PUBLIC HEARING:

B. MAMMOTH PACIFIC I REPLACEMENT PROJECT FINAL ENVIRONMENTAL IMPACT REPORT (FEIR), CLARIFYING GENERAL PLAN AMENDMENT 12-003 (b), CONDITIONAL USE PERMIT 12-004, VARIANCE 12-002 & RECLAMATION PLAN 12-001. The Planning Commission may: 1) certify the FEIR; 2) approve Conditional Use Permit 12-004 for the M-1 Replacement Plant (including the granting of a height exception for mechanical appurtenances) and decommissioning/reuse of the existing MP-I plant site as a storage area; 3) approve Variance 12-002 for setback reductions from an exterior property line and blue line stream, and to construct an above-ground electrical transmission line; and 4) approve Reclamation Plan 12-001. The Planning Commission may also recommend that the Board of Supervisors certify the FEIR and approve General Plan Amendment 12-003 to clarify the County's intent and interpretation of Chapter 15, section 15.070 (B)(1)(d) and Objective D, Policy 1, Action 1.13 of the Energy Resources section of the Conservation and Open Space Element pertaining to setbacks from a blue-line stream. The proposed project would replace the aging MP-I geothermal power plant with a new, more-modern and -efficient binary power plant (referred to as "M-1") while maintaining the existing geothermal wellfield, pipeline system and ancillary facilities. No new offices or other structures are proposed, with the exception of a small substation to be placed on the north side of the project site. The M-1 plant would be located ~500' east of the existing MP-I plant, which is located ~1,200' northeast of the intersection of US Highway 395 and State Route 203 on 90 acres of private (fee) land owned by Ormat Nevada, Inc. The M-1 replacement power plant is anticipated to increase the net electricity generation by 34% while utilizing the same geothermal resources for the existing MP-I facility. 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 the applicant would close and dismantle the old MP-I plant and would utilize the former plant location for equipment storage. The transition period during which both the MP-I and M-1 operations would overlap but would not exceed two years from the date the M-1 plant begins startup operations. *Staff: Courtney Weiche, associate planner, and Gerry Le Francois, principal planner*

Courtney Weiche and Gerry Le Francois reviewed the current facility, in operation since 1984, and presented the proposed CUP, variance, reclamation plan, and Clarifying General Plan Amendment. Rob Carnahan, Project Environmental Services, presented CEQA materials. A public scoping meeting was held February 2011, and EIR on project impacts was released July 2011. Six agency and public comments were received. A revised/recirculated DEIR in February 2012 received 10 comments. Based on comments, clarifications to General Plan were made as an additional component. RDEIR2 had revisions, but did not replace RDEIR. New land use and planning items were added. Two comments were received after July 2012 release.

Stacey Simon cited documents received just today from Lozeau/Drury, Adams Broadwell, Joseph & Cardozo. Commissioner Shipley stated that last-minute documents can't be read in two minutes without any background. Revised Resolution R12-05 was made available to the public, with minor changes to Exhibits B and C, which were explained by staff.

OPEN PUBLIC COMMENT: Fred Stump, Long Valley Fire Protection District, is still conducting fire code review, and retained consulting firm using designers hired by Ormat. Height was not an issue for FPD.

Any history of incidents? In 1980s, leaked fluid ignited, with exposure problems for adjacent piping. A fire-protective water system has been installed since. A second system for redundancy has been proposed.

Ron Leiken represented Ormat, a publicly traded company on the New York Stock Exchange. Ormat has been around since 1960s, is a geothermal pioneer in 24 countries, and supplies equipment to other companies. Mammoth Pacific was a subsidiary of Ormat until 2010, when Ormat purchased all interest. MP-1, built in 1984, owns 90 acres. Leiken discussed Ormat's excellent environmental record of no adverse impacts. Economic benefits: stable primary employment, with royalties to feds (\$90,000/yr). Recognition: Ormat has received awards and recognition from agencies. New M-1 plant would replace MP-I, produce 15% more energy with same amount of resource, and be reclaimed as storage site when M-1 becomes operational. Steam emanates from a natural steam vent, not emission from the plant. Ormat tried to avoid site limitations, and the proposed site is the only one found. Without a variance, project would have geologic and related impacts. An economic boost during construction would be \$9.9 million to Mono County and hiring local contractors.

Elizabeth Klebaner, California Unions for Reliable Energy, sent comments on all EIRs, with focus on CEQA: 1) conflict with General Plan; 2) air quality: excess emissions, uncontrolled leaks; 3) biological impacts: no geothermal within 500' of blue-line stream. Setbacks hold unless revised in Specific Plan (SP). Variance is applicable only if not in conflict with Specific Plan policies. Mono included Long Valley HAC information, but data do not relieve Mono from impacts that were not evaluated or mitigated. Invalid to claim it does not affect Hot Creek. She disagreed that resource is stable. Conclusion: Take no action, direct staff to fix deficiencies in EIR, recirculate.

Commissioner Bush asked Klebaner why she was here. "Who do you represent?" he inquired. *CURE = California Unions for Reliable Energy, which is interested in sustainable projects. Its stakeholders recreate/reside in Mono and include thousands of members.* Bush requested a list of residents to talk to. Commissioner Shipley noted statements contradictory to the opposite side. What is the source of expertise? Who said what? *Separate analysis.* Commissioners are lay people who don't want to debate. Bush stated Ormat is not a new thing. "It's been running 28 years with no big problems. Now they're telling us it's terrible? It's been a good experience so far," he said.

Mitchell Tsai, Laborers International Union of North America, Local Union 783, cited concern that the project not be detrimental to residents or workers. Mitigate impacts, comply with environmental laws. Ensure sustainable levels of mule deer. Their expert biologist concluded significant impact on mule deer. Impacts have not been reduced to less-than-significant levels.

Commissioner Bush asked Tsai if he wanted to stop the plant also. Bush commented that deer seem to be resilient, and the herd hangs around. Tsai cited issues with FEIR: Failure to adopt mitigation measures, particularly no lineal barriers that would block migration (he suggested underground). Bush asked if mitigation is enough to stop a project that's been running well for nearly 30 years. Stacey Simon clarified that County's deer expert did not conclude that there would be a significant impact to deer. Tsai contended that additional replacement facility would eliminate 5.7 acres of critical deer habitat. Commissioner Shipley asked if a field study was done or they relied on prior information. Every project that comes up involves deer migration. Who said what, when, how. Road kill occurs every year. Bush noted that normally the goal is to stop a project, but Tsai represents people who would work on the project.

Curt Nan Nest described Ormat as a great contract to work with, into safety issues, and employees are friends who live in Inyo and Mono raising families. All experts looked at this project.

Rick Joy, who has worked in Mono County since early 1980s, knows Ormat's reputation and wants to take advantage of natural geothermal resource.

David Harvey, Mammoth Lakes planning commissioner but not here in that role, has worked with Ormat for years, and thought it unconscionable to delay the process any more. No significant negative impacts have occurred in 30 years of operation. An EIR is a subjective document that folks will pick to pieces forever. The commission will take testimony and make a decision. "It's time to move forward, get local economy back on track; local laborers are ready and willing to work. Make good positive decisions for our community. The tactic is delay, delay, delay," he said.

Brent Allen, nearly 30-yr Mono resident, has worked with Ormat since it came here and found it responsible and optimistic about resource use. He wanted to support companies here to help us.

Jim McDade, vendor from Inyo County, saw Ormat as safety conscious. He supported the project, as he relies on what goes on in Mono County.

Dan Lyster chairs the Long Valley Hydrologic Advisory Council (HAC), which has collected monitoring data the last 26 years. Changes have occurred, but causes are uncertain. "Scientists do not editorialize on change," he said. Precipitation and seismic events influence the system. No effects have been attributed to the facility. HAC monitors hydrology only, not air. Changes occurred due to low precipitation and low runoff. Systems are all tied together. Fish hatchery is still operating, plant too.

Commissioner Lizza asked Lyster if streams through property are fed by an ephemeral stream, and would the flow end up in Mammoth Creek? *It used to flow into Mammoth Creek. More flow occurred last year, but never enough to adequately support biological resources because they're affected by precipitation.* Commissioner Shipley noted grass growing throughout, looked like drainage ditch. Scott Burns stated policies were developed 20 years ago, after plant was built. Any effect on streambed from existing plant? *Not to Lyster's knowledge.*

--- STAFF REQUESTED RECESS AT 2:55 P.M. TO CONFER, RECONVENED AT 3:24 P.M. ---

Dr. Jim Paulus, project biologist who has consulted here for 20 years, described Ormat as one of his better clients. He has done a lot of research (four studies in last year) and found Ormat to be conscientious. Confusion emerges about judging impact and sufficient mitigations. Comments seemed to result from unfamiliarity with the area, possibly not being around deer. He showed on a whiteboard a constrained corridor between structures as the only place for deer. Aboveground transmission line being added to existing transmission line rack – no new barrier. Mitigation would set aside corridors for preservation, not further block existing corridor, with earthen ramp over existing pipes. A small number of deer reside here. Only 1.5%-2% go to Mammoth Creek for water or migration.

Stacey Simon asked Dr. Paulus to address assertion by LIUNA's consultant that loss of area under site of proposed plant is significant impact, but Dr. Paulus disagreed, didn't see deer using it.

Rob Carnahan, EIR consultant, addressed purported General Plan conflict, air quality emissions (does not emit ozone itself), and biological impact on deer (citation provided by commenter's deer expert in 1987 was undercut by study cited). Lyster noted attempts to mitigate impact of pipelines last several years. Vegetation intended to screen pipeline was eaten by deer.

Stacey Simon noted that staff initially saw a tough call whether to respond to General Plan comment, but realized clarification would just moot the issue and ensure that the language was consistent with the County's intention and prior interpretation. Mono integrated zoning into its General Plan pursuant to 1998 Attorney General opinion, and setbacks are traditional zoning regulations. Ch. 33 provides for variances from Land Development Regulations (zoning-type requirements) located in the General Plan. A 500' setback for geothermal development within the Hot Creek Buffer Zone from blue-line streams is established by Land Development Regulations. Mandatory General Plan elements are traditional, broad goals and policies all the way down to action items. Majority of action items refer to something already done or that should be done in future. Goal is protecting hydrologic resources. Action 1.13 is merely a reference to the Land Development Regulation in Chapter 15, not a re-imposition of that regulation. Commenter claims it was imposed twice in different General Plan elements. Revise Conservation/Open Space Element to be consistent. A variance is a discretionary act and the commission may or may not approve, at its discretion, but the alleged General Plan inconsistency would become a moot issue by clarifying. Asserted it's a conflict, but staff doesn't think it is. The County has adopted regulations restricting geothermal development within 500' of a water course unless a variance is granted. Staff didn't see inconsistency. It was misreading of language, so change language to be clear to all parties. It's a non-issue from staff perspective. Simon suggested clarifying Condition #3: *The rate of geothermal fluid production supplying the Casa Diablo geothermal complex shall not exceed existing geothermal fluid flow utilized in the complex.*

Chair Shipley asked if there was any additional public comment. There being none, public comment was closed. **CLOSE PUBLIC COMMENT.**

DISCUSSION: Commissioner Lizza noted only a 50' section appears to intrude into 100' setback, not entire plant. Ephemeral stream is impacted much more by existing plant. Deer population: Evaluated by expert and CDFG had no negative comments. Union representatives talk about families, but workers would be away from family if working here. Far less environmental impact results from geothermal than fossil fuels. "It's difficult to respond to input and comments presented at the beginning of a meeting when document is several pages long. If you want serious consideration, get it to commission earlier, or it seems like a delay tactic. Late submission of comments at a meeting doesn't show respect to commission or desire to evaluate comments."

Commissioner Bush heard no one state outright opposition to the project, but thought it could be better or more thorough. Every expert saw the project as a positive. He favored this project that would put people to work.

Commissioner Roberts reminded that staff had recirculated the EIR, and he saw no reason for more delay.

Commissioner Shipley considered successful track record of the plant, nearly nonexistent impacts, putting people to work, and an upgrade for safety and efficiency as win/win. Impact on deer is nonexistent. Locating plant in already-disturbed site leaves nothing to reclaim, just brush to grow back. He stated he was totally in favor of this project that's been "rehashed a million times over," and recommended moving forward.

MOTION: Recommend adoption of Resolution R12-05 taking the following actions:

- Adopt and certify the Final EIR and mitigation monitoring and reporting program for Mammoth Pacific 1 Replacement Project, finding that:
 1. In compliance with CEQA Guidelines Section 15090 (a);
 - a. The Final EIR has been completed in compliance with CEQA;
 - b. The Final EIR was presented to the decision-making body of the lead agency, and that the decision-making body reviewed and considered the information contained in the Final EIR prior to approving the project; and
 - c. The Final EIR reflects the lead agency's independent judgment and analysis.
- Make required findings and approve Use Permit application 12-004 subject to the Mitigation Monitoring and Reporting Program and Conditions of Approval, as modified; and
- Make required findings and approve Variance 12-002 subject to the Mitigation Monitoring and Reporting Program and Conditions of Approval; and
- Make required findings and approve Reclamation Plan 12-001, subject to the Mitigation Monitoring and Reporting Program and Conditions of approval; and
- Make required findings and recommend that the Board of Supervisors approve Clarifying General Plan Amendment 12-003(b), with rewording to the Conservation/Open Space Element suggested by Commissioner Lizza: *Action 1.13: No geothermal development located within the Hot Creek Buffer Zone shall occur.* The County has adopted land development regulations for geothermal development within 500 feet on either side of a surface watercourse (as indicated by a solid or broken blue line on U.S. Geological Survey 7.5- or 15-minute series topographic maps) within the Hot Creek Buffer Zone (See Mono County Land Development Regulations, Chapter 15, section 15.070(B)(1)(d) ,) which are subject to variance only in accordance with Chapter 33 of the Mono County General Plan.
- Condition #3: The rate of geothermal fluid production supplying the Casa Diablo geothermal complex ~~during the startup operating transition period during which both the proposed M-1 power generation facilities and the existing MP-1 plant power generation facilities may operate at the same time~~ shall not exceed existing geothermal fluid flow utilized in the complex.
(Bush/Roberts. Ayes: 4. Absent: Pipersky.)

7. WORKSHOP: None

8. REPORTS:

A. DIRECTOR: 1) November meeting: White Mountain Specific Plan/Tract Map revision and D395 overhead line. 2) Cell tower: Conditions satisfied. 3) June Lake winter: Residents are developing a plan. 4) Flood maps: Higerd held well-attended meeting in Chalfant Valley. Update floodplain regulations in a cleanup GPA.

B. COMMISSIONERS: None.

9. ADJOURN: 4:11 p.m.

Prepared by C.D. Ritter, commission secretary

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October 11, 2012

To: Mono County Planning Commission

From: Courtney Weiche, Associate Planner
Gerry LeFrancois, Principal Planner
Stacey Simon, Assistant County Counsel

Re: Mammoth Pacific I Replacement Project including:

- 1) Certify Final EIR and Mitigation Implementation and Monitoring Program
- 2) Approve Conditional Use Permit 12-004
- 3) Approve Variance 12-002
- 4) Approve Reclamation Plan 12-001
- 5) Recommend approval of Clarifying General Plan Amendment 12-003(b)

I. RECOMMENDATION

Staff recommends that the Planning Commission adopt Resolution R12-XX taking the following actions:

- A. Adopt and certify the Final EIR and mitigation monitoring and reporting program for Mammoth Pacific I Replacement Project, finding that:
 1. In compliance with CEQA Guidelines Section 15090 (a):
 - a. The Final Environmental Impact Report (Final EIR) has been completed in compliance with CEQA;
 - b. The Final EIR was presented to the decision-making body of the lead agency, and that the decision-making body reviewed and considered the information contained in the Final EIR prior to approving the project; and
 - c. The Final EIR reflects the lead agency's independent judgment and analysis.
- B. Make required findings and approve Use Permit application 12-004 subject to the Mitigation Monitoring and Reporting Program and Conditions of Approval; and
- C. Make required findings and approve Variance 12-002 subject to the Mitigation Monitoring and Reporting Program and Conditions of Approval; and
- D. Make required findings and approve Reclamation Plan 12-001, subject to the Mitigation Monitoring and Reporting Program and Conditions of Approval; and
- E. Make required findings and recommend that the Board of Supervisors approve Clarifying General Plan Amendment 12-003 (b).

II. PROJECT OVERVIEW, SETTING AND LAND USE

The existing Mammoth Pacific Unit I (MP-I) project is a commercial geothermal development project operated by Mammoth Pacific L.P. (MPLP) and located near Casa Diablo Hot Springs. The existing MP-I project consists of a binary power plant with a design capacity of about 14 megawatts (MW), a geothermal wellfield, production and injection fluid pipelines, and ancillary facilities that have been operating since 1984. The existing MP-I power plant site is located approximately 1,200 feet northeast of

the intersection of U.S. Highway 395 and California State Route 203 on 90 acres of private (fee) land owned by Ormat Nevada, Inc. (Ormat), the parent company of MPLP. The proposed plant site would be constructed and operated within the existing Casa Diablo geothermal complex

The Mammoth Pacific I Replacement Project (Project) was proposed by MPLP to replace the aging MP-I power plant with a new, more modern and efficient binary power plant (M-1), while maintaining the existing geothermal wellfield, pipeline system and ancillary facilities. The proposed M-1 replacement power plant would be capable of generating, on average, approximately 18.8 MW (net) of electricity. No net change in the rate of geothermal fluid produced and supplying the existing Casa Diablo geothermal development complex would result, and no substantive change to the geothermal reservoir would occur as a result of the Project. During M-1 plant startup operations, the existing MP-1 plant would continue to operate until the new M-1 plant becomes commercial, after which time the old MP-1 plant would be closed and dismantled. The old MP-1 plant site would be converted to an equipment storage area as part of the decommissioning process and the entire site would be subject to a Reclamation Plan providing for ultimate return of the property to natural conditions. The transition period during which both plants would overlap would be a period of up to two years from the date the M-1 plant begins startup operations, but would not involve any new geothermal extraction.

The new M-1 plant site would be located to the east on the approximately 50-acre parcel, and within an area designated as Resource Extraction (RE) which "is intended to provide for protection of the environment and resource extraction activities . . . and for processing plants utilizing on-site materials or materials found in close proximity to the site." The existing MP-1 plant site decommissioning activities and establishment of a storage area, would be conducted on private land with a land use designation (LUD) of Resource Management (RM) which is intended "to recognize and maintain a wide variety of values in the lands outside existing communities," including "geothermal or mineral resources."

SURROUNDING LAND USES

The proposed plant site would be within an area circumscribed by the existing Casa Diablo geothermal complex, a group of three existing binary geothermal power plants located immediately northeast of the intersection of State Route 203 and Interstate Highway 395, and about two miles east of the Town of Mammoth Lakes. The off-site private lands in the Casa Diablo area predominantly designated as "Open Space", while the public lands in the Casa Diablo area are predominantly designated Resource Management.

PROJECT COMPONENTS

To summarize, the following approvals are required from Mono County for the Project:

- A Conditional Use Permit for the M-1 replacement plant (including the granting of a height exception for mechanical appurtenances) and decommissioning/reuse of the existing MP-I plant site as a storage area;
- A Variance for setback reductions from property line(s); setback reductions from streams designated by a blue line on USGS topographic maps (for structures within the 5.7-acre proposed M-1 plant site); and for grading of the existing MP-I plant site for use as an equipment storage area;
- A Variance to construct an aboveground electrical transmission line;
- A Grading Permit;
- Building Permits; and
- A Reclamation Plan.

A clarifying General Plan revision is also proposed, but is not required for approval of the Project.

PROJECT OBJECTIVE

MPLP's specific objectives for the Project are: (a) to optimize the amount of electrical energy that can be generated from the available geothermal resources; (b) to replace the existing MP-I plant with a new, more modern and efficient binary power plant; and (c) to ensure continuous power generation and maximize utilization of the geothermal resource.

The objectives of Mono County for preparing this EIR are to comply with the requirements of CEQA and to evaluate the potential environmental impacts of the Project consistent with the requirements of CEQA and the County General Plan.

III. CONDITIONAL USE PERMIT 12-004

HEIGHT EXCEPTION

Although the proposed M-1 geothermal plant would have a maximum height of approximately 35 feet above the excavated ground level, there are several mechanical appurtenances (two purge tanks, of about 36 inches in length and 24 inches in diameter, a two-inch diameter pipe, and a one-inch diameter lightning mast/rod) that extend to approximately 40 feet in height. This would exceed the permitted maximum height of 35 feet; however, Mono County regulations allow for exceptions in the cases of mechanical appurtenances. These mechanical appurtenances are a part of this CUP and are evaluated on pp 4-2 – 4-35 of the RDEIR. As described in the EIR, these appurtenances would be nearly completely obscured by vegetation and the super-structure of the main plant and would be colored to blend with the existing background. The analysis shown in the EIR demonstrates the project would preserve scenic vistas and would not have any impact on surrounding properties.

IV. VARIANCE 12-002

SETBACKS

The proposed Project includes a request for a variance from two required setbacks; 100 feet from the south line and 500 feet from the surface watercourse. The proposed M-1 replacement plant location was specifically chosen, and the requested variances are needed, to avoid the many geological and geotechnical constraints present in the project parcel area. The proposed location is necessary to minimize risks to both the plant and its operating personnel and would not result in any significant environmental impacts.

ABOVEGROUND PIPELINE

The Project includes two proposals for the interconnection pipeline, both of which have been analyzed as part of the EIR. Much of the Project site consists of geothermal soils having elevated temperatures. Generally, underground transmission lines require properly designed thermal backfill to reduce heat buildup and consequent loss of electrical conductivity or even melting of the conduit. However, such heat buildup in an underground transmission line crossing warm or hot areas in the soil cannot be mitigated with thermal backfill. There would be no new overhead transmission line poles associated with either of the interconnection transmission line options and no significant visual or other impacts.

V. CLARIFYING GENERAL PLAN AMENDMENT 12-003(b)

The County proposes to add clarifying language to the Conservation and Open Space Element of its General Plan, as well as to the land development regulations in the Land Use Element of its General Plan

The pertinent language in the General Plan Land Use Element, land development regulations, section 15.070 (B)(1)(d) reads:

“No geothermal development located within the Hot Creek Buffer Zone shall occur within 500 feet on either side of a surface watercourse (as indicated by a solid or broken blue line on U.S. Geological Survey 7.5- or 15-minute series topographic maps).”

The requirement of section 15.070(B)(1)(d) is also cited in the General Plan Conservation and Open Space Element as an action taken by the County to further the following water quality and hydrologic goals and policies:

- (1) To “establish a regulatory process with respect to both geothermal exploration and development that ensures that permitted projects are carried out with minimal or no adverse environmental impacts.” (Cons/Open Space Element p. V-37, Goal 1); and
- (2) “Geothermal exploration and development projects shall be sited, carried out and maintained by the permit holder in a manner that best protects hydrologic resources and water quality and quantity.” (Cons/Open Space Element, p. V-40, Objective D, Policy 1.)

The County proposes to add clarifying language to the Conservation and Open Space Element to clearly identify Action 1.13 (supporting Goal 1 and Objective D, Policy 1) as being imposed by and implemented through section 15.070(B)(1)(d) of the Land Development Regulations and to clarify that the 500-foot setback from any surface watercourse is a land development regulation of the General Plan subject to variance in accordance with Chapter 33 and is not “imposed twice” by virtue of being cited as an action taken in furtherance of the goals and policies set forth in the Conservation and Open Space Element.

The proposed revisions are consistent with the County’s current and past interpretation of its own General Plan and with its intent upon adoption. There would be no substantive change to the General Plan. Future geothermal development would continue to be subject to the setback requirements of Section 15.070, unless a variance were granted.

The proposed clarifying General Plan revision would not result in a significant impact to the environment, nor cause or increase any environmental impact associated with the Project or with any other project or activity in Mono County or within the Hot Creek Buffer Zone. Rather, it clarifies the existing meaning and intent of the General Plan, and preserves the setbacks imposed by section 15.070(B)(1), along with the variance procedure for any future project involving geothermal development within the Hot Creek Buffer Zone.

VI. RECLAMATION PLAN

After the existing MP-I plant is dismantled, the plant facilities would be removed from the site, the site would be re-graded, covered with gravel and converted to a fenced equipment storage yard that would also be used periodically for overflow parking. This interim restoration of the MP-I plant site is described in the Reclamation Plan submitted to Mono County and provided in the agenda packet. In addition, site reclamation at the end of the Project is described in the Reclamation Plan which covers each of the geothermal projects on private land in the Casa Diablo geothermal development complex area (including the MP-I Project, the MP-II Project, and the M-1 Replacement Plant). The Reclamation Plan provides prescriptive measures for restoration of the entire area disturbed by these projects to a natural condition at the end of the project life.

VII. ENVIRONMENTAL REVIEW

An Initial Study of the potential environmental effects of the Project was prepared, a Notice of Preparation (NOP) of the Draft Environmental Impact Report (DEIR) was filed with the California State Clearinghouse and Planning Unit within the Governor’s Office of Planning and Research (OPR) and a public notice of intent to prepare an EIR for the Project was distributed. The notice was published in local newspapers on or about February 4, 2011. It was also distributed to responsible and trustee agencies and interested members of the public identified on the Mono County interested party list. A public scoping meeting for the Project was conducted on Thursday, February 17, 2011. Mono County received a total of two written comment letters on the Project following the public notice.

DRAFT ENVIRONMENTAL IMPACT REPORT

As a result of the Initial Study, and comments received from responsible/trustee agencies and the public during scoping for the DEIR, the following environmental resource topics were identified for detailed environmental assessment.

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

The Draft EIR was originally circulated for public review from July 13, 2011 to August 26, 2011.

REVISED DRAFT ENVIRONMENTAL IMPACT REPORT (RDEIR)

After review of comments made on the earlier DEIR, it was determined that significant new information was needed to address comments on the proposed Project. Under the California Environmental Quality Act (CEQA), recirculation of a Draft EIR is required when significant new information changes the EIR. As such, a decision to revise and recirculate the Draft EIR was made to provide the public an opportunity to review additional Project information provided by the Applicant; new baseline biological resources information; and supplemental documentation not provided with the earlier published Draft EIR.

A Revised Draft Environmental Impact Report (RDEIR) was prepared. The RDEIR provided Appendices A through L to support the document. The RDEIR substantially amended the earlier Draft EIR such that reviewers were invited to submit new comments on the RDEIR for written response in this FEIR. The previous comments received on the earlier Draft EIR remain part of the administrative record, but the previous comments do not require written response.

A shortened 30-day public review period for the Recirculated Draft EIR was requested and approved by the State Clearinghouse. The public review period began at 8:00 a.m. on Friday, February 24, 2012 and ended at 5:00 p.m. on Monday, March 26, 2012.

SECOND REVISED DRAFT ENVIRONMENTAL IMPACT REPORT (RDEIR2)

In response to a concern raised by a commenter on the RDEIR, the County proposed to clarify the language of the Land Use and Conservation/Open Space Elements. In order to evaluate these proposed clarifications, a new Land Use/Planning section was added to the RDEIR to provide information for public review and comment. This second RDEIR (RDEIR2) was recirculated to provide the public and interested agencies with the opportunity to review and comment on the supplemental information provided in the new Land Use/Planning section and the associated changes to the RDEIR. Only the new Land Use/Planning section and the related changes to the text of the RDEIR were circulated for public review. Comments previously received on the RDEIR that pertain to other subjects have also been responded to and are addressed in the Final EIR, along with any agency/public comments on the RDEIR2.

All of the new or supplemental information to the RDEIR was analyzed as appropriate in various sections of the RDEIR2. The RDEIR2 provided Appendices M through O to support the document. The new or revised information included:

- Land Use/Planning Section 4.10;
- Cumulative Impact Land Use/Planning Section 5.3.10; and

- Assorted changes to earlier RDEIR text needed for document consistency with the added Land Use/Planning sections.

A shortened 30-day public review period for the RDEIR2 was requested and approved by the State Clearinghouse. However, the County subsequently decided to extend the shortened review period to the normal 45-day public review period. The public review period began at 8:00 a.m. on Friday, July 6, 2012 and the extended 45-day public review period ended at 5:00 p.m. on Monday, August 20, 2012.

FINAL ENVIRONMENTAL IMPACT REPORT

The Final EIR allows the public and Lead Agency to review revisions to the RDEIR/RDEIR2, comments, and responses to comments before approval of the project. The FEIR, which includes the RDEIR and RDEIR2, incorporated by reference) will serve as the environmental document used by Mono County when considering approval of the Project. After completing the FEIR and before approving the Project, the Lead Agency must make the following three certifications (CEQA Guidelines Section 15090).

1. The FEIR has been completed in compliance with CEQA;
2. The FEIR was presented to the decision-making body of the Lead Agency, and the decision-making body reviewed and considered the information in the FEIR prior to approving the project; and
3. The FEIR reflects the Lead Agency's independent judgment and analysis.

VIII. LDTAC REVIEW

The Land Development Technical Advisory Committee (LDTAC) has met to consider the project application and the project Conditions of Approval and Mitigation Monitoring and Reporting Program. LDTAC recommendations have been reflected in the project mitigation measures and/or Conditions of Approval.

The Community Development Director and Economic Development Director have also both reviewed and approved the staff report and various findings for the project.

IX. FINDINGS

CONDITIONAL USE PERMIT FINDINGS

If the Commission decides to approve Conditional Use Permit 12-004, the Commission should make the findings contained in Exhibit C to Planning Commission Resolution R12-XX.

VARIANCE FINDINGS

If the commission decides to approve Variance 12-002, the Commission should make the findings contained in Exhibit B to Planning Commission Resolution R12-XX.

RECLAMATION FINDINGS

If the Commission decides to approve Reclamation Plan 12-001, the Commission should make the findings contained in Exhibit D to Planning Commission Resolution R12-XX.

GENERAL PLAN AMENDMENT FINDINGS

If the Commission decides to recommend approval of General Plan Amendment 12-003(b), the Commission should make the findings contained in Exhibit E to Planning Commission Resolution R12-XX.

ENVIRONMENTAL FINDINGS PURSUANT TO CEQA GUIDELINE SECT. 15091

If the Commission decides to adopt and certify the Final EIR, the Commission should make the findings contained in Exhibit A to Planning Commission Resolution R12-XX.

X. ENCLOSURES

- 1) Resolution R12- XX [including exhibits A, B, C, D, E and F]
- 2) Reclamation Plan (including Landscape Plan)
- 3) Outdoor Lighting Plan
- 4) Black Eagle Consulting letter
- 5) Economic Analysis provided by ORMAT
- 6) Final EIR with Exhibits I, II, & III (CD copy enclosed & hard copy available upon request)
- 7) Notice of Decision/Use Permit (including Mitigation Monitoring and Reporting Program)

Mr. Ron Leiken
Ormat, Inc.
6225 Neil Road, Suite 300
Reno, NV 89511

Project No.: 0478-10-5
September 7, 2012

RE: Geological EIR Review Comments
M-1 Replacement Power Plant
Mono County, California

Dear Mr. Leiken:

Black Eagle Consulting, Inc. (BEC) has reviewed portions of the Draft Environmental Impact Report (DEIRs) for proposed relocation of the existing M-1 geothermal power plant. Black Eagle Consulting, Inc. would like to provide additional information in support of Mammoth Pacific's request for variances from the two required setbacks; 100 feet from the south line and 500 feet from the surface watercourse, west of the proposed new M-1 site. We would also like to address the requirement to bury transmission lines in the highway scenic corridor.

Black Eagle personnel have provided geotechnical exploration and expertise on the Casa Diablo geothermal power plant since the original Magma plant (current M-1 site) in the mid 1970's. We conducted extensive geologic/geotechnical investigations for the PLES I and MP II projects in 1988 and have been working to find a suitable replacement site for M-1 since 2008. This latter effort included geotechnical investigations for three sites with additional exploration and readjustment of equipment locations within the selected (currently proposed) site in order to minimize risks to both the plant and its operating personnel.

A number of geologic hazards are inherent to areas in and around geothermal activity. Faults, steam vents, warm seeps, high soil temperatures, voids, and highly compressible subsurface soils are common. Ground shaking from off-site earthquakes can result in renewal or shifting of subsurface geothermal conduits, producing hot spots and steam vents in areas that were previously cool. An existing building at the power plant had to be relocated (per our recommendation) when hot ground developed under the floor slab, following the earthquakes of 1980.

Because of our extensive experience at the Casa Diablo resource, we are very familiar with the geologic conditions at the power plant complex. The proposed M-1 replacement site has been carefully optimized as the best solution to the inherent geological and geotechnical constraints. This includes using a split level pad to reduce the depth of cut on the north and placing the required transmission line along existing roads and pipe racks just north of the site. Geological and geotechnical constraints are shown on the attached Figure 1 (Geological and Geotechnical Constraint Map). Our specific concerns are summarized below:

- Moving the M-1 replacement plant to the north (away from the south property line) would require deeper cuts that would encounter extremely hot soil as well as active steam vents and associated weak soils. An older (bedrock) east-west fault is also suspected north of the proposed replacement site. These conditions are hazardous to both the personnel and the plant equipment. Moving north also greatly increases the size of the cut slope and raises the plant elevation so that both would be more visible from US Highway 395, although that is not necessarily a geotechnical issue. Cutting the slope would require some blasting, which is of geotechnical concern.



Black Eagle Consulting, Inc.
Geotechnical & Construction Services

1345 Capital Boulevard, Suite A
Reno, Nevada 89502-7140

Tel: 775/359-6600 Fax: 775/359-7766
Email: mail@blackeagleconsulting.com

- Moving the plant to the east has all of the problems of moving north, but also overlaps the existing MP II.
- Moving the site to the south gets it closer to the property line and places critical structures on highly compressible soils, unsuitable for conventional foundation support or even placement of the necessary fill.
- Moving the site to the west would bring it even closer to the intermittent stream as well as an active, unnamed fault located about 0.1 miles to the west of the western boundary of the proposed M-1 replacement site. There are also active steam vents associated with this fault that must be avoided.
- Underground transmission lines require properly designed thermal backfill to reduce heat build up and consequent loss of electrical conductivity or even melting of the conduit. On the plant site this can best be handled by locating the lines in the fill side of the pad and using thermal backfill. A cross country underground transmission line will almost certainly cross warm to hot areas in the soil where heat build up cannot be mitigated with thermal backfill.

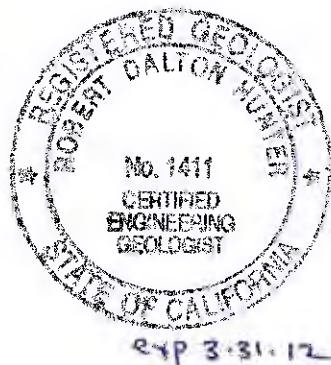
In summary, we agree that the proposed location of the M-1 plant is the best location on the property in terms of the environmental and safety issues addressed above, and support that Mono County grant the variances to the setback requirements for the proposed plant site and for the above-ground transmission line alignments.

Sincerely,

Black Eagle Consulting, Inc.



Dal Hunter, Ph.D., C.E.G.
Vice President



Attachments: Figure 1 – Geological and Geotechnical Constraint Map

DH:skw

Copies to: Addressee (2 copies and PDF via email)

References

Black Eagle Consulting, Inc. (BEC), 2011, Geotechnical Investigation, M-1 Replacement Power Plant on the Magma Lease, Central Site, Mono County, California, Private Consultant Report.

SEA Consulting Engineers, Inc., 1988, *Geotechnical, Geologic and Seismic Hazards Investigation for the Proposed Mammoth Pacific (MP-11) and Pacific Lighting Systems (PLES-1) Geothermal Power Plants.*



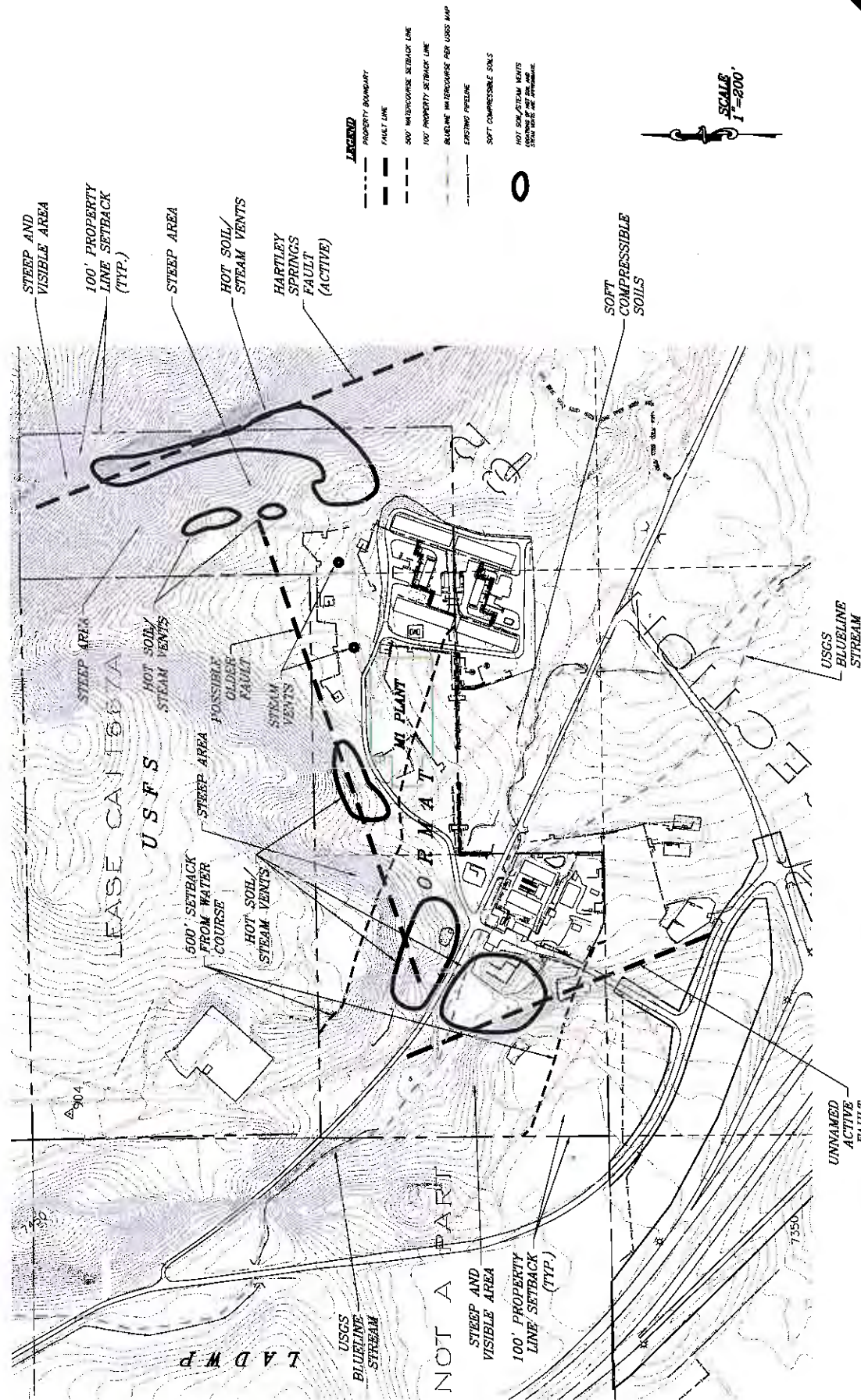
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M1 CONSTRAINTS EXHIBIT MAP

ORMAT GEOTHERMAL - MAMMOTH LAKES, CA



Mammoth Pacific MP-1, MP-2, M-1 Reclamation Plan

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APPENDIX

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1. Introduction

Mammoth Pacific, LP (MPLP) is currently operating the MP-1 and MP-2 power plants, which are located in the southeast portion of the "Magma" private property in the northwest quarter of Section 32, Township 3 South, Range 28 East of the Mount Diablo Meridian.

The MP-1 plant was the first geothermal power plant to be built at the Mammoth Pacific Complex, commencing operation in 1984 under a Conditional Use Permit issued by Mono County. MP-2 geothermal plant was established in 1990 under a separate Mono County Conditional Use Permit. Ormat Nevada, Inc., the owner of MPLP, proposes to replace the existing MP-1 plant with a new, modern, efficient, and more advanced M1 generation plant. MPLP will build the new plant slightly to the east of the MP-1 site and just west of the MP-2 site as shown in the attached Plate A. The MP-1 plant will operate for up to 2 years from the date the M-1 plant begins startup operations. MPLP will close and decommission the MP-1 plant after the M-1 plant becomes commercial. Depending on the approval and construction start date of M-1, the anticipated date for the reclamation of the MP-1 plant will be in Year 2014 or 2015. The MP-2 plant full reclamation will commence in 2045. At that time the MP-1 plant site will be reclaimed through the removal of the existing power plant facilities within the site. As an interim, MP-1 site will be reused as an equipment yard to support the Mammoth Pacific operations as it is adjacent to the Mammoth Pacific offices and existing maintenance yard. The existing offices, maintenance yard, and warehouse next to the MP-1 site will remain until all geothermal operations including the PLES plant on USFS lands end power production.

Once any power plant (MP-1, MP-2, or M-1) has been removed, reclamation of the site will be completed within one year.

Once the new M1 plant is decommissioned in 2045, the MP-1 and M-1 sites will be reclaimed as described below in Section 2 – Reclamation Plan.

Included in the reclamation will be the geothermal well sites which support the M-1, MP-1, and MP-2 plants. These wells will remain in operation until 2045. Well sites are shown on Plate B.

The end land use for the MP-1 site will be to restore the 39 acre parcel to natural site conditions consistent with the Resource Management land use designation.

The end land use for the M-1 and MP-2 sites will be to restore the 50 acre parcel to natural site conditions consistent with the Resource Extraction land use designation.

Summary of Reclamation Plan timeframe, cost, and end land use for all geothermal sites is shown below:

	MP-1 Plant	MP-2 Plant	M-1 Plant	Wells
Reclamation Start Date	Year 2014 or 2015	Year 2045	Year 2045	Year 2045
Estimated Cost	\$356,224	\$739,513	\$564,949	\$2,210,719

The reclamation date provided for the M-1 plant and the wells are estimated dates only. Ormat plans to operate the plant and wells as long as there is the geothermal resource is available. This reclamation plan will need to be revised and approved by the County if the geothermal plant will continue operations past 2045 or if the reclamation changes due to a change in end land use.

2. Reclamation Plan

This Reclamation Plan (Plan) is subject to Planning Commission approval and prepared in compliance with Mono County General Plan requirements (Chapter 35) and is designed to meet the reclamation requirements of the MP-1, MP-2, and M-1 plants. The reclamation techniques and methods in this Reclamation Plan are based on successful re-vegetation/reclamation programs initiated at the existing Casa Diablo Power Plants.

The reclamation plan addresses all surface disturbance created by the Project and abandonment of geothermal well sites. The geothermal wells will be sealed in accordance with the State and Mono County Environmental Health Department standards and requirements. Disturbed areas surrounding the wells will be reclaimed in the same manner as the plant sites.

In general, the reclamation plan includes measures for protecting wildlife and the public; minimizing erosion; demolishing structures; re-grading cut-and-fill slopes; re-vegetation; and providing the resumption of pre-project land uses. The reclamation goals are to reclaim the site to a stable, functioning landscape unit/ecosystem to allow for similar land uses, including wildlife habitat and dispersed and concentrated recreation, as currently exist, consistent with the Inyo National Forest Land and Resource Management Plan and the Mono County General Plan.

Wildlife Habitat

- A. No federal- or state-listed threatened or endangered species are known to occupy or frequent the Project area, however, there are five species of special concern to the Forest Service and CDFG associated with this habitat: mule deer, pine marten, northern goshawk, California spotted owl, and sage grouse. With removal of surface facilities and re-vegetation there would be

no residual impacts to these species.

- B. Wildlife habitat will be established on the reclaimed lands in a condition similar to the undisturbed lands surrounding the sites.
- C. There are no wetlands or other surface waters located within the Project area, therefore, no wetland habitats will be impacted.
- D. There are no perennial streams or other surface waters located within the Project area. A "blue line" stream is identified adjacent to the sites along the northerly boundary on the U.S. Geological Survey (USGS) topographic map ("Old Mammoth" quadrangle, 1:24000 series). The blueline stream is an ephemeral/intermittent identified as a stream "riparian conservation area" (RCA) by the USFS under the SNFPA ROD (USDA, Forest Service 2004). The stream flows southeast through the Casa Diablo geothermal development area emergency spill containment basin then draining into Mammoth Creek approximately 0.8 miles from the site.
- E. A more detailed on wildlife and wildlife habitat is found in Section 3.5 Biological Resources of Draft EIR.

Backfilling, Re-grading, Slope Stability and Re-contouring

Upon completion of operations, all Project-affected areas of surface disturbance will be re-contoured as necessary to blend with the surrounding topography as soon as practicable. Final reclaimed fill slopes will not exceed 2:1 (horizontal:vertical), except where site-specific geologic and engineering analyses demonstrate that the proposed final slope will have a minimum slope stability factor of safety that is suitable for the approved end use and when the proposed final slope can be successfully re-vegetated.

A final site reclamation plan for MP-1 plan is provided on Plates 1a, 1b, and 1c, attached in Appendix A. Once facilities have been removed from the plant site minor grading to shape the existing pad to slope to the northeast and backfill of the existing retention pond will be completed. As an interim, the pad will be covered with gravel to provide a surface for vehicles that will significantly reduce erosion and runoff through percolation of rainfall and snowmelt. Existing slope on the west and south sides of the plant site will be graded at 2:1 (horizontal: vertical) down to the reshaped pad. A stormwater retention basin will be graded to intercept the 20 year, 1 inch rainfall event as part of the interim reclamation plan. The basin will be graded with 3:1 side slopes to allow animals to escape from the basin. The fire suppression system will not be removed since it serves the existing office buildings.

As part of the final reclamation plan, gravel from the MP-1 site will be removed and the site will be re-vegetated. A retention basin will be located in the northeast

corner to collect the runoff from the site graded with side slopes of 3:1 to allow animals to escape from the bottom of the basin. Final reclaimed slopes, will not exceed 2:1 (horizontal: vertical) and will conform to the surrounding topography.

A site reclamation plan for the MP-2 plant site is provided on Plates 2a and 2b, attached in Appendix A. The plant structures, piping and equipment will be removed initially including concrete foundations supporting those facilities. The concrete liner from the existing pond will be removed and the pond will be backfilled. A retention basin will be installed as shown on Plate 2b, to collect the runoff from the site. Minor grading will be required once all the facilities and paving have been removed from the plant. The site will be graded at approximately 1% toward the retention basin. The concrete lined sloped separating MP-2 site and PLES site will remain until PLES site is reclaimed. A small portion of the slope located at the northern boundary of MP-2 site will be re-graded at 2:1 (horizontal: vertical).

A site reclamation plan for the M-1 plant site is provided on Plates 3a and 3b, attached in Appendix A. Once facilities have been removed from the plant site, slopes around the site will be graded at 2:1 (horizontal: vertical). The pad will be graded to slope to the south toward the existing retention pond. Existing retention system west of the pond will be removed and another retention pond will be graded with 3:1 side slopes. The two retaining walls on the site will also be removed and a slope will be constructed at a maximum of 2:1 where the walls were located.

Re-vegetation

The natural re-vegetation and planted vegetation that has already occurred on previously disturbed areas for the existing Casa Diablo Power Plants serve as a basis for determining the plant species and topographic features necessary for successful reclamation. These methods in use already include the design and construction of stable slopes, minor re-grading, ripping or sub-soiling to de-compact and loosen compacted soil, topsoiling, surface preparation through fine grading, reseeding and re-vegetation (or natural re-vegetation).

The M-1 site will be removing approximately 39 trees. Due to the lack of irrigation water available to establish trees replacement of trees is not proposed within the reclamation plan.

Seeding of disturbed areas would be completed using the following seed mixture and application rate:

Species	Pure Live Seed (Pounds per Ac.)
Big sagebrush (<i>Artemisia tridentata</i>)	0.5
Antelope bitterbrush (<i>Purshia tridentata</i>)	4
Desert peach (<i>Prunus andersonii</i>)	2
Rabbitbrush (<i>Ericameria nauseosa</i>)	0.5

Western needlegrass (<i>Achnatherum occidentale</i>)	2
Squirreltail (<i>Elymus elythoides</i>)	4
Basin wildrye (<i>Leymus cinereus</i>)	3

Preferably, seeds for this project would be collected within the immediate vicinity of the project area. If this is not possible due to poor seed availability, seed from the Eastern Slopes Subsection of the Sierra Nevada Section and Mono Section (Miles and Goudey 1997 — map available) would be acceptable. If availability still presents a problem, the seed mix may be modified in consultation with the Forest Service. Re-vegetation will occur in the fall to take advantage of fall and winter moisture.

The existing detention pond at MP-1 plant will be designated as a re-vegetation site to test the seed mix, shown on Plate 1B. Annual monitoring of this site will be conducted annually.

Success standards for re-vegetation are as follows:

- At least 3 shrubs and 8 perennial native grasses and/or forbs per 4 square meters would be established on site.
- Perennial grasses would account for at least 10% of the relative cover.
- All non-native weed species that are already present in the area would account for no more than 5% total of the relative cover at the end of the 2 year evaluation period. New non-native species introduced as a result of the project would be eradicated, i.e. 0% cover. Where this standard is not met, appropriate weed control measures will be implemented.
- At least 70% of trees planted. If this success rate is not achieved then supplemental irrigation may be required to establish trees.

Seeded slopes will be stabilized with erosion control blanket, such as "North American Green jt150."

The re-vegetated areas would be monitored for compliance with the success standards defined above. Barriers will be installed as necessary to prevent unauthorized vehicular traffic from interfering with the reclamation of temporary access routes or other project areas. Re-vegetated areas may be fenced to protect young plants from grazing animals.

The area shown on the M-1 reclamation plan as hot soils will not be held to the success standards noted above as existing areas around the project site with hot soils are either void of vegetation or poorly vegetated so it is anticipated the hot soils will not revegetate.

Failure to meet the success standards would require additional planting and/or weed control, as appropriate, until standards are met.

Drainage, Diversion Structures, Waterways and Erosion Control

Stable topographic surface and drainage conditions will be established to control erosion, prevent sedimentation, blend with the surrounding landscape, and to protect on-site and downstream sites.

Surface runoff and drainage will be controlled by silt fencing or a straw wattle until the interim gravel surface for MP-1 has been placed on the pad and/or the new vegetation has been developed to a point of controlling erosion for all sites during final reclamation.

Retention basins have been designed for each site, based on the Lahontan Regional Water Quality Control Board's Water Quality Plan for the Mammoth Creek Basin to contain the runoff volume generated from a 20 year intensity storm with a one hour duration, which is assumed to be 1 inch (0.83 feet) * Area (square feet) * C (infiltration coefficient). Retention basin sizing calculations are included in Appendix B.

Prime Agricultural Reclamation

The geothermal plant sites are not located within the prime agricultural lands and, therefore, this standard does not apply to the reclamation plan.

Other Agricultural Land

The geothermal plant sites are not located within agricultural lands of any kind and, therefore, this standard does not apply to the reclamation plan.

Building, Structure and Equipment Removal

At project decommissioning, all buildings and ancillary facilities will be reclaimed by having all structures removed and taken off-site. The on-site electric systems, geothermal and fire suppression water pipelines will be removed. The foundations for the plants, asphalt pavement except for those roads which support offsite facilities, and retaining walls will be removed. All above ground pipeline structures will be removed including the pipe and supports. Plates 1a, 2a, and 3a show the existing sites and identify the facilities to be removed. The liner at the bottom of the existing retention pond at MP-1 plant, the concrete pond at MP-2, and underground retention basin at M1 site will be removed and soil will be tested for possible hydrocarbon contamination. All contaminated soils will be removed and disposed of in accordance with state and local health and safety ordinances. All other waste to be disposed of will also be done in accordance with state and local health safety ordinances.

Stream Protection, including Surface and Groundwater

There are no perennial streams or other surface waters located within the Project area.

Topsoil Salvage, Maintenance and Redistribution

A topsoil stockpiled area for the M-1 plant will be shown on a map prior to the start of construction. Once the M-1 plant is decommissioned and removed, topsoil will be spread over the site in a minimum thickness of 3 inches.

Topsoil was not stockpiled when MP-1 and MP-2 sites were graded. Therefore, the resulting surficial soils after grading will be analyzed to determine the presence or absence of elements essential for plant growth and to determine those soluble elements that may be toxic to plants, if the soil has been chemically altered or if the growth media consists of other than the native topsoil. If soil analysis suggests that fertility levels or soil constituents are inadequate to successfully implement the re-vegetation program, fertilizer or other soil amendments may be incorporated into the soil. When native plant materials are used, preference will be given to slow-release fertilizers, including mineral and organic materials that mimic natural sources, and will be added in amounts similar to those found in reference soils under natural vegetation of the type being reclaimed.

Topsoil and suitable amended surficial soils will be planted with a vegetative cover or will be protected by other equally effective measures to prevent water and wind erosion and to discourage weeds.

Tailing and Waste Management

Geothermal drilling waste and cuttings shall be disposed of in a manner approved by the Lahontan Regional Water Quality Control Board and/or Mono County Environmental Health.

Closure of Surface Openings

Wells will be plugged in accordance with the State laws and regulations. Plugged wells will be protected from public entry in order to eliminate any threat to public safety and to preserve access for wildlife habitat.

3. Inspections

A request for annual inspection will be submitted to the Mono County Compliance Officer once each calendar year until construction activities are completed, resuming again once abandonment activities commence. Requests for annual inspections will be accompanied by a written report prepared by a qualified professional who identifies to what extent the reclamation at the site conforms or deviates from the approved reclamation plan.

The Compliance Officer will inspect or cause to be inspected the site within 30 working days of receipt of the written report, filing fee, and application for inspection. Unless otherwise agreed, failure to inspect within 30 working days shall be deemed acceptance of the report and a finding that the resource development operation is in compliance with the reclamation plan.









***Reclamation Plan
Mammoth Pacific
MP-1, MP-2, M-1 Power Plants***

APPENDIX A
Plates



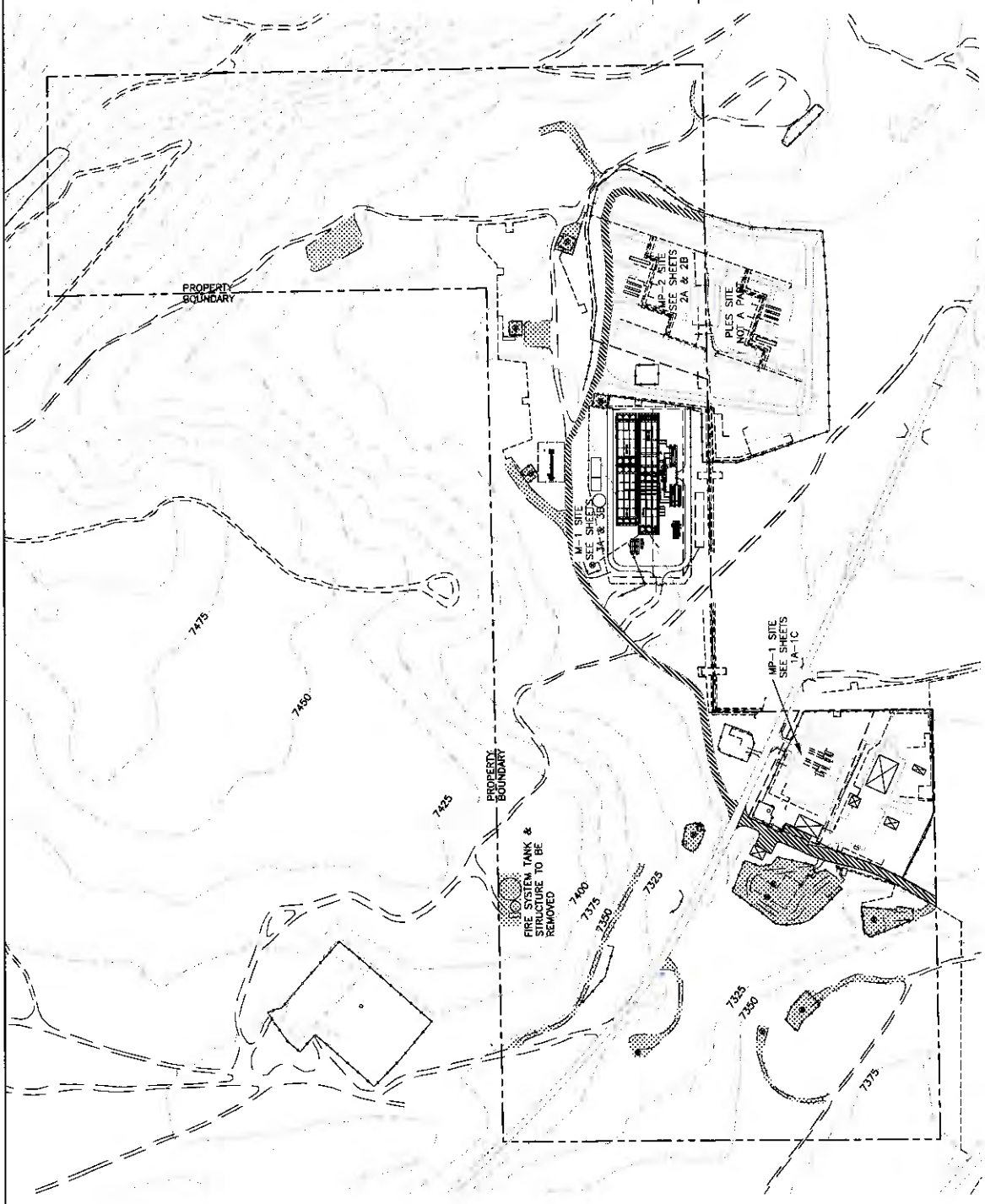
NOTE: RECLAMATION OF AN AREA INVOLVED MUST BE IN ACCORDANCE WITH THE REQUIREMENTS OF ALL GEOTHERMAL UNDERGROUND RESOURCES ACT (UGRA) AND THE CALIFORNIA GEOTHERMAL ENERGY ACT (CGEA). THE RECLAMATION OF AN AREA INVOLVED MUST BE IN ACCORDANCE WITH THE REQUIREMENTS OF ALL GEOTHERMAL UNDERGROUND RESOURCES ACT (UGRA) AND THE CALIFORNIA GEOTHERMAL ENERGY ACT (CGEA). THE RECLAMATION OF AN AREA INVOLVED MUST BE IN ACCORDANCE WITH THE REQUIREMENTS OF ALL GEOTHERMAL UNDERGROUND RESOURCES ACT (UGRA) AND THE CALIFORNIA GEOTHERMAL ENERGY ACT (CGEA).

LEGEND

-  ALL PAVING TO BE REMOVED AND RESTORED TO ORIGINAL CONDITION FOR SITE MONITORING PURPOSES
-  STRUCTURE TO BE REMOVED
-  INJECTION OR PRODUCTION WELL TO BE DESTROYED WITH PAVING REMOVED AND PAID HYDROLOGICAL
-  FENCE TO BE REMOVED
-  PIPELINE TO BE REMOVED
-  PROPERTY BOUNDARY
-  EXISTING DIRT ROAD
-  WELL PAD & ACCESS ROAD TO BE HYDROLOGICAL



NOT TO SCALE



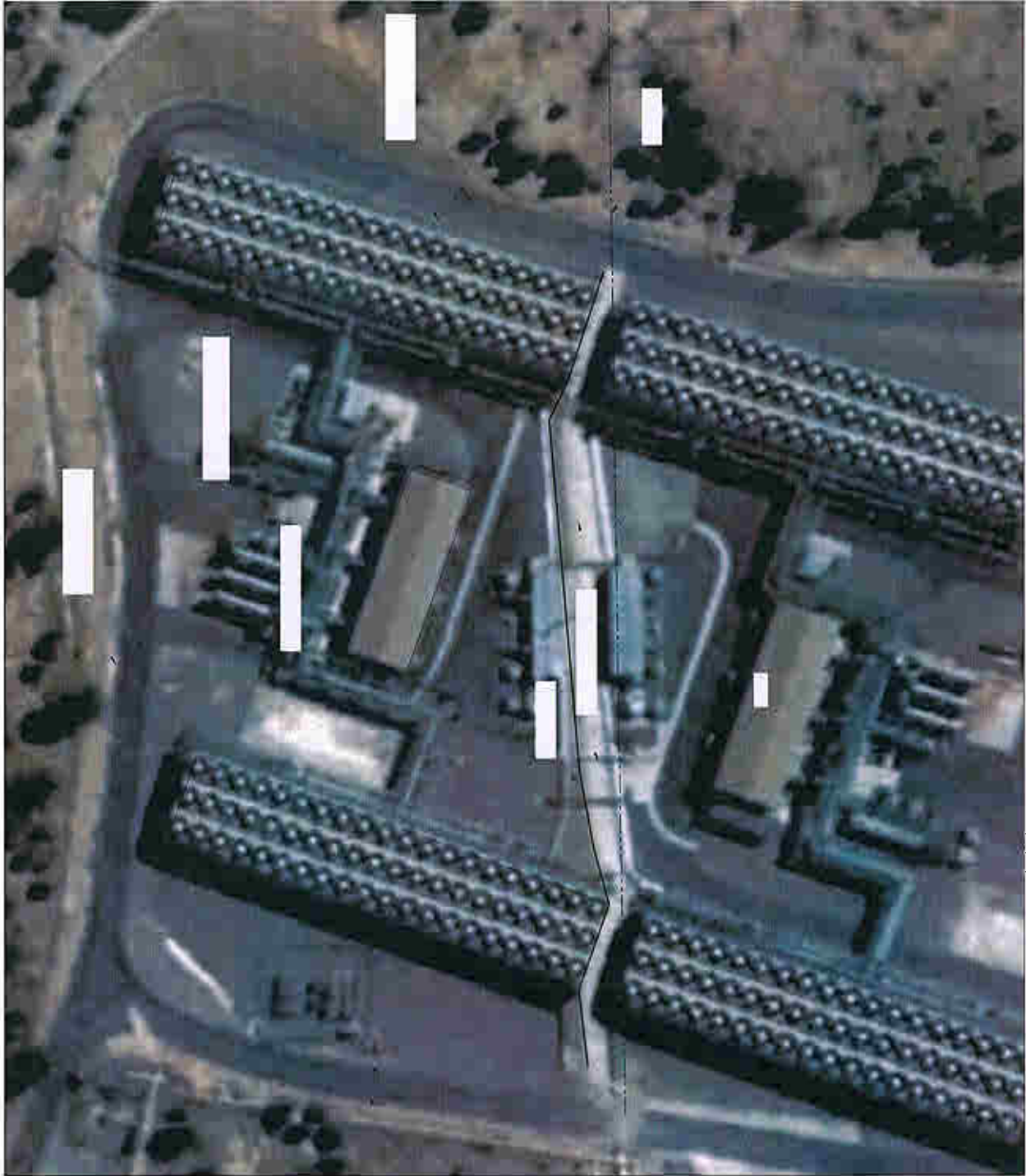
RECLAMATION NOTES:

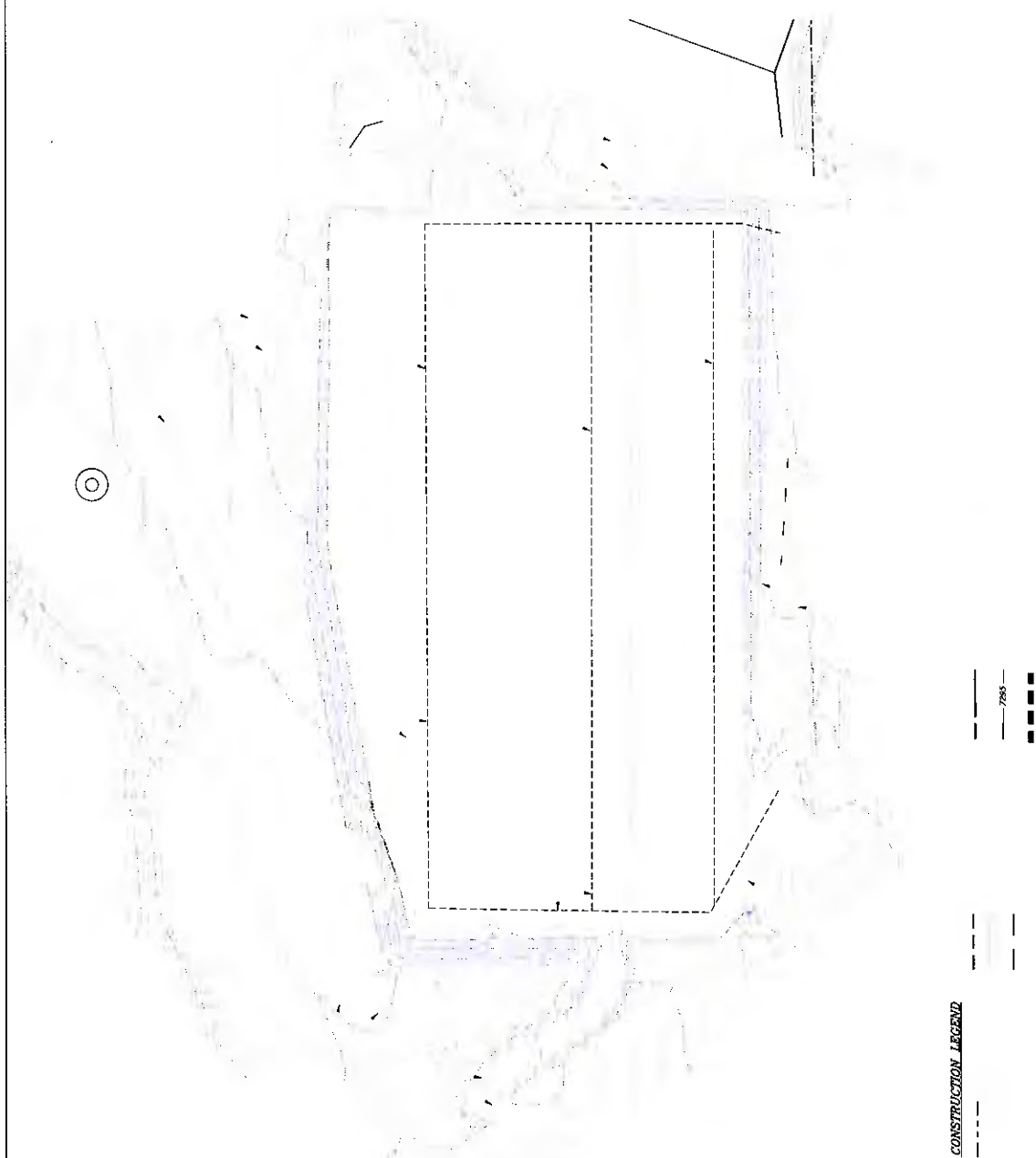




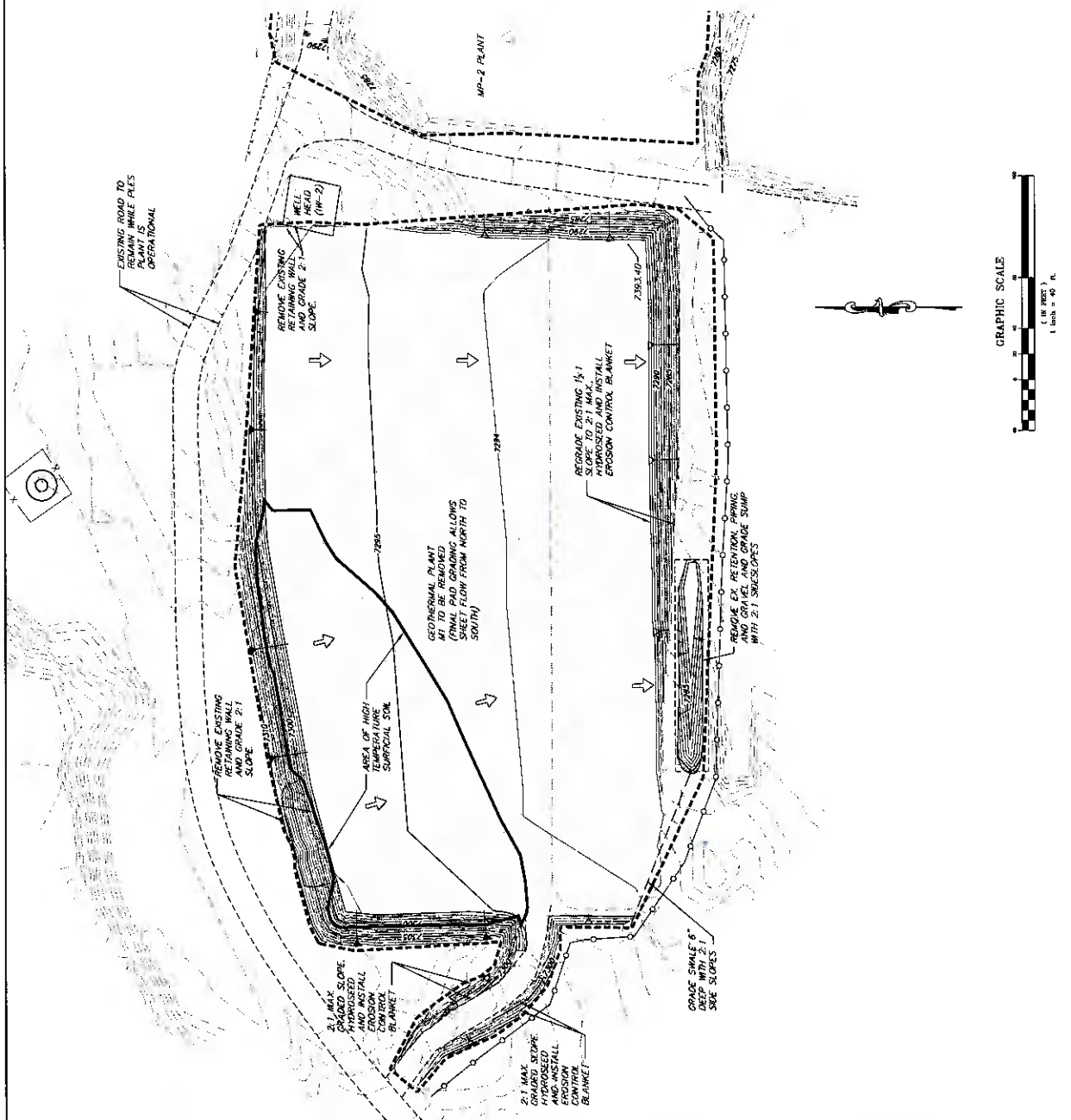


RECLAMATION NOTES:



RECLAMATION NOTES:

CONSTRUCTION LEGEND



***Reclamation Plan
Mammoth Pacific
MP-1, MP-2, M-1 Power Plants***

APPENDIX B
Retention Calculations



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 san luis obispo • lompoc • pleasanton

Calc'd By: **mf**
 Job No.: **3030.2**
 Date: **4/29/2011**

Mammoth Geothermal Plant M1 - Reclamation Plan

Storage Volume Calculation

Input:

Rainfall Quantity	1 in	=	0.083 ft
Percolation Rate	0 in/hr	=	0.000 ft/hr

Tributary Area

	SITE (excluding road)		
	Area		Runoff Coefficient
Roof Area	0,000 sf	0%	0.95
AC Pavement	0,000 sf	0%	0.90
Landscape	203,282 sf	100%	0.25
Total Area	203,282 sf	100%	0.25

Average Volume = Total Area * Average Runoff Coefficient * Rainfall

Storage Volume Required

4,235 cf

Storage Sizing Calculations

From AutoCad Volume Calculations

Basin A	5,130 cf
Basin B	6,551 cf

Storage Volume Provided

11,681 cf

Volume required

4,235 cf

Adequate Storage?

YES



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Calc'd By: **mf**
Job No.: **3030.2**
Date: **4/29/2011**

Mammoth Geothermal Plant MP2 - Reclamation Plan

Storage Volume Calculation

Input:

Rainfall Quantity	1 in	=	0.083 ft
Percolation Rate	0 in/hr	=	0.000 ft/hr

Tributary Area

	SITE (excluding road)		
	Area		Runoff Coefficient
Roof Area	0,000 sf	0%	0.95
AC Pavement	0,000 sf	0%	0.90
Landscape	201,523 sf	100%	0.25
Total Area	201,523 sf	100%	0.25

Average Volume = Total Area * Average Runoff Coefficient * Rainfall

Storage Volume Required

4,198 cf

Storage Sizing Calculations

From AutoCad Volume Calculations

Basin A	5,012 cf
---------	----------

Storage Volume Provided

5,012 cf

Volume required

4,198 cf

Adequate Storage?

YES



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sonoma • elisano • lompoc • pleasanton

Calc'd By: **mf**
Job No.: **3030.2**
Date: **4/29/2011**

Mammoth Geothermal Plant MP1 - Reclamation Plan

Storage Volume Calculation

Input:

Rainfall Quantity	1 in	=	0.083 ft
Percolation Rate	0 in/hr	=	0.000 ft/hr

Tributary Area

	SITE (excluding road)		
	Area		Runoff Coefficient
Roof Area	0,000 sf	0%	0.95
AC Pavement	0,000 sf	0%	0.90
Landscape	67,723 sf	100%	0.25
Total Area	67,723 sf	100%	0.25

Average Volume = Total Area * Average Runoff Coefficient * Rainfall

Storage Volume Required

1,411 cf

Storage Sizing Calculations

From AutoCad Volume Calculations

Basin A	1,594 cf
---------	----------

Storage Volume Provided

1,594 cf

Volume required

1,411 cf

Adequate Storage?

YES

***Reclamation Plan
Mammoth Pacific
MP-1, MP-2, M-1 Power Plants***

APPENDIX C
Cost Estimate

2/8/2012



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**ENGINEER'S PRELIMINARY COST ESTIMATE
MAMMOTH PACIFIC WELL REMOVAL
RECLAMATION PLAN**

Item Description	Quantity	Unit	Unit Cost	Total Cost
A. PRODUCTION WELL				
REMOVE PUMP AND WELL PIPING INCL. Well Drill Rig @\$6,000/day, 3 laborers @\$600/day and trucking@\$1,600/day	9	EA	40,000	\$ 360,000
REMOVE PIPING, CONTROL BUILDING AND RESEED SITE:incl. bulldozer and loader @ \$3,600/day, hydroseeder and operator @\$1,200/day and seed @\$10,000	9	EA	100,000	\$ 900,000
			<u>SUBTOTAL:</u>	<u>\$ 1,260,000</u>
B. INJECTION WELL				
RECLAIM PAD (remove piping, pump control bldg., concrete pad, and reseed)incl. bulldozer and loader @ \$3,600/day, hydroseeder and operator @\$1,200/day and seed @\$10,000	5	EA	20,000	\$ 100,000
			<u>SUBTOTAL:</u>	<u>\$ 100,000</u>
			SUBTOTAL ITEMS A-B:	\$ 1,360,000
			20% Contingencies	\$ 272,000
			TOTAL:	<u>\$ 1,632,000</u>



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**ENGINEER'S PRELIMINARY COST ESTIMATE
MAMMOTH PACIFIC M1
RECLAMATION PLAN**

Item Description	Quantity	Unit	Unit Cost	Total Cost
<u>A. GENERAL</u>				
MOBILIZATION incl equipment transport, employee per diem	1	LS	44,000	\$ 44,000
			SUBTOTAL:	\$ 44,000
<u>B. EROSION CONTROL</u>				
FILTER FENCING / STRAW WATTLE incl wattle at \$0.40 per lf and labor @\$20/hr	1	LS	1,500	\$ 1,500
EROSION CONTROL BLANKET incl. blanket @\$0.70/sf and laborers @\$40/hr for 20 hrs	28,316	SF	1	\$ 28,316
HYDROSEEDING incl. hydroseed and sprayer @ \$0.20 per sf and two operators @15/hr ea totalling \$0.19 per sf	203,282	SF	0.30	\$ 60,985
FINE GRADING (INC. SHAPING OF 2:1 SLOPES) w/ excavator \$3,000/day (w/operator) and bulldozer @ \$1,500/day for 4.5 days	1	LS	20,000	\$ 20,000
			SUBTOTAL:	\$ 110,801
<u>C. REMOVALS:</u>				
EQUIPMENT REMOVAL AND SALVAGE (incl. 150T crane @\$3,000/day for 40 days and 50T crane @ \$1,800/day for 80 days	1	LS	170,000	\$ 170,000
CONCRETE DEMOLITION and DISPOSAL incl. excavator and loader @ \$43/cy and trucking and disposal @ \$20/cy	1,060	CY	65	\$ 68,900
PAVING AND BASE incl. bulldozer and loader @ \$43/cy and trucking and disposal @ \$20/cy	430	CY	63	\$ 27,090
UNDERGROUND RETENTION BASIN incl. excavator and loader @ \$4,400/day and trucking and disposal @ \$20/cy	1	LS	50,000	\$ 50,000
			SUBTOTAL:	\$ 315,990
SUBTOTAL ITEMS A-C:				\$ 470,791
20% Contingencies				\$ 94,158
TOTAL:				\$ 564,949



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 jose hills • obispo • lompoc • glennview

**ENGINEER'S PRELIMINARY COST ESTIMATE
 MAMMOTH PACIFIC MP1
 RECLAMATION PLAN**

Item Description	Quantity	Unit	Unit Cost	Total Cost
<u>A. GENERAL</u>				
MOBILIZATION incl equipment transport, employee per diem	1	LS	44,000	\$ 44,000
			SUBTOTAL:	\$ 44,000
<u>B. EROSION CONTROL</u>				
FILTER FENCING / STRAW WATTLE incl wattle at \$0.40 per lf and labor @\$20/hr	1	LS	1,500	\$ 1,500
EROSION CONTROL BLANKET incl. blanket @\$0.70/sf and laborers @\$40/hr for 20 hrs	4,553	SF	1	\$ 4,553
HYDROSEEDING incl. hydroseed and sprayer @ \$0.20 per sf and two operators @15/hr ea totalling \$0.19 per sf	64,678	SF	0.30	\$ 19,403
FINE GRADING (INC. SHAPING OF 2:1 SLOPES) w/ excavator \$3,000/day (w/operator) and bulldozer @ \$1,500/day for 4.5 days	1	LS	20,000	\$ 20,000
			SUBTOTAL:	\$ 25,456
<u>C. REMOVALS:</u>				
EQUIPMENT REMOVAL AND SALVAGE (incl. 150T crane @\$3,000/day for 20 days and 50T crane @ \$1,800/day for 40 days	1	LS	75,000	\$ 75,000
CONCRETE DEMOLITION and DISPOSAL incl. excavator and loader @ \$43/cy and trucking and disposal @ \$20/cy	1,797	CY	63	\$ 113,211
PAVING AND BASE incl. bulldozer and loader @ \$43/cy and trucking and disposal @ \$20/cy	622	CY	63	\$ 39,186
			SUBTOTAL:	\$ 227,397
SUBTOTAL ITEMS A-C:				\$ 296,853
20% Contingencies				\$ 59,371
TOTAL:				\$ 356,224

2/8/2012



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san luis obispo • ojai • pleasanton

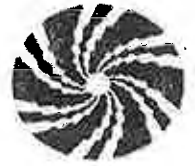
**ENGINEER'S PRELIMINARY COST ESTIMATE
MAMMOTH PACIFIC MP2
RECLAMATION PLAN**

Item Description	Quantity	Unit	Unit Cost	Total Cost
<u>A. GENERAL</u>				
MOBILIZATION incl equipment transport, employee per diem	1	LS	44,000	\$ 44,000
			SUBTOTAL:	\$ 44,000
<u>B. EROSION CONTROL</u>				
FILTER FENCING / STRAW WATTLE incl wattle at \$0.40 per lf and labor @\$20/hr	1	LS	1,500	\$ 1,500
EROSION CONTROL BLANKET incl. blanket @\$0.70/sf and laborers @\$40/hr for 34 hrs	2,653	SF	1	\$ 2,653
HYDROSEEDING incl. hydroseed and sprayer @ \$0.20 per sf and two operators @15/hr ea totalling \$0.19 per sf	201,523	SF	0.30	\$ 60,457
FINE GRADING (INC. SHAPING OF 2:1 SLOPES) w/ excavator \$3,000/day (w/operator) and bulldozer @ \$1,500/day for 4.5 days	1	LS	20,000	\$ 20,000
			SUBTOTAL:	\$ 64,610
<u>C. REMOVALS:</u>				
EQUIPMENT REMOVAL AND SALVAGE (incl. 150T crane @\$3,000/day for 40 days and 50T crane @ \$1,800/day for 80 days	1	LS	150,000	\$ 150,000
CONCRETE DEMOLITION and DISPOSAL incl. excavator and loader @ \$43/cy and trucking and disposal @ \$20/cy	3,377	CY	63	\$ 212,751
PAVING AND BASE incl. bulldozer and loader @ \$43/cy and trucking and disposal @ \$20/cy	2,300	CY	63	\$ 144,900
			SUBTOTAL:	\$ 507,651
SUBTOTAL ITEMS A-C:				\$ 616,261
20% Contingencies				\$ 123,252
TOTAL:				\$ 739,513

[illegible]

 <p>ORMAT <small>THE COMPANY IS THE PROPRIETOR OF THE ORMAT SYSTEM OF AIR-INDUCED FOAM INJECTION</small></p>		<p>Client</p> <p>Mammoth Lakes Geothermal Project</p> <p>ORMAT</p> <p>Mammoth Lakes, California</p>		<p>Drawn</p> <p>E3.4</p> <p>SITE PHOTOMETRIC PLAN</p> <p>20 September 2011 JP Engineering Job #1064</p>	
<p>Revision</p> <p>Drawing Number</p> <p>Date</p>		<p>Engineer</p> <p>Drawing Date</p>		<p>Contract</p> <p>Project Number</p>	

[illegible][illegible]



March 26, 2012

Dan Lyster
Director
Mono County Economic Development Department
P.O. Box 2415
Mammoth Lakes, CA 93546

Scott Burns
Director
Mono County Community Development Department
P.O. Box 347
Mammoth Lakes, CA 93546

**Subject: Mammoth Pacific I Replacement Project
Comment on Revised Draft EIR – Project Benefits**

Dear Director Lyster and Director Burns:

The purpose of this letter is to provide a brief summary of the Mammoth Pacific, L.P. I Replacement Project (Project) as well as a summary of the environmental (and economic and social) benefits to help ensure the Planning Commission and Board of Supervisors have an understanding of the purposes of the Project as they study the Draft Environmental Impact Report (DEIR). The DEIR, of course, includes a complete project description under the "project description" section and more specifically as needed in the following sections of that document. Some of the project benefits are also mentioned in the DEIR, but this letter concisely lists some of the benefits.

Ormat representatives will appear at the Planning Commission and Board of Supervisor (if needed) hearing(s) to provide an overview of the Project and to answer any questions that may arise.

We respectfully request that you include this letter in the Final EIR on the project so that it will be available to Mono County officials and the general public.

PURPOSE AND DESCRIPTION OF THE M-1 PROJECT

Mammoth Pacific, L.P. is a wholly owned subsidiary of Ormat Technologies, Inc. Ormat is a pure-play clean energy company that has 500 employees in the United States. Its operations are consistent with policies at various levels of government, including Mono County, that encourage the safe development of alternative energy resources as a means of reducing the country's dependence on fossil fuels.

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As described in the DEIR, Ormat, by and through its subsidiary Mammoth Pacific, L.P. (MPLP), proposes to replace the existing MP-I (also called G-1) power plant at the Casa Diablo geothermal complex with an advanced generation plant called M-1. The MP-I plant will be torn down, decommissioned and the site reclaimed after the new plant is on-line. The new plant will be constructed on land owned by MPLP immediately adjacent to and on the same parcel as the existing plant.

The MP-I plant was the first geothermal plant constructed at Casa Diablo. It commenced operations in 1984 after receiving a conditional use permit from Mono County. It has been in continuous operation since that time. It was one of the first geothermal plants in the United States utilizing binary cycle technology. It was therefore *first generation* technology. Geothermal technology has advanced significantly in the last 28 years.

As a result of *advanced generation* technologies, the new M-1 plant will utilize the geothermal resource in a manner that will result in the production of approximately 15 percent more energy with the same amount of resource used by the existing plants. There will be no increase in the amount of the geothermal fluid used in the process. The plant will consist of one Ormat Energy Converter (OEC). An OEC is proprietary modular binary geothermal power generation equipment manufactured by Ormat that includes a vaporizer, turbines, generators, an air-cooled condenser (the cooling system), a pre-heater, pumps and piping. There will be no additional wells drilled. The only new pipelines will consist of pipes on the MPLP property to connect with existing pipes connected to the well-field. The expected life of the new plant is 30 years.

PROJECT BENEFITS

Mono County's alternative energy policies state that the County may request the applicant to provide information on economic benefits to the community of a geothermal development project. Pursuant to the County's request, that information was provided in the form of a study by the independent economic consulting firm of Wahlstrom and Associates. Wahlstrom's report, which has been submitted for the record, is entitled "*Economic Benefits of proposed M-1 Geothermal Power Replacement Plant, Mono County, California.*" It shows that the project will provide some \$46.1 million of new investment in materials, equipment and services. Ormat submitted for the record an additional analysis entitled "*Supplemental Economic and Societal Benefits Report: Geothermal Operations in the Casa Diablo Area.*" This report summarizes the economic, technologic and other benefits of geothermal development generally at Casa Diablo.

The benefits of the replacement project include, but are not limited to, the following:

- More efficient production of renewable, clean green energy from the same resource without significant environmental effects.

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- Construction jobs utilizing local contractors to the extent possible.
- Continuation of stable, long-term well-paying energy/green jobs in Mono County.
- Increased revenues to state and local governments in the form of property, sales, income and employment taxes, generated both by the new plant's increased efficiencies and its longer life span.
- Quieter operations as a result of the advanced generation technologies.
- Substantially less fugitive emissions than with the existing plant.
- The working pressure of the OEC is lower than with the existing system, resulting in reduced leakage of the working fluid and increased safety.
- Substantially less lubricating oil because the new design requires less oil, is more leak-resistant, and has fewer moving parts.
- Substantially reduced fire hazard for the reasons listed in the DEIR, including a reduced on-site need for flammable working fluid and up-graded fire protection system utilized in the project design.
- To the extent electricity production is increased and sent to the grid, it will offset emissions of pollutants and green-houses gases that would otherwise be produced by conventional fossil fuel plants elsewhere on the grid.
- There have been no documented significant adverse environmental effects from the existing geothermal operation at Casa Diablo. A more efficient and safe plant utilizing advanced generation technologies has also not been shown to have any potential effects.

As requested above, please include this letter in the Final EIR on the project so that it will be available to Mono County officials and the general public, and also please place a copy of this in the administrative record for the M-1 project.

Very truly yours,

Ron Leiken, QEP
Environmental/Regulatory Affairs Administrator

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September 27, 2011

Dan Lyster
Economic Development Department
PO Box 2415
Mammoth Lakes, CA 93546

Subject: Supplemental Report of Economic Benefits of Geothermal Operations

Dear Mr. Lyster:

With respect to its application for the construction of the M-1 geothermal replacement plant, Ormat provided the County with the report by Wahlstrom & Associates entitled "*Economic Benefits of Proposed M-1 Geothermal Power Replacement Plant, Mono County, California.*" That report shows that the M-1 project will provide some \$46.1 million of new investment in materials, equipment and services. That would obviously be a substantial economic benefit to Mono County and the broader local community. The report was provided pursuant to applicable provisions of the Mono County General Plan and at the request of the Mono County Director of Community Development.

Ormat has also compiled the attached supplemental report. This report summarizes the economic and related benefits of geothermal development generally at the Casa Diablo site. We respectfully request, as we did with the former report, that you add it to the administrative record of both the M-1 and CD-4 projects.

Thank you for your consideration of this matter.

Very truly yours,

Ron Leiken, QEP
Environmental/Regulatory Affairs Administrator

Cc: Scott Burns
Mono County Director of Community Development

Stacey Simon
Mono County, Assistant County Counsel

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**SUPPLEMENTAL ECONOMIC AND SOCIETAL BENEFITS REPORT:
GEOTHERMAL OPERATIONS IN THE CASA DIABLO AREA
MONO COUNTY**

This report is a supplement to the report prepared by the independent economic consulting firm Wahlstrom & Associates dated September 6, 2011, and entitled *Economic Benefits of Proposed M-1 Geothermal Power Replacement Plan, Mono County California*. The Wahlstrom report was previously provided to Mono County in connection with the consideration of the M-1 geothermal replacement plant application. That report was specific to the economic benefits of the M-1 project. This report summarizes the economic benefits of geothermal development generally in the Casa Diablo area of Mono County. This report is submitted on behalf of Mammoth Pacific, LP, the operator of the Casa Diablo projects.

Ormat is a pure-play clean energy company with 500 employees in the United States. Its geothermal operations in Mono County provide local green jobs and clean, renewable energy tied into the local grid. The following is a non-exclusive list of some of the general economic benefits of Ormat's geothermal development in the Casa Diablo area:

- Stable primary employment and tax revenues independent of the national economy
- Economic benefits derived from continuous operation since 1984
- Property tax contributions (\$726,120 paid to Mono County in 2010)
- Direct local purchases totaling nearly \$1 million in 2010
- Periodic local construction jobs for small projects at the existing facilities
- 23 full-time equivalent employees
- Total payroll of approximately \$2.2 million to local employees
- Payroll taxes of approximately \$180,000 per year
- Royalties paid to Mono County from operations on federal lands of approximately \$90,000 per year, paid through the Bureau of Land Management
- Use of local lodging, restaurant and retail services by Ormat corporate employees and by Ormat contractors in the area on business
- Hiring of local construction and professional services.

Economics are only part of the picture of benefits that MPLP brings to Mono County. These geothermal operations also provide environmental and societal benefits. This is also a non-exclusive list:

- Production of approximately 29 MW, or enough to power some 21,750 homes
- Production of renewable, clean and sustainable energy

- Geothermal energy is "base-load," producing energy to the grid 24/7, whereas many other renewable energies are intermittent
- No fossil fuels are consumed to generate energy
- The 29 MW of geothermal power are annually avoiding emission of about 200,000 tons of CO₂ from fossil fuel plants
- Geothermal production has the least surface use and visual impact of any other form of energy production, whether renewable or non-renewable
- Low visual impact allows blending with the surrounding environment
- Conserves fossil fuels and contributes to the diversity of energy resources
- Enhances national security by reducing dependence on imported fuels
- Contributes to meeting state and national renewable energy goals
- Geothermal operations are "field proven;" 10,000 MW are produced world-wide
- No substantial adverse environmental effects of Casa Diablo operations in the 26 years of operations
- Ormat operations at Casa Diablo have been the subject of awards from elected officials, trade associations and community groups based on its record for environmental protection and operations excellence
- Participation in and contribution to local educational and cultural programs
- Work with local, federal and state authorities to assure environmentally safe operations, and to ensure worker safety.



**ECONOMIC BENEFITS OF
PROPOSED M-1 GEOTHERMAL POWER
REPLACEMENT PLANT
MONO COUNTY, CALIFORNIA**

**Prepared for
Ormat Technologies**

**Prepared by
Wahlstrom & Associates**

September 6, 2011

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Appendix: Retail Spending Leakage Tables	

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2. Construction Worker Schedule.....	4
3. Summary of Direct, Indirect and Induced Benefits Generated by the Proposed Geothermal Power Replacement Plant	7

* * *

1. PROJECT DESCRIPTION

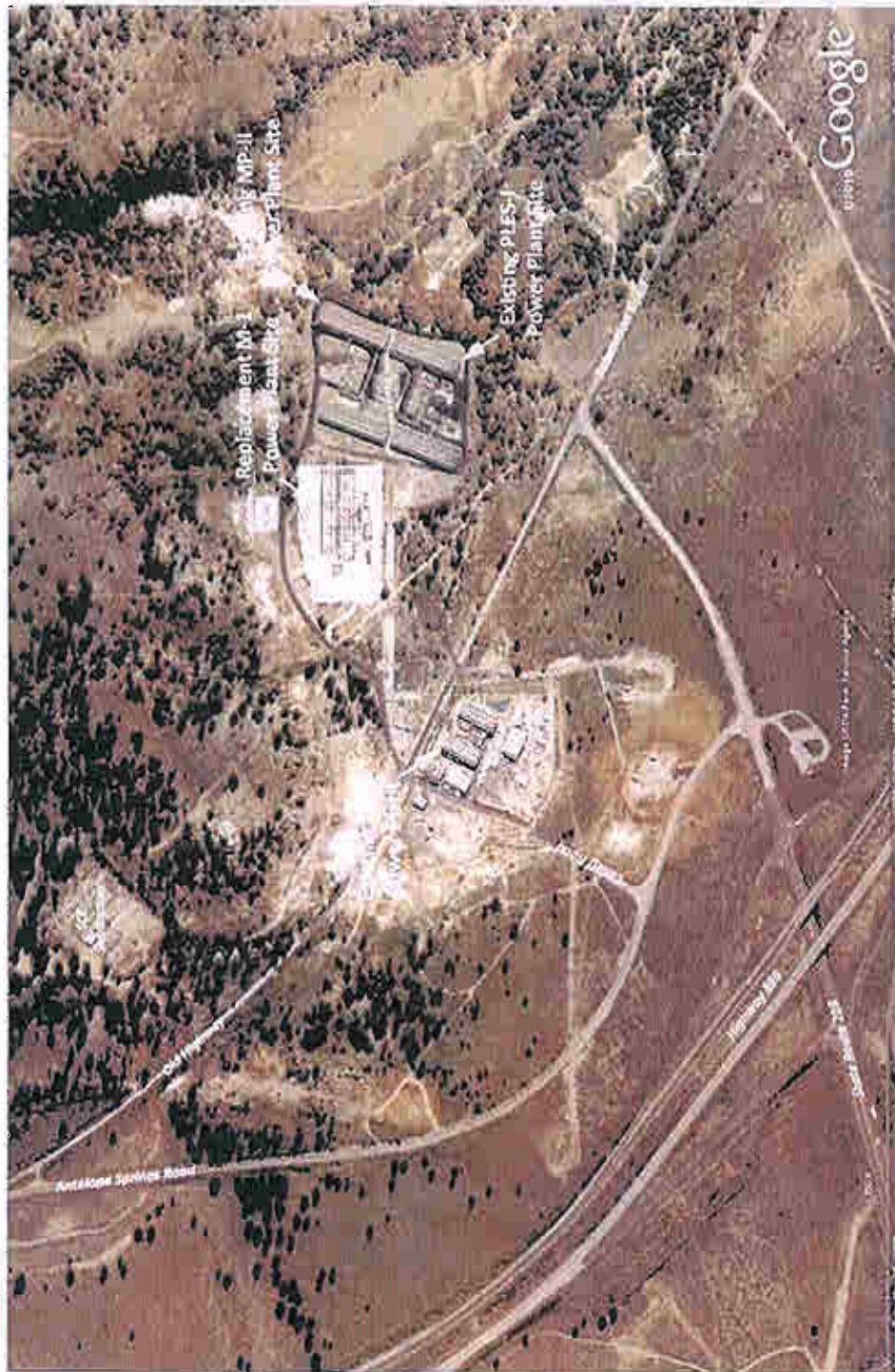
The Mammoth Pacific geothermal complex is located on unincorporated land in Mono County, 2.5 miles east of the Town of Mammoth Lakes, northeast of the junction at US Highway 395 and State Route 203. The complex includes three geothermal power plants built between 1984 and 1990 that have a generating capacity of 29 megawatts (MW). The existing facility produces enough electricity to power approximately 21,750 homes. The electricity is sold under long-term contracts to Southern California Edison.

During late 2010, Ormat Nevada, Inc. (ONI) acquired sole ownership of the geothermal complex site, power plants, equipment, and future rights to develop additional geothermal facilities on more than 10,000 acres of undeveloped federal land. The Company proposes to replace the 7 MW 1984 facility (G1) with a more modern and efficient advanced technology plant (M1) that can produce 18 MW of electricity.

The new plant will be located only 500 feet from the existing plant (See Figure 1). A pipeline will connect the replacement plant with the existing wells, which means that no new geothermal wells will need to be constructed. In addition, a new 12.47 KV substation/switching station will be constructed to connect the new power plant to the existing transmission line.

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FIGURE 1
Replacement Power Plant Location



New Investment and Jobs

The proposed project will require \$46.1 million of new investment in materials, equipment, and services. The investment will generate one year of jobs for out-of-area and local construction, and engineering and professional services contractors. The project applicant estimates that 70 percent of contractors on site will permanently reside out of the area, and 30 percent will be local contractors. However, the new investment will not change the facility operations staff, which will remain at 23 full-time workers. The allocation of the new investment and the type of jobs that will be created are summarized below.

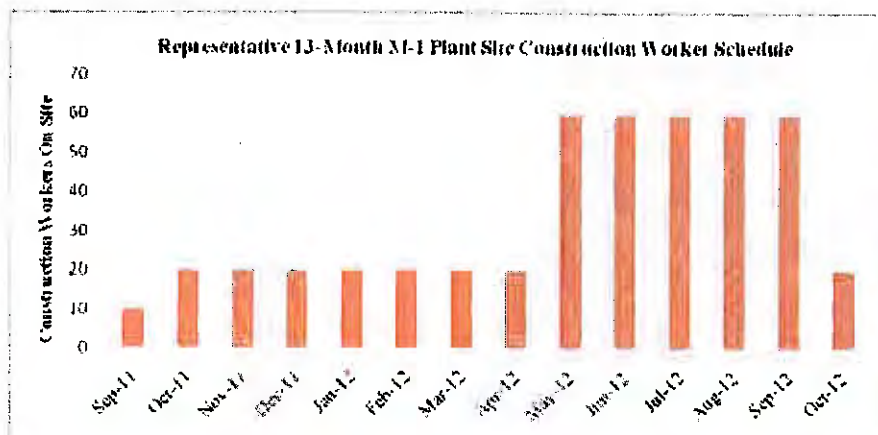
- The Project Applicant will purchase \$32.5 million of materials and equipment needed to assemble the replacement power plant generating unit, substation, spare parts, pentane, and a new building for the construction workforce. Power plant equipment and materials will be purchased from world markets and trucked into Mono County.
- \$5.1 million to purchase mechanical, electrical, and other skilled construction services from companies and individuals from outside the region. Specialized contractors will construct the new power plant's electrical and mechanical systems, as well as a new transmission line and substation.
- \$3.8 million to purchase engineering and other professional services. The project applicant estimates \$500,000 of engineering services will be purchased, and 80 percent of the services will be outsourced to firms that reside out the region.
- \$3.3 million to purchase the services of Mono and Inyo County firms to assist the replacement power plant construction project. Earthwork, concrete, and landscaping are services that local contractors can competitively provide.
- \$1.4 million will purchase construction management services provided by a combination of Ormat employees and independent contractors. Approximately 50 percent of this expenditure will be used to recruit additional Ormat employees and contractors to Mono County. The remainder will be spent on out of the area contractors.

Project Schedule

The proposed project schedule will have 20 construction workers continuously on site between October 2011 and April 2012. Up to 60 construction workers will be on site between May through the end of September 2012. The construction workforce will then decline to 20-persons by the end of October 2012 (See Figure 2).

The existing plant would continue to operate until the new plant becomes commercial, which may take as long as two years. After that time, the existing facility will be dismantled, the site graded, and the pad covered.

FIGURE 2
Construction Worker Schedule



2. MONO COUNTY'S ECONOMIC SETTING

The proposed project will be a boost to Mono County's economy, which is still losing jobs. Mono County's private sector job base expanded from 4,100 jobs in 1992 to 5,600 jobs by 2006 (Table 1). This amounts to a 2.2 percent annual rate of growth over a 14-year period, which exceeds California's 1.6 percent job growth rate during the same period.

However, Mono County lost 200 private sector jobs between 2007 and 2009, which amounted to a three-year 1.3 percent annual rate of job loss. An additional 200 private sector jobs were lost between 2009 and 2010.¹ However, the recession-generated loss of jobs in Mono County was less severe than California's job loss because the area's economy is less dependent on the manufacturing, retail, and technology sectors that were hit hard by the recession.

Mono County's economy is highly dependent on tourism as nearly 60 percent of the private jobs are generated by lodging facilities and restaurants. Retail businesses generates another 12 percent of county jobs, with construction and real estate/leasing another 6 percent each.

¹ Source: California Employment Development Department

Gross County Product

The value of goods and services produced in Mono County exceeds \$1 billion (see Table 2, column 2). The three largest economic sectors include accommodations (\$270 million), real estate (\$224 million), and public sector wages (\$163 million).

Employee wages paid among all industries amount to \$346 million (column 4). Self-employed individuals earned \$72 million of proprietor income (Column 5), and corporate profits, rents, and interest earned on real estate assets amounted to \$228 million (Column 6).

Mono County's Construction Industry

The past trends and current conditions within Mono County's construction industry (Table 3) provides a benchmark to evaluate the proposed project's economic impacts, as summarized below.

- Mono County lost more than 240 construction jobs between 2007 and 2009 as the recession drastically reduced the demand to build new residential and commercial space. The recession caused Mono County to lose approximately 40 percent of its 2006 construction job base.
- The construction industry generated \$95 million of production value, which accounts for 9 percent of Mono County's gross product (see column 2). The construction industry output has significantly declined since 2007 along with the decline of construction industry jobs.
- Self-employed persons generate approximately 50 percent of Mono County's construction industry earnings. Wage and salary employees generate the other half of industry earnings.
- The construction of nonresidential structures, which includes the proposed power plant replacement project, generates \$32 million of industry output. Construction companies that build other nonresidential structures pay \$6.8 million of salaries, and sole proprietors earn \$7.2 million of fees.

3. ECONOMIC BENEFITS OF THE POWER PLANT REPLACEMENT PROJECT

The construction of a replacement power plant should contribute \$9.9 million to Mono County's economy during the project's one-year construction phase. Additional fiscal benefits will be yielded by the higher property taxes that are generated by the new power plant investment. It is anticipated that local contractors will get \$3.1 million of business, and the indirect and induced spending by local contractors and out of area workers will contribute another \$6.8 million to the local economy.

The proposed project will also create 81 jobs in Mono County during the life of the construction activity. It is anticipated that contracts obtained by local establishments will generate 12 jobs. The vast majority of jobs will be generated by additional spending at support businesses that provide lodging, restaurants, take out food, retail, recreation, and other consumer services.

It is important to note that the new power plant investment would retain a steady number of jobs for many years into the future. The existing power plant would be decommissioned and existing jobs would be lost without the new investment. The economic benefits summarized in Figure 3 are described and explained below.

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Figure 3
Summary of Direct, Indirect and Induced Benefits Generated by the Proposed Geothermal Power Replacement Plant

Type of Contract	Value of Investment (\$ million)	Direct Purchases in Mono County	Mono County Indirect Multiplier Spending	Mono County Induced Multiplier Spending	Total Mono County Spending Impacts	Jobs Created For Mono County Workers To Construct The Power Plant Replacement Project	Indirect and Induced Jobs Created in Mono County	Total Jobs Created in Mono County
Purchase of equipment and materials on the world market	\$32.5	\$0	\$0	\$0		0	0	0
Contracts with out-of-area construction firms that recruit workers to temporarily reside in Mono County	\$5.1	\$0	\$1,510,000	\$260,000	\$1,770,000	0	18	18
Contracts with local firms to help construct the power plant replacement project	\$3.3							
Contracts with Mono County firms	\$3.0	\$3,000,000	\$400,000	\$510,000	\$3,910,000	11	2	20
Contracts with Inyo County firms	\$0.3	\$0	\$0	\$0	\$0	0	0	0
Construction management contracts	\$1.4							
Contracts with out-of-area construction management firms and/or Ormat employees that temporarily reside in Mono County	\$0.7	\$0	\$130,000	\$30,000	\$160,000	0	2	2
Contracts with out-of-area construction management firms and/or Ormat employees that work away from the site	\$0.7	\$0	\$0	\$0	\$0	0	0	0
Civil engineering and Other Indirect Expenses	\$3.8							
Mono County Civil Engineering Firms	\$0.1	\$100,000	\$10,000	\$20,000	\$130,000	1	0	1
Out of area Civil engineering firms	\$0.4	\$0	\$60,000	\$10,000	\$70,000	0	1	1
Other indirect expenses	\$3.3	\$0	\$3,300,000	\$560,000	\$3,860,000	0	39	39
TOTALS	\$46.1	\$3,100,000	\$5,410,000	\$1,390,000	\$9,890,000	12	68	81

Data Sources: 2007 U.S. Census of Construction Industries, Ormat Technologies, California Energy Commission, IMPLAN Multipliers

Analysis: Wahlstrom & Associates

Notes

Columns (1 & 2): Information on investment by type of contract is provided by Ormat Technologies
Column (3): Mono County indirect spending multipliers from IMPLAN. See Table X for W&A estimates of spending by construction worker that temporarily reside in Mono County
Column (4): Mono County induced spending multipliers from IMPLAN.
Column (5) equals Column (2) + Column (3) + Column (4)
Column (6): Column (3) * wages/employee data from the U.S. Census of Construction Industries Data. See Table X
Column (7) equals Column (3) + Column (4) / \$100,000 assuming that local businesses generate \$100,000 of earning per employee
Column (8) equals Column (6) + Column (7)

Materials and Equipment (\$32.5 million)

Materials and equipment needed to assemble the replacement power plant will be purchased from world markets and trucked into Mono County. This expenditure will not generate direct or indirect purchases in Mono County, nor will it create any local jobs.

Out of Area Construction Firms (\$5.1 million)

Mechanical, electrical, and other skilled construction services will be purchased from companies and individuals that reside outside the region. Specialized contractors will be recruited to live in the area while they are working on specific tasks related to the power plant replacement project. It is estimated that the temporary workers will spend \$1.5 million on lodging and consumer services while residing in Mono County.² The indirect spending will generate another \$260,000 of induced spending, which will contribute to the creation or retention of 18 consumer services jobs in Mammoth Lakes and Mono County.

Local Construction Contractors (\$3.3 million)

The Project Applicant anticipates that Mono County firms will be awarded 9 percent of the local contracts, and Inyo County firms will be awarded 10 percent of the local business; \$3 million of contracts with Mono County businesses will generate another \$400,000 of indirect spending and \$510,000 of induced spending.³ We estimate that 11 contractor jobs will be created or retained by the local construction contracts. Another 9 consumer service jobs will be created or retained by the indirect and induced spending with consumer service establishments.

Construction Management Contracts (\$1.4 million)

Ormat anticipates using \$700,000 of additional construction management services by recruiting additional Staff or entering into contracts with construction management firms to work at the site on specific tasks. The out of area staff or contractors will contribute \$200,000 of indirect spending to the local economy and \$30,000 of induced spending.⁴ Approximately 2 consumer service jobs will be created or retained by contractor spending.

The remaining construction management activity will be contracted to out-of-area firms or Ormat Staff that will not travel to the site and make any economic contributions to Mono County's economy.

² See Appendix Table 4 for indirect spending calculations by out of area contractors

³ Calculations are made using the IMPLAN input-output model for Mono County. The model indicates that each construction dollar invested in the local economy will generate indirect impacts at a rate of 13.5% and induced impacts at a rate of 17%.

⁴ See Table 4 for indirect spending calculations

Civil Engineering and Other Indirect Expenses (\$3.8 million)

Ormat anticipates using \$100,000 of local civil engineering services. Firms and individuals that are awarded civil engineering contracts will generate another \$30,000 of indirect and induced spending. The total spending should create or retain one job.

Another \$400,000 of civil engineering services will be purchased from out-of-area firms who will work on site to perform specific tasks. The out of area contractors will generate another \$70,000 of indirect and induced spending in the local economy. The spending will be sufficient to support one consumer job.

Finally, Ormat anticipates another \$3.3 million of purchases on housing, transportation, and other consumer services from local vendors. Nearly \$3.9 million of indirect and induced spending should create or retain 39 consumer jobs in the local economy.

Ongoing Operations

Mammoth Pacific typically spends \$500,000 or more on local services and materials to support the power plant. Without the new plant, approximately 25 percent of the local spending would be lost as the existing facility is ultimately decommissioned and dismantled.

* * *

APPENDIX: Economic Impact Analysis Tables

**Table 1: Employment Trends in Mono County and California
1992-2009**

Table 2: Mono County Product and Industry Outputs, 2010

Table 3: Construction Industry Outputs in Mono County

**Table 4: Estimates of Indirect Benefits Generated by
Out-of-area Contractors**

**Table 5: Employment and Earnings Among Establishments Engaged in
Power Plant and Civil Engineering Construction**

*** * ***

Table 1
Employment Trends in Mono County and California, 1992 - 2009

	1992	2003	2006	2009	Percent Private Sector Jobs 2009	Job Growth 1992 - 2006	Job Growth 2007 - 2009	Annual Growth Rate 1992 - 2006	Annual Growth Rate 2007 - 2009
California									
Total Employment	12,505,100	14,768,000	15,435,500	14,456,500		2,930,400	-979,000	1.5%	-2.2%
Total Private Employment	10,057,900	11,986,800	12,608,000	11,605,200		2,550,100	-1,002,800	1.6%	-2.7%
Construction Employment	495,500	796,800	933,700	623,100	4%	438,200	-310,600	4.6%	-12.6%
Mono County									
Total Employment	5,200	7,100	7,100	7,000		1,900	-100	2.3%	-0.5%
Total Private Employment	4,100	5,500	5,600	5,400		1,500	-200	2.2%	-1.3%
11 Agriculture, Forestry, Fishing and Hunting	30	20	30	30	1%	0	0	0.0%	0.0%
21 Mining, Quarrying, and Oil and Gas Extraction	28	15	1	1	0%	-26	0	-20.8%	-1.4%
22 Utilities	8	4	2	2	0%	-6	0	-9.0%	-1.4%
23 Construction	330	560	580	340	6%	251	-242	4.1%	-16.3%
31-33 Manufacturing	50	60	60	40	1%	10	-20	1.3%	-12.6%
42 Wholesale Trade	20	20	30	10	0%	10	-20	2.9%	-30.7%
44-45 Retail	570	740	730	640	12%	160	-90	1.8%	-4.3%
48-49 Transportation & Warehousing	8	4	49	78	1%	42	28	14.0%	16.3%
51 Information	48	44	24	25	0%	-24	1	-4.8%	1.4%
52 Finance and Insurance	62	57	54	44	1%	-8	-9	-1.0%	-6.1%
53 Real Estate and Rental and Leasing	248	391	422	300	6%	174	-122	3.9%	-10.8%
54 Professional, Scientific, and Technical Services	102	191	225	120	2%	123	-105	5.8%	-18.9%
55 Management of Companies and Enterprises	0	1	1	0	0%	1	-1	0.0%	0.0%
56 Administrative Support, Waste Management and Remediation	85	133	29	218	4%	-55	189	-7.3%	94.9%
61 Educational Services	4	2	4	4	0%	0	0	0.5%	-1.4%
62 Health Care and Social Assistance	209	151	13	14	0%	-197	2	-18.2%	3.8%
71 Arts, Entertainment, and Recreation	62	96	95	102	2%	33	7	3.1%	2.5%
72 Accommodation and Food Services	2,103	2,826	3,042	3,210	59%	940	168	2.7%	1.8%
81 Other Services (except Public Administration)	159	207	237	232	4%	77	-4	2.9%	-0.6%
91 Public Administration	1,060	1,530	1,500	1,640		440	140	2.5%	3.0%

Source: California Employment Development Department and IMPLAN ES 202 Files
Analysis: Wahlstrom & Associates

Table 2
Mono County Gross County Product and Industry Outputs, 2010

Description	Employment (1)	Industry Output (2)	Industry Output % Total (3)	Employee Compensation (4)	Proprietor Income (5)	Other Property Income (6)	Indirect Business Tax (7)	Indirect Business Tax % Total (8)
Total	9,600	\$1,056,400,000		\$345,900,000	\$71,900,000	\$221,700,000	\$66,000,000	
11 Agriculture, Forestry, Fishing and Hunting	20	\$7,400,000	1%	\$200,000	\$900,000	\$1,500,000	\$100,000	0%
21 Mining, Quarrying, and Oil and Gas Extraction	30	\$17,500,000	2%	\$3,600,000	\$400,000	\$4,500,000	\$900,000	1%
22 Utilities	10	\$6,900,000	1%	\$1,400,000	\$0	\$2,600,000	\$800,000	1%
23 Construction	740	\$95,100,000	9%	\$19,300,000	\$20,300,000	\$5,500,000	\$700,000	1%
31-33 Manufacturing	40	\$16,100,000	2%	\$1,500,000	\$60,000	\$1,100,000	\$1,400,000	2%
42 - Wholesale Trade	10	\$2,400,000	0%	\$800,000	\$90,000	\$300,000	\$300,000	1%
44 - 45 Retail	930	\$56,800,000	5%	\$21,300,000	\$6,800,000	\$9,600,000	\$10,200,000	15%
48 Transportation	50	\$9,800,000	1%	\$2,200,000	\$100,000	\$1,000,000	\$200,000	0%
49 - Warehousing and Storage	40	\$3,000,000	0%	\$1,500,000	\$700	\$400,000	\$10,000	0%
51 - Information	40	\$6,800,000	1%	\$1,300,000	400,000	1,000,000	\$200,000	0%
52 - Finance and Insurance	90	\$16,400,000	2%	\$2,300,000	\$1,600,000	\$3,900,000	\$300,000	0%
53 - Real Estate, Rentals & Leasing	990	\$224,200,000	21%	\$10,900,000	\$12,400,000	\$114,300,000	\$25,300,000	38%
54 - Professional, Scientific and Technical	290	\$29,300,000	3%	\$7,600,000	\$6,800,000	\$5,500,000	\$700,000	1%
55 - Management of Companies and Enterprises	40	\$1,100,000	0%	\$700,000	\$60,000	\$100,000	\$5,000	0%
56 - Administrative, Waste Management and Remediation	200	\$18,600,000	2%	\$6,100,000	\$500,000	\$2,500,000	\$500,000	1%
61 - Education Services	20	\$1,100,000	0%	\$700,000	\$20,000	\$70,000	\$10,000	0%
62 - Health Care	140	\$11,100,000	1%	\$1,700,000	\$4,400,000	\$400,000	\$80,000	0%
71 - Arts, Entertainment and Recreation	570	\$49,000,000	5%	\$13,500,000	\$3,800,000	\$9,300,000	\$4,600,000	7%
72 - Accommodations and Food Services	2,990	\$269,600,000	26%	\$96,300,000	\$2,900,000	\$36,000,000	\$19,300,000	29%
81 - Other Services	510	\$51,200,000	5%	\$15,7800,000	\$10,500,000	\$1,400,000	\$400,000	1%
91 - Public Administration	1,880	\$163,000,000	15%	\$137,300,000	\$0	\$25,700,000	\$0	0%

Source: Minnesota Implan Group

Analysis: Wahlstrom & Associates

Notes:

Column 1 - Includes self employment

Column 2 - Value of industry production in producer prices

Column 4 - Includes wages, salaries, benefits & employer taxes

Column 5 - Self employment earnings including capital consumption allowance

Column 6 - Includes corporate profits, rent, interest and capital consumption allowance

Column 7 - Includes sales taxes, excise taxes, fees, fines, licenses & property taxes. All payments to government except payroll taxes and end of year corporate taxes.

Table 3
Construction Industry Outputs in Mono County

Description	Employment (1)	Industry Output (2)	Employee Compensation (3)	Proprietor Income (4)	Other Property Income (5)	Indirect Business Tax (6)
Total Industry Output	9,635	\$1,056,400,000	\$345,900,000	\$71,900,000	\$227,700,000	\$66,000,000
23 Construction	741	\$95,100,000	\$19,300,000	\$20,300,000	\$6,500,000	\$700,000
34 - Construction of new commercial and health care structures	162	\$18,900,000	\$4,300,000	\$4,500,000	\$1,000,000	\$200,000
35 - Construction of new manufacturing structures	49	\$5,400,000	\$1,300,000	\$1,400,000	\$300,000	\$30,000
36 - Construction of other new nonresidential structures	261	\$32,200,000	\$6,800,000	\$7,200,000	\$1,700,000	\$200,000
37 - 38 - Construction of new residential structures	144	\$24,800,000	\$3,800,000	\$4,000,000	\$2,300,000	\$100,000
39 - Maintenance and repair of nonresidential structures	86	\$9,000,000	\$2,300,000	\$1,900,000	\$800,000	\$80,000
40 - Maintenance and repair of residential structures	37	\$4,700,000	\$800,000	\$1,400,000	\$400,000	\$30,000

Source: Minnesota Implan Group

Analysis: Wahlstrom & Associates

Notes:

Column 1 - Includes self employment

Column 2 - Value of industry production in producer prices

Column 3 - Includes wages, salaries, benefits & employer taxes

Column 4 - Self employment earnings including capital consumption allowance

Column 5 - Includes corporate profits, rent, interest and capital consumption allowance

Column 6 - Includes sales taxes, excise taxes, fees, fines, licenses & property taxes. All payments to government except payroll taxes and end of year corporate taxes.

Table 4
Estimates of Indirect Benefits Generated by Out of Area Contractors

Type of Contract	Value of Investment (\$ Million) (1)	Value per Employee (2)	Full Time Workers (3)	Workers that Temporarily Reside in Mono County (4)	Number of Days in Mono County per Worker (5)	Consumer Spending per day (6)	Total Indirect Spending (7)
Power plant construction (out-of-area firms)	\$5.1	\$208,000	25	22	428	160	\$1,511,000
Contracts with out-of-area construction management firms and/or Ormat employees that temporarily reside in Mono County	\$0.7	\$219,000	3	3	428	160	\$197,000
Contracts with out-of-area civil engineering firms that temporarily reside in Mono County	\$0.4	\$277,000	1	1	428	160	\$59,000
Construction management	\$7	\$219,000	6	4	428	160	\$131,000

Data Sources: 2007 U.S. Census of Construction Industries, Ormat Technologies, California Energy Commission

Analysis: Wahlstrom & Associates

Notes

Column (1): Information on investment by type of contract is provided by the Project Applicant

Column (2): U.S. Census of Construction Industries Data, See Table 5

Column (3): Column (1)/(2)

Column (4) Assumes 60% of out of area contractors will reside in Mono County and 40% will reside in Inyo County

Column (5) Project is scheduled to start construction in the beginning of September, 2011 and will be completed by the end of October, 2012

Column (6) Per Diem rates paid to California Energy Commission contractors

Column (7) equals Column (4) + Column (5) + Column (6)

Table 5
Employment and Earnings Among Establishments
Engaged in Power Plant and Civil Engineering Construction

NAICS	Construction Sectors	Establishments	Employees	Construction Workers	Other Workers	Value of Construction (\$ Thousand)	Value per All Employees	Value per Construction Employee
237130	Power & communication line & related structures	5,289	187,706	148,104	39,602	\$30,783,389	\$164,000	\$208,000
237990	Other heavy industry & civil engineering construction	4,077	70,461	55,948	65,797	\$15,504,377	\$220,000	\$277,000
237991	Construction Management	130	4,664			\$1,023,357	\$219,000	

Source: U.S. Census of Construction Industries, 2007

Analysis: Wahlstrom & Associates



RESOLUTION R12-05

**A RESOLUTION OF THE MONO COUNTY PLANNING COMMISSION
CERTIFYING THE FINAL ENVIRONMENTAL IMPACT REPORT
FOR THE MAMMOTH PACIFIC I REPLACEMENT PROJECT,
APPROVING A CONDITIONAL USE PERMIT, VARIANCE, AND RECLAMATION PLAN
FOR THE PROJECT, AND RECOMMENDING THAT THE BOARD OF SUPERVISORS
APPROVE A CLARIFYING AMENDMENT TO THE MONO COUNTY GENERAL PLAN
REGARDING GEOTHERMAL DEVELOPMENT
WITHIN 500 FEET OF A MAPPED WATERCOURSE**

WHEREAS, the Mammoth Pacific I Replacement Project proposes to replace the existing MP-1 power plant, located near Casa Diablo Hot Springs, with a new, more modern and efficient binary power plant to be located on the same site; to provide for reclamation and partial reuse of the existing power plant site; and to provide for the ultimate reclamation of all operations on the site, without altering the existing geothermal well field or changing the level of geothermal extraction (the "Project"); and

WHEREAS, the Project includes approval of a Conditional Use Permit; approval of a variance from the 100-foot property-line and 500-foot stream setbacks applicable to geothermal development, authorization for the placement of an aboveground transmission pipeline, and a recommendation that the Board of Supervisors add clarifying language to the Mono County General Plan related to the 500-foot stream setback; and

WHEREAS, Mono County has caused to be prepared an Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act (CEQA) for the Project; and

WHEREAS, the Mono County Planning Commission did, on October 11, 2012, hold a properly noticed and advertised public hearing to hear all testimony relevant to the Project, Final EIR, and approvals; and

WHEREAS, based on the information provided in the draft and Final EIRs, public comment received on the Project, and taking into account the recommendations of staff, the Mono County Planning Commission desires to approve the Conditional Use Permit, grant the requested variance, approve the Reclamation Plan, and recommend that the Board of Supervisors approve the clarifying General Plan amendment.

NOW, THEREFORE, Mono County Planning Commission hereby **FINDS** and **RESOLVES** that:

1. A Final Environmental Impact Report (Final EIR) has been completed for the Project in compliance with CEQA; and
2. The Final EIR has been presented to the Planning Commission, which is the decision maker with respect to the Conditional Use Permit, Variance, and Reclamation Plan for the Project and is the advisory body to the Board of Supervisors with respect to the proposed General Plan Amendment; and

3. The Planning Commission has reviewed and considered the information contained in the Final EIR (and the draft EIRs) for the Project; and
4. The Final EIR reflects the lead agency's independent judgment and analysis; and
5. The Final EIR has identified potentially significant effects of the project which, as the result of changes or alterations incorporated into the Project, have been avoided or reduced to a less-than-significant level, as set forth in Exhibit A to this resolution, which is hereby incorporated by this reference as if fully set forth herein; and
6. Potential alternatives to the proposed Project are either not feasible or do not provide environmental benefit in comparison to the proposed Project, as set forth in Exhibit A; and
7. The Mono County Planning Commission does hereby certify and adopt the Final EIR and the mitigation monitoring and reporting program for the Mammoth Pacific I Replacement Project.

BE IT FURTHER RESOLVED THAT the Mono County Planning Commission hereby:

1. Makes each of the findings set forth in Exhibit B to this resolution, which is hereby incorporated by reference as if fully set forth herein, related to approval of a variance from specified provisions of the Land Development Regulations and Land Use Designation; and
2. Approves Variance 12-002 authorizing a variance from the 100-foot property line setback, a variance from the 500-foot surface watercourse setback, and a variance from the provisions of section 11.010 of the General Plan related to the undergrounding of utilities for the Project, as described in the EIR.

BE IT FURTHER RESOLVED THAT the Mono County Planning Commission hereby:

1. Makes each of the findings set forth in Exhibit C to this resolution, which is hereby incorporated by reference as if fully set forth herein, related to approval of a Conditional Use Permit for the Project; and
2. Approves Conditional Use Permit 12-004 for the Project, including all Conditions of Approval, the Mitigation Monitoring, and Reporting Program, and a height exception for mechanical appurtenances, as described in the EIR.

BE IT FURTHER RESOLVED THAT the Mono County Planning Commission hereby:

1. Makes each of the findings set forth in Exhibit D to this resolution, which is hereby incorporated by reference as if fully set forth herein, related to approval of a Reclamation Plan for the Project; and

2. Approves Reclamation Plan 12-001 for the Project.

BE IT FURTHER RESOLVED THAT, the Mono County Planning Commission hereby:

1. Finds that the proposed change to the text of the Land Development Regulations of the General Plan in General Plan Amendment 12-003(b) is consistent with the General Plan and any applicable area plan as set forth in Exhibit E to this resolution, which is attached hereto and hereby incorporated by reference; and
2. Recommends that the Board of Supervisors approve the Final EIR and GPA 12-003(b), which clarifies existing language in the Mono County General Plan related to setbacks from a surface watercourse applicable to geothermal development.

PASSED AND ADOPTED this 11th day of October, 2012, by the following vote of the Planning Commission, County of Mono:

AYES : Scott Bush, Chris Lizza, Dan Roberts, Steve Shipley

NOES :

ABSENT : Mary Pipersky

ABSTAIN :

Steve Shipley, Chair

ATTEST:

APPROVED AS TO FORM:

CD Ritter
Secretary of the Planning Commission

Stacey Simon
Assistant County Counsel

EXHIBIT A

DRAFT ENVIRONMENTAL IMPACT FINDINGS PURSUANT TO CEQA GUIDELINE SECTION 15091 MAMMOTH PACIFIC I REPLACEMENT PROJECT FINAL ENVIRONMENTAL IMPACT REPORT

The State of California Public Resources Code Section 21081 and CEQA Guidelines Section 15091 require a public agency, prior to approving a project, to identify significant impacts of the project and make one or more of three allowable findings for each of the significant impacts:

- The first allowable finding is that “[c]hanges or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR.” (State CEQA Guidelines Section 15091, subd. (a)(1))
- The second allowable finding is that “[s]uch changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.” (State CEQA Guidelines, Section 15091, subd. (a)(2))
- The third allowable finding is that “[s]pecific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR.” (State CEQA Guidelines, Section 15091 (a)(3))

After reviewing the Final EIR and the public record on the Project, the County hereby makes the findings in Parts I through IV of this document regarding the significant effects of the Mammoth Pacific I Replacement Project (Project) pursuant to Section 15091 of the State CEQA Guidelines.

All effects of the Project on the environment are hereby found to be not significant after mitigation. Cumulative impacts of the Project in conjunction with other related approved, proposed, or projects currently under construction have been addressed where applicable, and would not be significant after mitigation.

PART I: FINDINGS RELATIVE TO POTENTIALLY SIGNIFICANT IMPACTS

Because certain effects of the Project were analyzed in the EIR as *potentially* significant and because project design features, alterations, or mitigation measures have been imposed which avoid or further reduce those effects, the Planning Commission hereby finds as follows:

A. Aesthetics

1. Potentially Significant Effect: The Project could substantially degrade the existing visual character or quality of the site and its surroundings if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features designed to screen the proposed M-1 plant from public view. These features consist of earth-tone painting, pine tree preservation, a restriction on the height of materials stored, and placement of the interconnection transmission line near ground level. In addition, a Landscape Plan has been prepared and must be approved by the

County. The Landscape Plan identifies specific visual screening measures to be implemented at the storage yard to be located in the footprint of the existing MP-I plant, which is to be removed. With implementation of these design features and the protection measure, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could create a new source of substantial light or glare that would adversely affect nighttime views in the area if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features to reduce nighttime visibility caused by lighting of the proposed M-1 plant and associated facilities. These features consist of downward projection of power plant lighting and preparation/implementation of an Outdoor Lighting Plan for the Project in conformance with County Dark Sky Regulations. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

B. Air Quality

1. Potentially Significant Effect: The Project could conflict with or obstruct implementation of the applicable air quality plan if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features designed to eliminate the potential for conflicts with applicable Great Basin Unified Air Pollution Control District (GBUAPCD) plans and policies, including obtaining an Authority to Construct permit for the proposed M-1 plant and permits to operate the diesel fueled emergency generator and firewater pump generator. All permits shall be obtained from the GBUAPCD. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could result in the violation of an air quality standard or contribute substantially to an existing air quality violation if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features to ensure that air pollution emissions from the site are reduced to the maximum extent practicable. These features consist of installing a vapor recovery unit to capture motive fluid that could otherwise be released during plant maintenance and compliance with fugitive dust emission control measures during Project construction activity.

With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

C. Biological Resources

1. Potentially Significant Effect: The Project could have a substantial adverse effect on riparian habitat and/or federally protected wetlands as defined by Section 404 of the Clean Water Act if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features designed to reduce soil erosion and sedimentation impacts associated with runoff from the Project site. These design features include installation of a subsurface retention basin at the proposed M-1 plant site, implementation of erosion control/stormwater construction best management practices (BMPs) in the interim site reclamation plan for the MP-I plant site, and implementation of M-1 plant site construction and post-construction BMPs. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could interfere with the movement of 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 if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features intended to reduce potential interference with fish and wildlife. These design features include (a) implementation of a 15 mile-per-hour speed limit for all on-site construction vehicles; (b) construction and operation noise reduction measures including use of noise attenuation devices on construction equipment; (c) incorporation of erosion/sedimentation and spill control measures into the Project design, including a Spill Prevention, Control and Countermeasure (SPCC) Plan; (d) avoiding removal of existing trees in the placement of the interconnection injection pipeline; (e) prohibition on the installation of linear barriers to movement of deer or other wildlife between the existing plant and the replacement plant; (f) construction of a new deer crossing; (g) maintenance of existing mule deer movement corridor on northeastern side of complex; (h) fencing of waste facilities to avoid attracting potential predators; (i) shielding of lighting; (j) dog leash requirements; (k) slope limitations to prevent wildlife from being trapped in basins; (l) installation of passive raptor deterrents, and (m) revegetation requirements. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

3. Potentially Significant Effect: In the absence of the Project, there could be an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service if not subject to design features, alterations, or mitigation measures.

Statement of Facts: MPLP is currently conducting the hydrologic and biological monitoring prescribed by Mono County General Plan with respect to its existing operations, but existing permit requirements for such monitoring only exist under the MP-II and PLES-I project approvals. Should these two projects be abandoned prior to the abandonment of the MP-I Replacement Project, there would be no permit requirement to continue the prescribed monitoring for what could be an extended MP-I project life. Should the existing geothermal resource production and injection activities from the MP-I Plant result in changes in the temperature, flow rate or quality of the Hot Creek headsprings supporting the critical habitat of the Owens tui chub, then this could be a potentially significant impact under CEQA. Bio Mitigation Measure 1, which subjects the Project to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the County General Plan, would ensure that such monitoring continues.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact from existing operations to a level that is less than significant.

4. Potentially Significant Effect: The Project could have an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service if not subject to design features, alterations, or mitigation measures.

Statement of Facts: As a result of the findings of the baseline biological resources survey, multiple actions were identified which, if implemented, would further reduce the potentially adverse effects of the Project on biological resources. These actions and others identified by this assessment have been compiled into required Bio Protection Measures 2 through 16. With implementation of these protection measures, Project impacts would remain less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

D. Cultural Resources

1. Potentially Significant Effect: The Project could cause a substantial adverse change in the significance of a historical or archaeological resource, may directly or indirectly destroy a unique paleontological resource, and/or may disturb undocumented human remains if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a design feature intended to reduce any potential impact to historical, archaeological, or paleontological resources that may be encountered at the Project site. This design feature requires the implementation of all environmental protection measures to reduce the adverse effects of the Project on cultural resources that were recommended in the baseline cultural resources survey reports prepared for the Project area. In addition, Cultural Protection Measure 1 is required to ensure that any human remains encountered during the construction phase of the Project are properly treated. With implementation of this design feature and protection measure, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

E. Geology and Soils

1. Potentially Significant Effect: The Project could expose structures to potential substantial adverse effects, including the risk of loss involving rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features intended to reduce any potential adverse effects resulting from seismic activity in the surrounding vicinity. These design features would require the implementation of all measures recommended in the geotechnical site investigation reports to mitigate impacts due to geotechnical, soils, and geologic constraints; as well as require that all Project structures be constructed to meet applicable earthquake safety codes and the 2010 Uniform Building Code adopted by the County. In addition, Cultural Protection Measure 1 is required to ensure that any human remains encountered during the construction phase of the Project are properly treated. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

F. Hazards and Hazardous Materials

1. Potentially Significant Effect: The Project could create a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a design feature requiring that no hazardous materials, chemicals, or wastes be stored in the new storage yard to be constructed in the footprint of the decommissioned MP-I plant. With implementation of this design feature, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features requiring that (a) the power plant site be designed and constructed to prevent fluids from leaving the site and to prevent runoff from being channeled or directed in an unnatural way so as to cause erosion or siltation; (b) install and maintain a system of pressure and flow sensing devices capable of detecting leaks and spills and regular inspection of all lines; (c) include the M-1 plant site and operations within the existing hazardous material management and emergency response program at the Casa Diablo geothermal complex; and (d) include the M-1 plant and operations within the existing fire prevention and suppression program at the Casa Diablo geothermal complex. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

G. Hydrology and Water Quality

1. Potentially Significant Effect: The Project could provide additional sources of polluted runoff if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project shall implement design features designed to reduce soil erosion and sedimentation impacts associated with runoff from the Project site. These design features include installation of a subsurface retention basin at the proposed M-1 plant site, implementation of erosion control/stormwater construction best management practices (BMPs) in the interim site reclamation plan for the MP-I plant site, and implementation of M-1 plant site construction and post-construction BMPs. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could degrade water quality if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a design feature to reduce the potential for pollution to reach surface drainages. This design feature includes incorporation of erosion/sedimentation and spill control measures into the Project design, including a Spill Prevention, Control and Countermeasure (SPCC) Plan. The power plant site must also be designed and constructed to prevent spills from leaving the site and to prevent runoff from being channeled or directed in an

unnatural way so as to cause erosion or siltation. In addition to this design feature, implementation of Hydro Mitigation Measures 1 and 2 is required in order to provide additional spill containment and emergency response planning at the Project site. Hydro Mitigation Measure 3, which would subject the Project to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the County General Plan, (to which the existing MP-1 plant is not currently subject) will further enhance such protections.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

3. Potentially Significant Effect: The Project could violate waste discharge requirements if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a design feature to avoid the alteration of or discharge of material to the existing stream channel crossing the site. No element of the project construction will result in the alteration of, or discharge of fill material to, the blue-line drainage channel that crosses the site between the existing MP-I and proposed M-1 plant sites, adjacent to Old Highway 395. Prior to commencement of construction, the Applicant shall provide to the County the proposed engineering design for the road crossing which demonstrates to the County that no impact to this drainage channel would occur as a result of project construction. With implementation of this design feature, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

H. Noise

1. Potentially Significant Effect: The Project could result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project shall implement design features to reduce noise associated with Project construction activities. These design features limit construction activities to daylight hours, require on-site construction equipment to be equipped with noise attenuation devices, and require all construction activities and normal Project operations to comply with applicable County noise requirements. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

I. Cumulative Effects

1. Potentially Significant Effect: The Project could combine with existing development in the vicinity to create a new source of substantial light or glare

that would adversely affect nighttime views in the area if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a protection measure to reduce nighttime lighting within the Casa Diablo geothermal complex. This protection measure requires that all projects within the Casa Diablo geothermal complex comply with applicable County lighting standards. With implementation of this protection measure, cumulative impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could combine with existing development in the vicinity to result in the violation of an air quality standard or contribute substantially to an existing air quality violation if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a protection measure to ensure that fugitive dust emissions from the site are reduced to the maximum extent practicable. This measure restricts Project-related vehicle speeds on all unpaved access roads to 15 miles per hour. With implementation of this protection measure, cumulative impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

3. Potentially Significant Effect: The Project could combine with existing development in the vicinity to interfere with the movement of 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 if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements Cumulative Bio Mitigation Measure 1 to reduce potential interference with fish and wildlife. This mitigation requires that constraints to wildlife movement through the Casa Diablo Hot Springs area be evaluated as part of any new development project proposed in the area. Measures shall be included as part of each new development project that would prevent the respective project from becoming a substantial obstacle to wildlife movement through or around the respective proposed development area. With implementation of this mitigation measure, cumulative impacts would be reduced to a less than significant level.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

4. Potentially Significant Effect: The Project could combine with existing development in the vicinity to have an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the

California Department of Fish and Game or U.S. Fish and Wildlife Service if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The storage of water in lined wellfield basins would continue to attract wildlife and has the potential for similar cumulative impacts on wildlife as a result of any wellfield expansion associated with new geothermal development that is not a part of the Project. The existing wellfield could be expanded by the addition of new wells and well sites to provide the additional geothermal fluid needed to support the proposed CD-4 power plant. This impact could be cumulatively significant if future lined well site basins are constructed in a manner that prevents wildlife from escaping from the basins. Cumulative Bio Mitigation Measure 2 is therefore required for County approved projects and should be considered as a requirement by federal agencies as a stipulation for approval of geothermal projects on public land in the vicinity of Casa Diablo Hot Springs. With implementation of this mitigation measure, cumulative impacts would be reduced to a less than significant level.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

5. Potentially Significant Effect: The Project could combine with existing development in the vicinity to have an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service if not subject to design features, alterations, or mitigation measures.

Statement of Facts: MPLP is currently conducting the hydrologic and biological monitoring prescribed by Mono County General Plan, but existing permit requirements for such monitoring only exist under the MP-II and PLES-I project approvals. Should these two projects be abandoned prior to the abandonment of the MP-I Replacement Project, there would be no permit requirement to continue the prescribed monitoring for what could be an extended MP-I project life. Hydro Mitigation Measure 3, would subject the Project to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the County General Plan, preventing such a lapse from occurring.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

6. Potentially Significant Effect: The Project could combine with existing and/or proposed geothermal development in the vicinity to degrade water quality if not subject to design features, alterations, or mitigation measures.

Statement of Facts: Should the continued geothermal resource production and injection activities from the MP-I Project, in combination with other existing and future geothermal power plant projects in the Hot Creek Buffer Zone, result in changes in the temperature, flow rate or quality of the Hot Creek headsprings used for Hot Creek Fish Hatchery operations, then this could be a potentially significant impact under CEQA. Cumulative Hydro Mitigation Measure 3, which would subject all existing and future geothermal power plant projects in

the Hot Creek Buffer Zone, or in the vicinity of Casa Diablo Hot Springs, to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the County General Plan, would reduce this potential impact to a less than significant level.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

PART II: FINDINGS RELATIVE TO UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL EFFECTS

No unavoidable significant environmental effects would result from implementation of the Project.

PART III: FINDINGS RELATIVE TO ALTERNATIVES

1. No Project Alternative: If the Project is denied, the existing MP-I power plant would not be replaced by the new technology proposed for the Project, and the more efficient conversion of the available geothermal heat energy to electrical energy afforded by the proposed replacement plant technology and equipment would not be realized. The aging MP-I power plant would be expected to continue to operate as long as repair and restoration of the facility remains economically practical, but the long-term continuing utilization of the MP-I project geothermal resources could be shortened due to eventual equipment failure. The No Project Alternative would not meet most of the basic project objectives. Objectives that would not be met include (a) Applicant's objectives: to *optimize the amount of electrical energy that can be generated from the available geothermal resources*, and to *ensure continuous power generation and maximize utilization of the geothermal resource ...*; and (b) the County goals, policies and objectives: to *permit the productive and beneficial development of alternative energy resources, including geothermal resources*; and to *ensure the orderly and sound economic development of geothermal resources...*

FINDING: The No Project Alternative is infeasible because it is inconsistent with and does not meet project objectives.

2. Alternative Power Plant Location (North Site): The selected North Site Alternative would be on public land administered by the USFS located north of the existing SCE substation and east of the proposed Casa Diablo IV Geothermal Development Project (CD-4) power plant site. It is assumed that the North Site Alternative would be constructed within an approximately 5.7-acre footprint essentially the same as that described for the Project. An approximately 600-foot interconnection transmission line would need to be constructed from the alternative plant site to the existing SCE substation. In addition, new production and injection fluid pipelines would need to be constructed to the North Site Alternative plant site. The new pipelines would be assumed to parallel the pipeline route of the proposed CD-4 Project from the existing MP-I plant site to the North Site Alternative plant site – a distance of about one mile. The construction, MP-I decommissioning, operations, and eventual site reclamation of the North Site Alternative geothermal development would be essentially the same as those activities described for the Project with only minor site-specific adjustments. Approval for development on the North Site Alternative would require NEPA review and approval from federal agencies.

FINDING: The North Site Alternative would result in very similar impacts to those identified for the proposed Project. However, selection of the North Site Alternative plant site would require construction of approximately one mile of new geothermal pipeline corridor resulting in greater impacts on biological resources and more construction related air emissions. The location of the North Site Alternative plant site would be within a Jeffrey Pine forested area and would be susceptible to greater potential wildland fire hazard than the proposed M-1 plant site. This was determined to be a potentially significant impact. The North Site Alternative power plant site would be less visible from major roadways than the proposed Project plant site, but visual impacts were not determined to be significant from either of the plant sites. The proposed Project is considered environmentally superior to the North Site Alternative.

3. Identification of the Environmentally Superior Alternative: The proposed Project, as amended by the conditions and mitigation/protection measures prescribed in the EIR, is the environmentally superior alternative based on the discussion and findings above.

Exhibit B
Variance 12-002
Findings and Rationale

A. Because of special circumstances (other than monetary hardship) applicable to the property, including its size, shape, topography, location, or surroundings, the strict application of the provision of the land use designations or land development regulations deprives such property of privileges (not including the privilege of maintaining a nonconforming use or status) enjoyed by other property in the vicinity and in an identical land use designation.

1. Setbacks. The proposed Project includes a request for a variance from two required setbacks; 100 feet from the south line and 500 feet from a surface watercourse. The proposed locations on the site were specifically chosen, and the requested variances are needed, to avoid the many geological and geotechnical constraints present in the Project parcel area and to minimize lot disturbance. As stated in the letter from Black Eagle Consulting, Inc. (BEC) dated September 7, 2012, (the “BEC Letter”), the proposed location is necessary to minimize risks to the plant, its supporting facilities, and operating personnel. In addition, continued use of the existing plant site for ancillary facilities reduces site disturbance by avoiding the relocation of those uses to another area on the site.

A number of geologic hazards are inherent to the surrounding areas on the parcel. To the north and east of the proposed plant location (away from the south property line) are extremely hot soils as well as active steam vents and associated weak soils. These conditions are hazardous to both personnel and plant equipment. Moving the facilities north would also greatly increase the size of the cut slope and raises the elevation so that they would be more visible from Highway 395. Site disturbance would also increase, as the existing plant location would not be utilized.

Moving the facilities to the south would cause them to be closer to the property line and would place critical structures on highly compressible soils, unsuitable for conventional foundation support or even placement of the necessary fill. Moving the replacement plant to the west would bring it even closer to the intermittent stream as well as to an active, unnamed fault located about 0.1 miles to the west of the western boundary of the proposed site. There are active steam vents associated with this fault that must be avoided.

Other properties within the Hot Creek Buffer Zone are currently developed with geothermal facilities (as described in section 5.1.1 of the EIR, and figure 38) or proposed for future development and thus enjoy the privileges of such use. Because those properties are not subject to the same geological and geophysical constraints, such uses are conforming.

2. Aboveground transmission line. As noted in the EIR and the BEC Letter, much of the Project site consists of geothermal soils having elevated temperatures. Generally, underground transmission lines require properly designed thermal backfill to reduce heat buildup and consequent loss of electrical conductivity or even melting of the conduit. However, such heat buildup in an underground transmission line crossing warm or hot areas in the soil cannot be mitigated with thermal backfill and a variance to place the

transmission line above ground is necessary and does not constitute a special privilege. (See BAC Letter, September 7, 2012).

B. The grant of variance will not constitute a special privilege inconsistent with the limitations upon other properties in the vicinity and in the land use designation in which the property is situated.

1. Setbacks. As illustrated in the BEC letter and in FEIR Drawing 1, development of the Project site is highly constrained as a result of steep slopes, fault zones, and geothermal soils/fumaroles. The site is also bisected by an intermittent surface watercourse. The combination of these conditions is unique to the Project site, and other parcels designated RE and/or within the Hot Creek Buffer Zone are not similarly limited. In fact, several are already developed with geothermal facilities or proposed for such development. (See FEIR Figure 1 and RDEIR sections 5.1.1 and 5.1.2.)

The only other non-federally-owned parcel within the Casa Diablo portion of the Hot Creek Buffer Zone, owned by LADWP, consists of 194 acres. The LADWP parcel has ample area available for geothermal development such as that proposed on the Project site (see FEIR Drawing 1). Accordingly, the grant of a variance for the proposed Project would not constitute a special privilege inconsistent with the limitations on other nearby or similarly-situated properties but instead, would put it on par with such properties. The County's land use regulations do not apply on federal land.

2. Aboveground transmission line. Mono County Land Development Regulations authorize the placement of distribution facilities such as the proposed transmission line underground without discretionary approval by the County. (See Mono County General Plan, Section 11.010(B).) Those regulations provide for aboveground placement pursuant to director review permit or use permit if any one of four findings can be made. (See Mono County General Plan, Section 11.010(D).) Alternatively, a variance may be granted to allow aboveground use where the conditions justifying a variance exist. (See Mono County General Plan Chapter 33). The proposed aboveground line is capable of being approved pursuant to either procedure, as either of the required findings can be made. Specifically, under Section 11.010(D)(1), the pipeline will not significantly disrupt the character of the area (See RDEIR sections 2.1.3 and 4.2.3 concluding that there will not be a significant visual impact associated with the Project or the aboveground pipeline; see also the discussion of the existing environment, indicating the presence of other above ground transmission lines and geothermal infrastructure in the vicinity.) Likewise, the finding for aboveground placement under Section 11.010(D)(2) can be made since aboveground placement would decrease the line's exposure to environmental hazards (e.g., heated soils) thus making it environmentally superior to undergrounding. (See BEC Letter.) Other private properties in the area meeting these (or the other listed) criteria are also eligible to request approval for aboveground utilities pursuant to Section 11.010, if they meet the stated criteria.

Accordingly, the grant of a variance would not constitute a special privilege inconsistent with limitations imposed on other properties.

C. The grant of variance will not be detrimental to the public welfare or injurious to property or improvements in the area in which the property is situated.

1. Setbacks. A number of geologic hazards are inherent to the surrounding area. The proposed location of the M-1 replacement plant (and supporting facilities) would actually

lessen any exposure to hazardous conditions and would minimize risks to both the plant and its operating personnel, in comparison to other locations on the property. (See, e.g., BEC Letter.) Adjoining property consists of thousands of acres of undeveloped land owned by the federal government. The only other nearby development consists of similar geothermal operations. Accordingly, a minor variation from the property line setback would have no impact on improvements or property in the area.

And Project design features and required mitigation measures, including installation of a subsurface retention basin and a sediment trap, implementation of erosion control/stormwater construction best management practices (BMPs), post-construction BMPs, restrictions on the existing plant site during its interim use for storage (e.g., prohibition on cleaning or fueling equipment, limitations on what may be stored, and height limitations) that will reduce and avoid the possibility of hydrologic impacts on the site as discussed in section 4.8.3 of the EIR and the Reclamation Plan, as well as reduce visual impacts as discussed on pages 4-2 through 4-35 of the EIR. Finally, the Project involves no expansion in water use or use of the geothermal resource. As such, there is no impact to water quantity.

2. Aboveground transmission line. The Project includes two proposals for the interconnection transmission line, both of which were analyzed in the EIR. The EIR concludes that there will not be a significant visual impact associated with the Project or the aboveground line. (See sections 2.1.3 and 4.2.3; see also the discussion of the existing environment on page 2 of the EIR, which describes the presence of other above ground transmission lines and geothermal infrastructure in the vicinity.) Because either option would be located near ground level (either within an existing pipe rack or on its own T-bar supports and suspended approximately 2-3 feet above ground level) as opposed to overhead, visual impacts associated with either option would be virtually non-existent. There would be no new overhead transmission line poles associated with either of the interconnection transmission line options. Indeed, placement of the transmission line underground presents a risk to the lines and to operation if such lines fail.

D. The grant of variance will not be in conflict with established map and text of the general and specific plans and policies of the County.

1. Setbacks. As discussed in section 4.10.3 of the EIR, the 500-foot surface watercourse and 100-foot exterior property line setbacks are subject to variance in accordance with Chapter 33 of the General Plan. The Project requires a variance from the 500-foot setback because, while the replacement plant would be further from the same watercourse than the existing plant, it would still be partially within that setback. And the existing plant site (to be used for interim storage) would continue to be within the setback. The granting of such a variance is not inconsistent with the text or maps of the General Plan, including but not limited to, the Energy Resources section of the Conservation and Open Space Element (Goal 1, Objective D, Policy 1, Action 1.13). That section lists the 500-foot setback imposed by the Land Development Regulations as an “action” to further the policy of protecting hydrologic resources. The reference is not intended to prohibit the granting of an otherwise authorized setback variance where no hydrologic impacts would result, and does not “re-impose” the setback requirement already imposed. Setbacks are classic development standards which may be adjusted through variance procedures where necessary due to site-specific constraints, such as those that exist here. Finally, Project design features and mitigation measures imposed as mandatory conditions of approval avoid or minimize potential impacts to hydrologic resources by preventing fluids from

reaching adjacent waterways and limiting geothermal extraction to existing levels, as discussed above and in section 4.8.3 of the EIR. The proposed variance is consistent with the map and text of the General Plan as currently written and as proposed to be clarified by GPA 12-003(b).

The variance from the 100-foot property line setback is also authorized in accordance with Chapter 33 of the General Plan and would not be in conflict with any program, policy, goal, or objective of the General Plan.

2. Aboveground transmission line. See discussion under finding B.2 above, which is incorporated by this reference.

Exhibit C
Use Permit 12-004
Findings and Rationale

I. USE PERMIT

- A. All applicable provisions of the Land Use Designations and Land Development Regulations are complied with, and the site of the proposed use is adequate in size and shape to accommodate the use and to accommodate all yards, walls and fences, parking, loading, landscaping and other required features.**

The existing MP-1 plant site decommissioning activities and the conversion of a portion of the site to a storage area, proposed as part of the Project, would be conducted on private land with a land use designation (LUD) of Resource Management (RM). The RM designation is intended “to recognize and maintain a wide variety of values in the lands outside existing communities,” including “geothermal or mineral resources.” “Mining and geothermal exploratory projects” are explicitly “uses permitted subject to use permit” and other “similar” uses may also be permitted.

The RM designation provides for a minimum parcel size of 40 acres, limits site disturbance to 10% (with a maximum lot coverage of 5%), and provides for maximum population density of 5.02 persons per 40 acres. The RM parcel consists of approximately 40 acres of privately-owned land, of which approximately 2.6 acres is presently disturbed (approximately 6.6%). This level of disturbance is pre-existing and would not be increased by the Project. The ultimate decommissioning, reclamation and restoration of this site required by the Reclamation Plan is consistent with Resource Management intent of the designation to provide for low intensity rural uses that recognize and maintain the resource value of the parcel and would eliminate site disturbance. There would be no residential use of the property.

The proposed new M-1 plant site would be located on the adjacent 50-acre parcel, which is designated as Resource Extraction (RE). The RE designation “is intended to provide for protection of the environment and resource extraction activities . . . and for processing plants utilizing on-site materials or materials found in close proximity to the site.” “Exploring, drilling, and development of geothermal resources” are explicitly “uses permitted subject use permit” and other “similar” uses may also be permitted uses. The M-1 replacement plant site construction and Project operations would be conducted entirely on private land with a LUD of RE.

The RE designation provides for a minimum parcel size of 40 acres, prohibits residential uses (other than for an employee/caretaker) and references the setbacks established by section 15.070 for resource development (100 feet from interior public streets or from a property line, 500 feet from any adjacent private dwelling, institution, school, or other building or location used for public assemblage, and, for geothermal development within the Hot Creek Buffer Zone, 500 feet from a surface watercourse). The Land Use Designations and Land Development Regulations function as the County’s zoning requirements and are subject to variance pursuant to Chapter 33 of the Mono County General Plan and State law.

All project activities would occur more than 100 feet from any internal street and more than 500 feet from adjacent uses for public assemblage. The nearest dwelling, institution, or school is located within the Town of Mammoth Lakes approximately two miles to the west of the project site. A public parking area located just to the east of US 395 and the Mammoth Lakes exit is greater than 500 feet from the project property line (Figure 19, Revised DEIR, February 2012). The project includes a request for a variance which would authorize a portion of the facility to be located within 100 feet of an external property line and within 500 feet of a surface watercourse. Such variances are authorized by Chapter 33 of the Land

Development Regulations and if granted consistent with those requirements, all provisions of the Land Use Designations and Land Development Regulations would be complied with.

As described more fully in section 4.2.2 of the EIR, the Project meets applicable standards of the Land Development Regulations related to visual impacts. An Outdoor Lighting Plan has been provided for the Project site which meets the requirements of Chapter 23 of the General Plan, the County's "Dark Sky Regulations," to mitigate nighttime visibility of the facilities. In addition, a Landscape Plan has been submitted which provides additional visual screening of the Project site. Use Permit conditions require compliance with these plans. All buildings, insulation jacketing, and visible structures would be painted to blend with the existing environment in order to minimize the visual impacts in the area and approximately six-foot-high fences would be constructed around the M-1 plant site and the M-1 plant substation to provide additional screening. Site disturbance is limited and a Reclamation Plan which meets the requirements of Chapter 26 of the General Plan and will reduce and restore site disturbance has been submitted. Compliance with the Reclamation Plan is a condition of project approval. Accordingly, the Project also meets applicable standards set forth in Section 08.010 through 08.060 Scenic Combining District and State Scenic Highway.

Section 4.110 of the Land Development Regulations provides for a maximum building height of 35 feet, but allows for greater heights to be approved through the Director Review process or Use Permit process. The project involves approval, through the Use Permit process, of mechanical appurtenances which exceed 35 feet in height. (See additional discussion below in sections II.A and II.B.)

Chapter 11 of the Land Development Regulations provides for the undergrounding of utilities, unless overhead placement is approved by Director Review permit, Use Permit, or variance. The Conservation and Open Space Element, Visual Resources, Objective C, Policy 3, Actions 3.1 through 3.8 reference these requirements. The project proposes two possible locations for an aboveground interconnection transmission line, and the applicant has applied for a variance to allow for aboveground installation.

The Project is in compliance with all other applicable provisions of the Land Use Designations and the Land Development Regulations of the Mono County General Plan.

Further, the site is adequate in size and shape to accommodate the use, and to accommodate all yards, walls, and fences, parking, loading, landscaping and other required uses. The site consists of 90 acres of privately-owned land bordered on all sides by publicly-owned land managed primarily for open space.

B. The site for the proposed use relates to streets and highways adequate in width and type to carry the quantity and kind of traffic generated by the proposed use.

As described in the EIR (see, e.g., sections 2.1.2, 2.1.6, and 3.3.8) 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 and no long-term impact to the existing roadway circulation system in the area would result.

Short-term construction traffic would increase in the immediate vicinity of the site, although the traffic volumes expected to be associated with Project construction would be light and existing volume-to-capacity ratios at the U.S. Highway 395/SR 203 interchange are sufficient to accommodate this small temporary increase.

The existing entrances to the Casa Diablo geothermal development complex would continue to provide adequate access to the new M-1 plant site. North and south U.S. Highway 395 off ramps onto State Route

203 are located less than one-quarter mile southwest of the Project site. Access to the Project site would be via State Route 203 east to Antelope Springs Road, then north to Cutoff Road, then east to the existing paved access to the replacement plant site off of the Old Highway Road. Substation Road and Old Highway Road would be used as emergency access roads that lead to a locked gate which can be opened by emergency responders and is sufficient to support emergency vehicles, in accordance with the County's Fire Safe Regulations (Chapter 22 of the Land Development Regulations).

A new paved access road would be constructed from the onsite access road to the lower pad on which the M-1 plant would be constructed. Paved access roads would also be constructed along the north, south and west sides of the new M-1 plant site, which are specifically designed in width and type to carry the quantity and kind of traffic associated with the project.

C. The proposed use will not be detrimental to the public welfare or injurious to property or improvements in the area in which the property is located.

The EIR for the Project has identified no significant impacts resulting from the proposed Project. The proposed use is the same as currently exists on the site, with the exception that a new, more modern facility would replace the existing M-1 plant. The new facility includes design features (including, but not limited to a landscaping plan, dark sky compliant lighting, and screening) not currently applicable to the existing facility. Without expanding the use of the geothermal resource or in any way increasing impacts to that resource, the proposed facility would increase the amount of geothermal energy generated on the site and reduce associated impacts. (See EIR Project Description).

The M-1 site is situated in an area where property and improvements are committed to similar compatible uses, including existing operating geothermal plants and well fields, the existing MP-1 plant proposed for decommissioning, and an SCE substation. The proposed use has been sited to minimize visual impacts from the State Scenic Highway, and when the existing plant is decommissioned, will have less of a detrimental visual presence than exists currently. (See EIR section 4.2.3.)

In addition, the proposed Project incorporates design features which will protect the public and property from the risks of fire, contamination, and other hazards. Specifically, the M-1 replacement power plant site would be designed and constructed to prevent fluids from leaving the site and endangering adjacent properties or nearby waterways. Numerous engineering, fire-control and safety measures are integrated as part of the Project to prevent releases of n-pentane, to avert or control fires, and to respond to other emergencies. (See e.g., EIR section 2.1.6.)

A diesel-powered emergency generator would be installed on the M-1 plant site to provide emergency backup power to critical plan functions in the event of a power outage. Similarly, a diesel-powered firewater pump generator would be installed to provide power to the firewater pump during fire emergencies.

In addition, MPLP has developed an integrated program to meet the following requirements, (see EIR section 2.1.6): California Accidental Release Prevention (CalARP) Program; EPA Risk Management Plan (RMP); OSHA Process Safety Management (PSM) Program for all three existing plants. Prior to delivery of n-pentane, MPLP would revise and update this program to reflect the new M-1 plant; Revise its existing Spill Prevention, Control and Countermeasure (SPCC) Plan, in conformance with 40 CFR 112, to include the new M-1 plant; Update its Emergency Response Plan (ERP); Update its Hazardous Materials Business Plan (HMBP); A Permit for Authority to Construct and Permit to Operate would be obtained from the GBUAPCD

There would be at least one employee “on call” at all times familiar with the ERP and would have the authority to commit the resources needed to carry out the contingency plan.

D. The proposed use is consistent with the map and text of this General Plan and any applicable area plan.

For a thorough discussion regarding the Project’s consistency with the General Plan see the analysis contained throughout the EIR, and particularly sections 4.10.2 and 4.10.3. The following summarizes the Project’s consistency with applicable maps, policies, land uses, and programs contained in the General Plan.

The Project is consistent with General Plan maps designating the site for Resource Management (RM) and Resource Extraction (RE). The RE designation (where the replacement plant would be located) “is intended to provide for protection of the environment and resource extraction activities.” “Exploration, drilling, and development of geothermal resources” are explicitly “uses permitted subject to use permit and other “similar uses may also be permitted.” The RM designation (where the existing plant is located) is intended to “recognize and maintain a wide variety of values in the lands outside existing communities,” including “geothermal or mineral resources.” “Mining and geothermal exploratory projects” are explicitly “uses permitted subject to use permit” and other “similar” uses may be permitted.

The Project is consistent with the objectives, policies, general land uses, and programs of the Mono County General Plan. General Plan goals encourage the productive and beneficial development of alternative energy, including geothermal resources, in manner which avoids or minimizes environmental impacts. The EIR concludes that there will be no significant environmental impacts as a result of the proposed Project. General Plan policies allow consideration of national need for alternative energy and require the applicant to demonstrate the economic benefits of the Project. (See Conservation and Open Space Element – Energy Resources.) The economic analysis of the Project describes those benefits.

Objectives C and D of Goal 1 of the Energy Resources portion of the Conservation and Open Space Element establish procedures and direction for addressing biologic and associated hydrologic impact mitigation and monitoring requirements from geothermal exploration and development. Consistent with these policies, a baseline biological resource survey was conducted (Paulus 2011) and is provided as Appendix D of the EIR. The recommended measures and project design features of this report have been incorporated and are a part of the Project.

The EIR concludes that there would be no significant impacts to visual resources as a result of the Project and that current visual impacts associated with the MP-1 facility would be reduced by the Project. Additionally, the Project would be consistent with all applicable General Plan Policies pertaining to Aesthetics/Visual Resources, provided that a variance is granted to allow transmission lines to be placed at ground level as opposed to underground.

- Aboveground utility lines. Objective C, Policy 3, Actions 3.1-3.8 Conservation/Open Space Element (Visual Resources) provides for underground installation of utility lines in conformity with County Requirements. Chapter 11 of the Land Use Regulations provides for underground installation unless approved through Use Permit or Director Review in certain specified circumstances. Actions 3.1-3.8 also allow for aboveground installation pursuant to a variance. The Project is consistent with this policy if the requested variance is granted. Additionally, the transmission lines would be eligible for an exception to the underground requirement pursuant to Chapter 11, as described in Exhibit B, section B.2.

- Mechanical appurtenances/building height. (Land Use Element – Development Standards): The Project proposes to install purge tanks, two-inch diameter vent pipes and one-inch diameter lightning masts on top of the air cooling towers which would extend up to approximately 40 feet above ground level, exceeding the permitted height of 35 feet by up to 5 feet. However, Mono County regulations allow for exceptions to be granted by the Planning Director in the cases of mechanical appurtenances or, for building heights in excess of 35 feet, through the Use Permit process. The purge tank vent pipes and lightning qualify as “mechanical appurtenances” and would thus meet the criteria for exception to be granted by the Planning Director, or by the more stringent Use Permit process. (See sections II.A and B below.)

The Project would be consistent with relevant General Plan Policies in the Conservation/Open Space Element pertaining to Air Quality as discussed on page 30 of the RDEIR2.

The Project would be consistent with relevant General Plan Policies in the Conservation/Open Space Element pertaining to Biological Resources as discussed on pages 30-32 of the RDEIR2 and section 4.4 of the RDEIR, as revised. For example, current biologic and hydrologic monitoring will continue and will also be applied to the M-1 plant; baseline studies have been prepared to document existing conditions on the Project site and mitigation measures and design features are imposed to minimize potential impacts based on those studies and recommendations.

The Project would also be consistent with relevant General Plan Policies (shown in Table 25 of the RDEIR) in the Conservation/Open Space Element pertaining to hydrology and water quality as described on pp. 30 – 36 of the RDEIR2. The Project includes design features and is subject to mitigation measures which avoid or minimize potential impacts to hydrologic resources to a level that is less than significant through, among other things, installation of a subsurface retention basin at the M-1 plant site, implementation of erosion control/stormwater construction best management practices (BMPs) and post-construction BMPs, as discussed in the EIR. (See e.g., section 4.8.3). The Project involves no additional use or extraction of water from the geothermal resource and therefore has no impact to water quality.

- Setbacks from surface watercourse. As discussed previously, Section 15.070(B)(1)(d) of the County’s Land Use Regulations imposes a 500-foot setback from surface watercourses for geothermal development within the Hot Creek Buffer Zone. Chapter 33 of the General Plan authorizes the granting of variances from any Land Development Regulation or LUD if certain conditions exist. The project requires a variance from this setback because, while it would be further from the same watercourse than the existing plant, the replacement plant would still be partially within that setback. The Energy Resources section of the Conservation and Open Space Element (Goal 1, Objective D, Policy 1, Action 1.13) lists the 500-foot setback as an “action” to protect hydrologic resources. That reference is not intended to prohibit the granting of an otherwise authorized variance and does not “re-impose” the setback requirement already imposed. If a variance is granted in accordance with Chapter 33, then the Project is consistent with the General Plan, both as currently written and with the clarifications to the General Plan included proposed by GPA 12-003(b).

The Project would be consistent with relevant General Plan Policies in the Safety Element pertaining to fire hazards as discussed on page 32 of the RDEIR2 and in section 4.7 of the RDEIR. For example, the Project would not create a significant risk from wildland or structural fire; the Project will obtain a will-serve letter from the Long Valley Fire Protection District and will implement Project HazMat Design Feature 4, which would extend the existing fire suppression and response program in place at the Casa

Diablo Geothermal Complex to cover the proposed Project. Appendix A to the RDEIR presents a list of measures that the Project would adopt in order to reduce the risk of wildland and/or structural fire. These measures include compliance with applicable requirements in the Fire Safe Ordinance and Uniform Fire Code; and the Notice of Preparation for the Draft EIR was sent to the Department of Forestry and the Long Valley Fire Protection District was consulted in the preparation of the RDEIR.

The Project would be consistent with relevant General Plan Policies in the Hazardous Waste Management Element pertaining to hazardous materials. The Project includes several design features, presented as HazMat Design Features 1 through 5 in the RDEIR.

For analysis of Project consistency with relevant General Plan Policies in the Noise Element pertaining to noise, see Section 4.9 of the RDEIR. As discussed therein, the Project, including Noise Design Features 1 through 3, would be consistent with all applicable General Plan Policies pertaining to noise.

II. MECHANICAL APPURTENANCES/BUILDING HEIGHT EXCEPTION

A. The project will not result in substantial detrimental effects on the enjoyment and use of surrounding properties.

Several mechanical appurtenances (including eight purge tanks, of about 36 inches in length and 24 inches in diameter, a two-inch diameter pipe, and a one-inch diameter lightning mast/rod) would extend up to approximately 5 feet above the 35-foot building height. These mechanical appurtenances are part of the CUP application and are evaluated on pp 4-2 – 4-35 of the RDEIR. As mechanical appurtenances, these structures could be approved through the Director Review process outlined in Section 4.110 of the General Plan, or pursuant to the more stringent Use Permit process actually undertaken. As described in the EIR, the appurtenances would be nearly completely obscured by vegetation and the super-structure of the main plant and would be colored to be blend with the existing background. The analysis shown in the EIR demonstrates the project would preserve scenic vistas and would not have any impact on surrounding properties.

B. The modified height will not exceed the lifesaving equipment capabilities of the fire protection agency having jurisdiction.

The mechanical appurtenances are lightning rods and pipes – and will not be occupied. The Long Valley Fire Department was consulted in the preparation of the EIR and it was determined the height exception does not exceed the lifesaving capabilities of the protection agency. The Project is required to obtain a will-serve letter from the Long Valley Fire Protection District and will also implement Project HazMat Design Feature 4, which would extend the existing fire suppression and response program in place at the Casa Diablo Geothermal Complex to cover the proposed Project.

III. ABOVEGROUND FLUID PIPELINE

The aboveground placement of fluid pipelines is authorized because burial would create unacceptable environmental impacts or the potential to contaminate shallow groundwater resources. The Project includes the relocation of two existing aboveground fluid conveyance pipelines to connect the new plant to existing production and injection locations. As discussed in Exhibit B, the site contains numerous geotechnical and geological constraints, including hot soils, active steam vents, and earthquake faults. Aboveground placement of fluid conveyance

lines minimizes the risk of damage to those lines due to earthquake or other site features, and allows for quick identification and remediation in the unlikely event of damage.

Exhibit D
Reclamation Plan 12-001
Findings and Rationale

A. The reclamation plan complies with the provisions of CEQA.

The Reclamation Plan is a component of the Mammoth Pacific Replacement Project. A Final Environmental Impact Report has been prepared for the Project. (SCH # 2011022020) and certified by the Planning Commission prior to adoption of the EIR.

B. The reclamation plan is consistent with the objectives and policies set forth in this General Plan and any applicable area or specific plans.

The project is consistent with the objectives and policies of the General Plan. The Land Use Element, Mammoth Vicinity Policies Objective C, Policy 4 & Action 4.1 provides:

Policy 4: Regulate geothermal and mining and reclamation activities in the Mammoth vicinity in a manner that retains the scenic, recreational, and environmental integrity of the Mammoth vicinity.

The Mammoth Pacific Reclamation Plan requires removal of the MP-1 plant, and removal of the MP-2 plant once these facilities are decommissioned. The proposed M-1 plant would also be removed once the plant is decommissioned in 2045. The offices, maintenance yard, warehouse, roads and wells would be removed once these facilities are no longer needed. Some roads and wells may remain to support geothermal production on USFS property for the PLES plant. The PLES plant is on Inyo National Forest lands and not subject to the reclamation plan.

Removal and site reclamation of the above facilities retains the scenic and environmental integrity of the area.

Action 4.1: All geothermal, mining and reclamation activities shall comply with the policies of the county's Conservation/Open Space Element and the county's Reclamation Ordinance.

The Conservation and Open Space Element of the General Plan, Energy Resources, provides that Geothermal exploration and development projects shall be sited, carried out and maintained by the permit holder in a manner that best protects hydrologic resources and water quality and quantity. Pursuant to that policy, permit conditions assure that required reclamation is completed within one year after a project is completed. The Reclamation plan contains provisions that assure the protection of springs, streams, and fumaroles from erosion, sediment transport, and similar adverse effects. Plan provisions also assure that project sites are restored as closely as reasonably possible to natural conditions, as determined by the MCEDD, in consultation with the Visual Review Committee.

Below is a summary of plant removal cost and timeframes listed in the Reclamation Plan:

	MP-1	MP-2	M-1	Wells
<i>Reclamation start date</i>	2014 or 2015	2045	2045	2045
<i>Cost</i>	\$356,224	\$739,513	\$564,949	\$2,210,719

Project conditions require reclamation activities to be completed within one year of plant removal.

The reclamation plan has erosion control and retention basins for each plant site to protect on-site springs, streams, and fumaroles from erosion, and requires that the site be monitored to assure that project sites are restored as closely as reasonably possible to natural conditions.

- C. Appropriate conditions have been imposed to ensure and verify that the site during and after reclamation will not cause a public hazard, nor be detrimental to the public health, safety, or welfare.**

The Mammoth Pacific Reclamation Plan requires removal of the power plants and plant infrastructure and restoration of the site to natural conditions as various components of the plant are removed. The project is required to comply with the adopted reclamation plan, which sets forth measures to avoid safety hazards and provide for public health, safety and welfare on the site during and after reclamation.

- D. An approved end use has been identified and the reclamation of the site shall be finally completed as soon as is feasible, considering the particular circumstances of the site to be reclaimed, and the plan provides for concurrent reclamation, where appropriate and feasible.**

The 90 acre site has an end land use of open space and will be restored to natural site conditions. The reclamation timeframes listed in the Reclamation Plan are:

	MP-1	MP-2	M-1	Wells
Reclamation start date	2014 or 2015	2045	2045	2045

The Plan allows for concurrent reclamation and timing based on when the various plants are decommissioned and various infrastructure is removed.

- E. The reclamation plan conforms to minimum verifiable performance standards established Chapter 35 and, in the case of surface mining operations, meets or exceeds the minimum, verifiable statewide reclamation standards adopted by the State Mining and Geology Board, and in the case of geothermal well abandonment, conforms to the requirements and guidelines of the California Division of Oil and Gas on non-federal lands, and the Bureau of Land Management on federal lands.**

The Reclamation Plan conforms to the standards as described in Chapter 35, Reclamation Plan, section 35.050 Reclamation Standards. The following summarizes standards and how the project complies with these applicable standards. Not every standard from section 35.05 is listed as some of these standards apply only to projects subject to Surface Mining and Reclamation Act of 1975 (SMARA).

1. Wildlife Habitat.

Wildlife and wildlife habitat shall be protected in accordance with the following standards:

- Rare, threatened or endangered species or species of special concern, and their respective habitat shall be conserved.
No federal- or state-listed threatened or endangered species are known to occupy or frequent the Project area. (Page 2 of Reclamation Plan)
- Wildlife habitat shall be established on disturbed lands in a condition similar to or better than that which existed before the lands were disturbed.
Wildlife habitat will be established on the reclaimed lands in a condition similar to the undisturbed lands surrounding the sites. (Page 3 of Reclamation Plan)
- Wetland habitat shall be avoided.
No wetland habitat on site will be disturbed. (Page 3 of Reclamation Plan)

2. Backfilling, Regrading, Slope Stability, and Recontouring.

Backfilling, regrading, slope stabilization, and recontouring shall conform to the following standards:

- Where backfilling is required for resource conservation purposes (e.g., agriculture, fish and wildlife habitat, and wild land conservation), fill material shall be backfilled to the standards required for the resource conservation use involved.
Project-affected areas of surface disturbance will be re-contoured as necessary to blend with the surrounding topography. (Page 4 of Reclamation Plan)
- Final reclaimed fill slopes, including permanent piles or dumps of mine waste rock and overburden, shall not exceed 2:1 (horizontal:vertical), except where site-specific geologic and engineering analyses

demonstrate that the proposed final slope will have a minimum slope stability factor of safety that is suitable for the approved end use, and when the proposed final slope can be successfully revegetated.

Final reclaimed fill slopes will not exceed 2:1 (horizontal:vertical), except where site-specific geologic and engineering analyses demonstrate that the proposed final slope will have a minimum slope stability factor of safety that is suitable for the approved end use and when the proposed final slope can be successfully re-vegetated. A site reclamation plan for MP-1 plan is provided on Plates 1a, 1b, and 1c, attached in Appendix A. A site reclamation plan for the MP-2 plant site is provided on Plates 2a and 2b, attached in Appendix A. A site reclamation plan for the M-1 plant site is provided on Plates 3a and 3b, attached in Appendix A. (Page 4 of Reclamation Plan)

- At closure, all fill slopes, including permanent piles or dumps of mine waste and overburden, shall conform to the surrounding topography and/or approved end use.
The reclamation plan requires that project-affected areas of surface disturbance will be re-contoured as necessary to blend with the surrounding topography

3. Revegetation.

Revegetation shall be part of the approved plan, unless it is not consistent with the approved end use.

- A vegetative cover suitable for the approved end use and capable of self-regeneration without continued dependence on irrigation, soil amendments or fertilizer shall be established on disturbed lands. The vegetative density, cover and species-richness of naturally occurring habitats shall be documented in baseline studies carried out prior to the initiation of resource development activities.
At least 3 shrubs and 8 perennial native grasses and/or forbs per 4 square meters would be established on site. Perennial grasses would account for at least 10% of the relative cover. (Page 5 of Reclamation Plan)
- Test plots conducted simultaneously with resource development activities shall be required to determine the most appropriate planting procedures to be followed to ensure successful implementation of the proposed revegetation plan. The County may waive the requirement to conduct test plots when the success of the proposed revegetation plan can be documented from experience with similar species and conditions or by relying on competent professional advice based on experience with the species to be planted.
The reclamation of the MP-1 (Plate 1B) site will serve as the test plot for both the seed mix and success of vegetative cover stated above.
- Where resource development activities result in compaction of the soil, ripping, disking, or other means shall be used in areas to be revegetated to eliminate compaction and to establish a suitable root zone in preparation for planting.
Approved methods in use already include the design and construction of stable slopes, minor re-grading, ripping or sub-soiling to de-compact and loosen compacted soil, topsoiling, surface preparation through fine grading, reseeding and re-vegetation (or natural re-vegetation). (Page 4 of Reclamation Plan)
- Prior to closure, all access roads, haul roads, and other traffic routes to be reclaimed shall be stripped of any remaining road base materials, prepared in accordance with section g below, covered with suitable growth media or topsoil, and revegetated.
Plate B in Appendix A of the Reclamation Plan shows which roads and travel routes will be removed at final reclamation, which will include coverage with suitable growth media and revegetation.
- Indigenous plant species shall be used for revegetation, except when introduced species are necessary to meet the end uses specified in the approved reclamation plan.
The seed mix for revegetation is listed on page 4 of the Mammoth Pacific Reclamation Plan. Preferably, seeds for this project would be collected within the immediate vicinity of the project area. If this is not possible due to poor seed availability, seed from the Eastern Slopes Subsection of the Sierra Nevada Section and Mono Section would be acceptable.
- Planting shall be conducted during the most favorable period of the year for plant establishment.

The Reclamation Plan includes requirements to reseed applicable areas in the fall in order to take advantage of beneficial winter moisture.

- Weeds as defined by the Soil Conservation Service, or the county Agricultural Commissioner, or the California Native Plant Society, shall be managed: 1) when they threaten the success of the proposed revegetation; and 2) to prevent spreading to nearby areas; and 3) to eliminate fire hazard.

The Reclamation Plan includes weed management measures, including a standard that all non-native weed species that are already present in the area would account for no more than 5% total of the relative cover at the end of the 2 year evaluation period.

- Success of revegetation shall be judged based upon the effectiveness of the vegetation for the approved end use, and by comparing the quantified measures of vegetative cover, density, and species-richness of the reclaimed lands to similar parameters of naturally occurring vegetation in the area. Either baseline data or data from nearby reference areas may be used as the standard for comparison. Quantitative standards for success and the location(s) of the reference area(s) shall be set forth in the approved reclamation plan. Comparisons shall be made until performance standards are met provided that, during the last two years, there has been no human intervention, including for example, irrigation, fertilization, or weeding. Standards for success shall be based on expected local recovery rates. Valid sampling techniques for measuring success shall be specified in the approved reclamation plan. Sample sizes must be sufficient to produce at least an 80% confidence level.

At least 3 shrubs and 8 perennial native grasses and/or forbs per 4 square meters would be established on site. Perennial grasses would account for at least 10% of the relative cover. Failure to meet the success standards would require additional planting and/or weed control, as appropriate, until standards are met. (Page 5 of Reclamation Plan)

4. Drainage, Diversion Structures, Waterways, and Erosion Control.

- Reclamation activities shall be conducted to protect on-site and downstream beneficial uses of water.
Surface runoff and drainage will be controlled by silt fencing or a straw wattle until the interim gravel surface for MP-1 has been placed on the pad and/or the new vegetation has been developed to a point of controlling erosion for all sites during final reclamation. There are no perennial streams or other surface waters located within the Project area that will be impacted by operations or reclamation. A “blue line” stream is identified adjacent to the sites along the northerly boundary on the U.S. Geological Survey (USGS) topographic map (“Old Mammoth” quadrangle, 1:24000 series). The blueline stream is an ephemeral/intermittent identified as a stream “riparian conservation area” (RCA) by the USFS under the SNFPA ROD (USDA, Forest Service 2004). Project activities and reclamation avoid impacts to this intermittent stream.
- The quality of water, recharge potential, and storage capacity of groundwater aquifers shall not be diminished, except as allowed in the approved reclamation plan.
*Retention basins have been designed for each site, based on the Lahontan Regional Water Quality Control Board’s Water Quality Plan for the Mammoth Creek Basin to contain the runoff volume generated from a 20 year intensity storm with a one hour duration, which is assumed to be 1 inch (0.83 feet) * Area (square feet) * C (infiltration coefficient). Retention basin sizing calculations are included in Appendix B.*
- Erosion and sedimentation shall be controlled during all phases of construction, operation, reclamation, and closure of an operation to minimize siltation of lakes and watercourses, as required by the Regional Water Quality Control Board, the State Water Resources Control Board, and the Mono County Grading Ordinance.
See above reference to Appendix B and the project is required to comply with the Mono County Grading Ordinance and an approved grading plan.
- Surface runoff and drainage shall be controlled by berms, silt fences, sediment ponds, revegetation, hay bales, or other erosion control measures, to ensure that surrounding land and water resources are protected from erosion, gullyng, sedimentation, and contamination. Erosion control methods shall be designed to handle runoff from not less than the 20-year/1-hour intensity storm event.

See above reference to Appendix B and the project is required to comply with the Mono County Grading Ordinance and an approved grading plan.

5. Prime Agricultural Land Reclamation and Other Agricultural Land

The project site does not contain prime or other agricultural lands.

6. Building, Structure and Equipment Removal.

- All equipment, supplies, and other materials shall be stored in designated areas (as shown in the approved reclamation plan). All waste shall be disposed of in accordance with state and local health and safety ordinances.

Once the MP-1 plant is decommissioned and removed, the MP-1 site will be used for interim storage for ongoing operations at the site. See Plate 1B. Plates 1a, 2a, and 3a in the reclamation plan show the existing sites and identify the various facilities to be removed.

- All buildings, structures, and equipment shall be dismantled and removed prior to final site closure except those buildings, structures, and equipment approved in the reclamation plan as necessary for the end use. *Plates 1a, 2a, and 3a in the reclamation plan show the existing sites and identify the various facilities to be removed.*

7. Stream Protection, Including Surface and Groundwater.

- Surface and groundwater shall be protected from siltation and pollutants that may diminish water quality as required by the Federal Clean Water Act, sections 301 et seq. (33 U.S.C. section 1311), 404 et seq. (33 U.S.C. section 1344), the Porter-Cologne Act, section 13000 et seq., the county Grading Ordinance, the Regional Water Quality Control Board or the State Water Resources Control Board.

Stable topographic surface and drainage conditions will be established to control erosion, prevent sedimentation, blend with the surrounding landscape, and to protect on-site and downstream sites. Plates 1B, 2B, and 3B show interim reclamation site storm water pollution prevention plans. The project is also subject to requirements of a Mono County grading permit.

8. Topsoil Salvage, Maintenance and Redistribution.

When the approved reclamation plan calls for revegetation or cultivation of disturbed lands, the following performance standards shall apply to topsoil salvage, maintenance, and redistribution activities:

- All salvageable topsoil suitable for revegetation shall be removed as a separate layer from areas to be disturbed. Topsoil and vegetation removal shall not precede development activities by more than one year, unless a longer time period is approved by the County.

Topsoil was not stockpiled when MP-1 and MP-2 sites were graded. Therefore, the resulting surficial soils after grading will be analyzed to determine the presence or absence of elements essential for plant growth and to determine those soluble elements that may be toxic to plants, if the soil has been chemically altered or if the growth media consists of other than the native topsoil. Topsoil and suitable amended surficial soils will be planted with a vegetative cover or will be protected by other equally effective measures to prevent water and wind erosion and to discourage weeds. Topsoil will stockpiled for the M-1 site reclamation will be spread over the site in a minimum thickness of 3 inches. One of the exhibits for the M-1 site will be amended to show the topsoil storage area. (Page 7 of the Reclamation Plan)

- Topsoil resources shall be mapped prior to stripping and the location of topsoil stockpiles shall be shown on a map in the reclamation plan. If the amount of topsoil needed to cover all surfaces to be revegetated is not available on-site, other suitable material capable of sustaining vegetation (such as subsoil) shall be removed as a separate layer for use as a suitable growth media. Topsoil and suitable growth media shall be maintained in separate stockpiles. Test plots may be required to determine the suitability of growth media for revegetation purposes.

See discussion directly above.

- Soil salvage operations and phases of reclamation shall be carried out in accordance with the schedule that: 1) is set forth in the approved Reclamation Plan; 2) minimizes the area disturbed; and 3) is designed to achieve maximum revegetation success allowable under the plan.

Soil salvage is limited for the MP-1 and MP-2 sites as stated above. The topsoil stockpile area for the M-1 site will be shown on a map to be included in the reclamation plan. The reclamation timeframes listed in the Reclamation Plan for the various plants are:

	MP-1	MP-2	M-1	Wells
Reclamation start date	2014 or 2015	2045	2045	2045

- Topsoil and suitable growth media shall be used to phase reclamation as soon as can be accommodated by the operations schedule presented in the approved reclamation plan. Topsoil and suitable growth media that cannot be utilized immediately for reclamation shall be stockpiled in an area where it will not be disturbed until needed for reclamation.

Topsoil will stockpiled for the M-1 site reclamation. One of the exhibits for the M-1 site will be amended to show the topsoil storage area.

- Topsoil and suitable growth media shall be redistributed in a manner that results in a stable, uniform thickness consistent with the approved end use, site configuration, and drainage patterns.

Topsoil will stockpiled for the M-1 site reclamation will be spread over the site in a minimum thickness of 3 inches. One of the exhibits for the M-1 site will be amended to show the topsoil storage area.

9. Tailing and Waste Management

There are not Tailings and/or Waste Management standards that are required for this project.

10. Closure of Surface Openings

- All geothermal wells shall be completed or abandoned in accordance with the California Division of Oil and Gas

The Reclamation Plan requires that all geothermal wells scheduled for reclamation be abandoned in accordance with the requirements of the California Division of Oil and Gas.

F. The estimated cost of the reclamation reasonably approximates the probable cost of performing the reclamation work as proposed in the plan and adequate surety (consistent with applicable provisions of SMARA for surface mining operations) will be posted to ensure completion of the required reclamation.

The Reclamation Plan contains cost estimates for all three plants located on the project site. A summary of timing and reclamation costs are:

	MP-1	MP-2	M-1	Wells
Reclamation start date	2014 or 2015	2045	2045	2045
Cost	\$356,224	\$739,513	\$564,949	\$2,210,719

See Appendix C Cost Estimates for additional details. The Reclamation Plan requires that adequate surety be provided.

G. The person or entity responsible for reclamation plan compliance has a public liability insurance policy in force for the duration of the reclamation which provides for personal injury and property protection in an amount adequate to compensate all persons injured or for property damaged as a result of the proposed reclamation activities.

The reclamation plan requires that Ormat provide to Mono County Risk Management or Mono County Economic Development Department the required public liability insurance policy for review and approval.

Exhibit E
Clarifying General Plan Amendment 12-003(b)
Findings and Rationale

A. The proposed change to the text of the Land Development Regulations of the General Plan is consistent with the General Plan and any applicable area plan.

The proposed change to section 15.070 of the Land Development Regulations is merely clarifying of existing regulations and General Plan provisions. Chapter 33 currently provides that a variance may be granted from a Land Development Regulation if specified findings are made. The proposed changes would cross-reference that ability within section 15.070 (itself a Land Development Regulation), which imposes a 500-foot setback from a surface watercourse for geothermal development within the Hot Creek Buffer Zone.

Setback requirements are traditional development standards (i.e., zoning standards) incorporated into the General Plan pursuant to a 1998 opinion of the California Attorney General issued at the request of Mono County. (81 Ops.Cal.Atty.Gen 57.) As with traditional zoning, the General Plan contemplates the need to vary from such development standards and has incorporated a process, consistent with state law, to make adjustments for project-specific circumstances through the variance process. GPA 12-003(b) clarifies the County's current and past practice in implementing its General Plan.

The Energy Resources section of the Conservation and Open Space Element (Goal 1, Objective D, Policy 1, Action 1.13) lists the 500-foot setback imposed by section 15.070 as an "action" to further the General Plan policy of protecting hydrologic resources. That reference is not intended to prohibit the granting of an otherwise authorized variance from section 15.070 setbacks, nor does it "re-impose" the setback requirement. The proposed clarifying language to be added to section 15.070 is not in conflict with the Conservation and Open Space Element either as written, or as proposed to be clarified contemporaneously with the clarification to section 15.070.

EXHIBIT F

Draft Proposed General Plan Amendment

The proposed General Plan clarifying revision would read as follows (new language shown in underline):

Land Use Element
Land Development Regulations
15.070 Development Standards.

The following minimum development standards shall apply to all projects in the Resource Extraction Designation unless a variance is granted in accordance with Chapter 33 or amended through the “Specific Plan” process. Other standards or conditions identified during the use permit process may also apply.

A. Lot Size and District Area.

The minimum lot size and district area shall be 40 acres or a quarter, quarter section, with the exception of patent and/or historical mining claims and "vested operations" which shall be considered on a case by case basis. Minimum lot size and district area may be reduced in conformance to the "Development Plan" or "Specific Plan" process.

B. Setbacks.

1. No processing equipment or facilities shall be located and no resource development shall occur within the following minimum horizontal setbacks:

- a. One hundred (100) feet from any interior public street or highway unless the Public Works Director determines that a lesser distance would be acceptable.
- b. One hundred (100) feet from any exterior property line.
- c. Five hundred (500) feet from any adjacent private dwelling, institution, school, or other building or location used for public assemblage.
- d. No geothermal development located within the Hot Creek Buffer Zone shall occur within 500 feet on either side of a surface watercourse (as indicated by a solid or broken blue line on U.S. Geological Survey 7.5- or 15-minute series topographic maps).

Conservation and Open Space Element
Energy Resources, Objective D, Policy 1

Action 1.13: ~~No geothermal development located within the Hot Creek Buffer Zone shall occur.~~ The County has adopted land development regulations for geothermal development within 500 feet on either side of a surface watercourse (as indicated by a solid or broken blue line on U.S. Geological Survey 7.5- or 15-minute series topographic maps) within the Hot Creek Buffer Zone (See Mono County Land Development Regulations, Chapter 15, section 15.070(B)(1)(d)) which are subject to variance only in accordance with Chapter 33 of the Mono County General Plan.¹

Deleted: Adoption

Deleted: of

Deleted: .

¹ Redline indicates Planning Commission's recommended wording.

MONO COUNTY

Planning Division

DRAFT NOTICE OF DECISION USE PERMIT, VARIANCE, & RECLAMATION PLAN

USE PERMIT: 12-004 **APPLICANT:** Mammoth Pacific L.P.
VARIANCE: 12-002
RECLAMATION PLAN: 12-001

ACCESSOR PARCEL NUMBER: 037-050-002 & 037-050-005

PROJECT TITLE: Mammoth Pacific I Replacement Project

PROJECT LOCATION: The project is located at 94 Casa Diablo Cutoff Road, Mammoth Lakes in Mono County, California.

On October 11 2012, a duly advertised and noticed public hearing was held and the necessary findings, pursuant to Chapter 32.010, Chapter 33.010, and Chapter 35.030, Land Development Regulations, of the Mono County General Plan Land Use Element, were made by the Mono County Planning Commission. In accordance with those findings, a Notice of Decision is hereby rendered for Use Permit 12-004, Variance 12-002, Reclamation Plan 12-001 Mammoth Pacific I Replacement Project, subject to the following conditions, at the conclusion of the appeal period and upon the provision of clarification of General Plan provisions related to setbacks from a surface watercourse by the Board of Supervisors (by adoption of GPA 12-003(b), Board interpretation, or otherwise).

CONDITIONS OF APPROVAL/MITIGATION MONITORING & REPORTING PROGRAM

See attached Conditions of Approval & MMRP

ANY AFFECTED PERSON, INCLUDING THE APPLICANT, NOT SATISFIED WITH THE DECISION OF THE COMMISSION, MAY WITHIN TEN (10) DAYS OF THE EFFECTIVE DATE OF THE DECISION, SUBMIT AN APPEAL IN WRITING TO THE MONO COUNTY BOARD OF SUPERVISORS.

THE APPEAL SHALL INCLUDE THE APPELLANT'S INTEREST IN THE SUBJECT PROPERTY, THE DECISION OR ACTION APPEALED, SPECIFIC REASONS WHY THE APPELLANT BELIEVES THE DECISION APPEALED SHOULD NOT BE UPHELD AND SHALL BE ACCOMPANIED BY THE APPROPRIATE FILING FEE.

DATE OF DECISION/PROJECT APPROVAL:
EFFECTIVE DATE OF USE PERMIT:

October 11, 2012

Upon provision of clarification by the Board of Supervisors of General Plan Provisions related to setbacks from a surface watercourse, or a decision on appeal is rendered, whichever occurs later.

This Use Permit shall become null and void in the event of failure to exercise the rights of the permit within one (1) year from the date of approval unless an extension is applied for at least 60 days prior to the expiration date.

Ongoing compliance with the attached conditions and mitigations is mandatory. Failure to comply constitutes grounds for revocation and the institution of proceedings to enjoin the subject use.

DATED: October 11, 2012

cc: X Applicant
X Public Works
X Building
X Compliance

**Draft Conditions of Approval & Mitigation Monitoring
 & Reporting Program
 Mammoth Pacific I Replacement Project
 Use Permit 12-004, Variance 12-002, and Reclamation Plan 12-001**

1. The project shall comply with the approved Reclamation Plan, Use Permit, and Variance.
2. The project shall conform to and meet the requirements set forth in the MP-I Replacement Project Final EIR and the attached Mitigation Monitoring and Reporting Program.

**MAMMOTH PACIFIC I REPLACEMENT PROJECT
MITIGATION IMPLEMENTATION AND MONITORING PROGRAM AND FORM
State Clearinghouse #2011022020**

Project Approval Date: _____ **Project File Number:** _____

The following measures have been adopted by Mono County (MC). As such, these measures represent formal conditions of approval of the Use Permit for the Mammoth Pacific I (MP-I) Replacement Project. Some of the measures were proposed as part of the Project by Mammoth Pacific L.P. (Applicant) and some of the measures were recommended environmental protection and mitigation measures in the Revised Draft EIR prepared for the Project. Unless explicitly stated otherwise, the Applicant and the MP-I Plant Operator shall be responsible for implementing these measures. The County and other identified responsible agencies shall be responsible for monitoring and reporting progress on these measures until all measures are fulfilled in accordance with their original purpose and intent as determined by the Mono County Planning Commission. This monitoring form shall be available for public review and inspection, and the final project clearance shall require that all verifications included in this form have been satisfactorily completed.

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
General Conditions				
1	Applicant shall conform to the Project Description described in the Revised Draft EIR prepared for the Project. Any proposed revisions to the Project Description must be approved by Mono County.	Design, Construction and Operations	MC Department of Public Works, MCEDD and MCCDD Planning Division	Confirm and Document During Design Approval and Monitor Throughout the Project Lifetime
2	The startup operating transition period during which both the proposed M-1 plant power generation facilities and the existing MP-I plant power generation facilities may operate at the same time shall be a maximum of two years from the date that the proposed M-1 plant begins startup operations of any kind.	Construction and Startup Operating Transition Period	MCEDD and MCCDD Planning Division	Confirm and Document During Startup Operating Transition Period

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
3	The rate of geothermal fluid production supplying the Casa Diablo geothermal complex shall not exceed the existing geothermal fluid flow capacity utilized in the complex.	Construction and Startup Operating Transition Period	CDOGGR, MCEDD and MCCDD Planning Division	Confirm and Document During Startup Operating Transition Period
Aesthetics:				
4	<u>Aesthetics Design Feature 1</u> : Power plant lighting shall be projected downward to mitigate nighttime visibility of the facilities.	Design, Construction and Operations	MCCDD	Confirm and Document During Design Approval
5	<u>Aesthetics Design Feature 2</u> : An Outdoor Lighting Plan shall be prepared and implemented for the M-1 plant site in conformance with the Mono County Dark Sky Regulations.	Design	MCCDD	Confirm and Document During Design Approval
6	<u>Aesthetics Design Feature 3</u> : The M-1 facility structures shall be painted in an earth-tone greenish color similar to the existing plants to help blend into the background.	Prior to the End of Construction	MCEDD and MCCDD Planning Division	Confirm and Document Prior to Operations
7	<u>Aesthetics Design Feature 4</u> : The large pine tree in the southwest corner of the M-1 plant shall be saved to provide some visual screening of the plant site.	Design and Construction	MCEDD and MCCDD Planning Division	Confirm and Document During Design Approval and Monitor During Site Construction
8	<u>Aesthetics Design Feature 5</u> : Items to be stored within the equipment storage area constructed on the decommissioned MP-I plant site shall be restricted to a maximum height of 15 feet.	Operations	MCEDD and MCCDD Planning Division	Monitor Throughout the Project Lifetime

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
9	<u>Aesthetics Design Feature 6</u> : The selected interconnection transmission line option(s) from the M-1 plant site to the existing utility distribution line shall be constructed near ground level to minimize the visibility of the interconnection transmission line.	Prior to the End of Construction	MCEDD and MCCDD Planning Division	Confirm and Document Prior to Plant Operations
10	<u>Aesthetics Protection Measure 1</u> : A Landscape Plan shall be prepared to provide visual screening of views of the proposed storage yard to be created in the footprint of the existing MP-I plant site, particularly along the southwestern and southeastern edges of the facility. The Landscape Plan shall be designed to achieve applicable standards set forth in Section 08.010 through 08.060 (Scenic Combining District and State Scenic Highway) of the Mono County General Plan Land Use Element and shall be approved by the County prior to the required decommissioning of the MP-I plant site. Visual screening alternatives could include installing metal slats in the chain link fence; installing and maintaining native vegetation consisting of such species as Jeffery pine, bitterbrush, and sagebrush; or other measures consistent with achieving the applicable County standards.	Prior to the End of Construction	MCEDD and MCCDD Planning Division	Confirm and Document Prior to Plant Operations
Air Quality:				
11	<u>Air Quality Design Feature 1</u> : An Authority to Construct permit for the new power plant shall be obtained from the Great Basin Unified Air Pollution Control District (GBUAPCD).	Prior to Construction	GBUAPCD, MCEDD and MCCDD Planning Division	Confirm and Document Prior to Site Construction
12	<u>Air Quality Design Feature 2</u> : Permits to Operate the diesel-fueled emergency generator and firewater pump generator shall be obtained from the GBUAPCD.	Prior to Construction	GBUAPCD, MCEDD and MCCDD Planning Division	Confirm and Document Prior to Generator Operations
13	<u>Air Quality Design Feature 3</u> : A vapor recovery unit (VRU) shall be used to capture motive fluid that could otherwise be released during plant maintenance.	Design and Operations	GBUAPCD and MC Department of Public Works	Confirm and Document During Design Approval

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
14	<u>Air Quality Design Feature 4:</u> The Applicant shall implement the following measures to reduce fugitive dust emissions from the Project: <ul style="list-style-type: none"> • Restrict surface disturbance to the area within the proposed site grading plan; • Routinely water disturbed surfaces and building materials; • Limit maximum construction vehicle speeds to 15 miles per hour (mph); • Restrict construction activities during periods of high wind (i.e., greater than 25 mph); • Water or cover all materials transported onto or off of the construction site; • Pave the plant maintenance road; and • Cover all unpaved plant site surfaces with gravel after final grading. 	Construction	GBUAPCD, MCEDD and MCCDD Planning Division	Confirm and Document Prior to Site Construction and Monitor During Site Construction
Biological Resources:				
15	<u>Bio Design Feature 1:</u> The M-1 plant site shall drain to a subsurface retention basin. Overflow from this basin shall drain via sheet flow to the surface for percolation.	Design and Construction	MC Public Works Department	Confirm and Document During Design Approval
16	<u>Bio Design Feature 2:</u> Short-term and long-term erosion control and stormwater construction best management practices (BMP) shall be integrated into the interim site reclamation plan for the MP-I plant site.	Prior to MP-I Decommissioning	MC Public Works Department	Confirm and Document During Design Approval
17	<u>Bio Design Feature 3:</u> M-1 plant site construction BMP shall be implemented, including: placement of straw wattles and/or silt fencing along the perimeter of the site, and around topsoil stockpiles; and placement of silt fences in drainage swales at the exit point of the site.	Design and Construction	MC Public Works Department	Confirm and Document During Design Approval

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
18	<u>Bio Design Feature 4:</u> M-1 plant site post-construction BMP shall also be implemented, including: the use of erosion control blankets and hydroseeding of slopes created by grading outside of the plant site; the placement of ¾” rock placed in all areas of the plant site that are not covered by pavement or structural concrete; and rock filled trench drains and retention facilities shall provide desiltation of storm water runoff.	Operations	MC Department of Public Works, MCEDD and MCCDD Planning Division	Confirm and Document During Design Approval and Monitor Throughout the Project Lifetime
19	<u>Bio Design Feature 5:</u> The on-site construction vehicle maximum speed limit shall be limited to 15 miles per hour (mph) to, in part, reduce the potential for vehicle impacts with wildlife during construction activities.	Construction	GBUAPCD, MCEDD and MCCDD Planning Division	Monitor During Site Construction
20	<u>Bio Design Feature 6:</u> All noise creating construction activities shall be limited to daylight hours; noise levels during construction activities shall be kept to a minimum by equipping all on-site equipment with noise attenuation devices; and the M-1 plant site facilities shall operate at lower noise levels than those of the existing MP-I plant to, in part, reduce the impacts from noise on wildlife.	Construction	MCEDD and MCCDD Planning Division	Monitor During Site Construction
21	<u>Bio Design Feature 7:</u> The M-1 plant site shall be designed and constructed to prevent spills from leaving the site 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, shall be instituted and maintained for the M-1 plant site facilities; the proposed M-1 plant site shall be integrated into the existing <i>Geothermal Brine Spill Prevention and Response Plan</i> prepared for the Casa Diablo geothermal complex; and a <i>Spill Prevention, Control and Countermeasure Plan</i> (SPPC Plan) shall be prepared for the plant site and integrated into the existing program for hazardous material management and emergency response at the Casa Diablo geothermal complex to, in part, reduce the potential for adverse offsite effects on biological resources from spills of geothermal fluid, petroleum hydrocarbons, or hazardous substances from the M-1 plant site.	Prior to and During Operations	MC Department of Public Works, Environmental Health, MCEDD and MCCDD Planning Division	Confirm and Document During Design Approval and Monitor Throughout the Project Lifetime

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
22	<u>Bio Design Feature 8</u> : Removal of existing pine trees located off of the M-1 plant site shall be avoided in the placement of the interconnection injection pipeline to minimize impacts on offsite vegetation and wildlife habitat.	Construction	MCEDD and MCCDD Planning Division	Monitor During Site Construction
23	<u>Bio Mitigation Measure 1</u> : The MP-I Project shall be subject to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the Mono County General Plan (Mono County General Plan, Conservation/Open Space Element, Energy Resources, Goal 1, Objectives C and D), including compliance with conditions addressing hydrologic monitoring and remediation contained in the existing Conditional Use Permit for the MP-II Geothermal Power Plant.	Operations	MCEDD, MCCDD Planning Division and the LVHAC	Monitor Throughout the Project Lifetime
24	<u>Bio Protection Measure 2</u> : All above ground pipelines and transmission lines shall be installed using low pressure tracked equipment to minimize impacts on vegetation. Understory vegetation and organic horizon may be trampled during pipeline and transmission line installation but not removed. All Jeffrey pine trees in the installation routes outside of the footprint of the M-1 replacement plant site shall be preserved. All interconnection transmission line and pipeline installation routes outside of the footprint of the M-1 replacement plant site shall be revegetated during the October following the respective pipeline or transmission line installations by seeding with a [seed mix – scrub] approved by the County which emphasizes bitterbrush.	Construction	MCEDD and MCCDD Planning Division	Monitor During Site Construction

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
25	<p><u>Bio Protection Measure 3:</u> A post M-1 plant site construction Revegetation Plan shall be prepared and submitted to the County. The Revegetation Plan shall specify that topsoil at the M-1 pad site, defined as organic litter and mineral soil to a depth of 10 inches, shall be stockpiled at the SCE easement edge. This topsoil shall be spread to enhance the revegetation areas. The revegetation shall include all pad edges, fill slopes, and areas disturbed by equipment, except the very small areas mapped as thermally disturbed (i.e., the pre-project condition is already devegetated). Revegetation areas shall be seeded and the seed immediately raked in during the first October following construction, using [seed mix – scrub]. After seed is broadcast, the revegetation area shall be mulched using shrubs and forest materials retained from the M-1 pad construction area. Once seeding and mulching have been completed, the revegetation areas shall be kept off-limits to vehicles except in emergency. Revegetation goals are: (1) eight native perennial grasses and four native shrubs per 4-square-meter quadrat (average of five quadrats per revegetation area), in all areas except those mapped as thermally disturbed; and (2) no populations of new non-native species (i.e., species that were present at Casa Diablo pre-project are allowed). If after 3 years goal (1) is not met, then new seeding and mulching is required. If at any time a new non-native population occurs, then eradication is required.</p>	Post-Construction	MCEDD and MCCDD Planning Division	Confirm and Document Prior to Plant Operations and Monitor Until Revegetation Goals are Successful
26	<p><u>Bio Protection Measure 4:</u> Patches totaling about 7.2 acres of high quality Wright Buckwheat Dwarf Scrub habitat have been mapped on the private land northeast of the M-1 plant site. The Applicant shall protect this habitat from further development and mechanical disturbance and designate the mapped area for long-term preservation in the Reclamation Plan prepared for the County for the Casa Diablo geothermal development.</p>	Design, Construction and Operations	MCEDD and MCCDD Planning Division	Require Revision of the Reclamation Plan and Monitor Throughout the Project Lifetime

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
27	<u>Bio Protection Measure 5:</u> During the seasonal bird nesting period from February 15 th through September 15 th , a nesting bird survey shall be undertaken by a qualified biologist within the 7-day period prior to commencing (or recommencing if activities stop longer than 7 days) construction activities on the M-1 plant site. If nesting birds are observed on or within 100 feet of the proposed M-1 plant site, then the CDFG shall be notified and surface disturbance within 100 feet of the nesting birds shall be postponed until a qualified biologist advises that fledging has occurred.	Pre-Construction	MCEDD, MCCDD Planning Division and CDFG	Confirm and Document Prior to Site Construction
28	<u>Bio Protection Measure 6:</u> A nesting bird survey shall be undertaken by a qualified biologist within the 7-day period prior to beginning decommissioning of the existing MP-I power generation superstructure. If nesting birds are observed on the existing MP-I power generation superstructure, then the CDFG shall be notified and decommissioning activities shall be postponed until a qualified biologist advises that fledging has occurred.	Pre-Construction	MCEDD, MCCDD Planning Division and CDFG	Confirm and Document Prior to Site Construction
29	<u>Bio Protection Measure 7:</u> The Project shall not erect any linear barriers to movement of deer or other wildlife in the area between the existing MP-I plant site and the replacement M-1 plant site. During M-1 plant site construction, no temporary fencing or pipeline racks shall be erected in this same area during the normal periods of mule deer migration, from April 1 st to May 30 th or from September 15 th through November 15 th .	Design and Construction	MCEDD, MCCDD Planning Division and CDFG	Confirm and Document During Site Construction
30	<u>Bio Protection Measure 8:</u> A new deer crossing shall be constructed over the existing pipeline rack between the existing MP-I plant site and the replacement M-1 plant site to enhance mule deer and other wildlife movement through the Project area. The crossing shall be approximately 30 feet wide and shall be located near the 90 degree turn in the pipeline from east-west to north-south (at about 37.64590°N, -118.91358°W). The crossing shall be earthen filled over the pipeline rack. The new fill slopes, the earthen top, and the adjacent disturbed area shall be revegetated using [seed mix – scrub] and Jeffrey pines on 20-foot centers. The finished crossing shall resemble the existing crossing at the SCE easement located approximately 320 feet east of the 90 degree turn.	Design and Construction	MCEDD, MCCDD Planning Division and CDFG	Confirm and Document During Design Approval and Post-Construction

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
31	<u>Bio Protection Measure 9</u> : The mule deer movement corridor identified on the northeastern side of the existing Casa Diablo geothermal complex shall be maintained free from further development and mechanical disturbance to provide continuing wildlife movement through the Casa Diablo area. This area generally coincides with the patches of Wright Buckwheat Dwarf Scrub community referenced in Bio Protection Measure 4, and the adjacent three acres of Singleleaf Pinyon Woodland, and one acre of Jeffrey Pine Forest. The Applicant shall protect this movement corridor from further development and mechanical disturbance and designate the mapped area for long-term preservation in the Reclamation Plan prepared for the County for the Casa Diablo geothermal development.	Design, Construction and Operations	MCEDD and MCCDD Planning Division	Require Revision of the Reclamation Plan and Monitor Throughout the Project Lifetime
32	<u>Bio Protection Measure 10</u> : All operational waste facilities shall be located within exclusion fences of at least six feet in height to avoid attracting potential predators (i.e., including bears, coyotes, and ravens) to the area. Gates shall be kept closed if a waste facility is present. All waste receptacles shall be fitted with bear-proof lids. The lids shall be kept closed, and waste receptacle lid-closure shall be added to the standard plant operating protocol. Visiting contractors shall be made aware of the importance of proper waste disposal within the Project area.	Operations	MCEDD and MCCDD Planning Division	Monitor Throughout the Project Lifetime
33	<u>Bio Protection Measure 11</u> : Construction lighting shall be shielded away from the area located between the existing MP-I plant site and the replacement M-1 plant site. Operational lighting located along the northern, western, and southern boundaries of the replacement M-1 plant site; and the eastern and southern boundaries of the new MP-I storage yard, shall be shielded and directed downward or inward away from deer movement corridors.	Design and Construction	MC Department of Public Works	Confirm and Document During Design Approval
34	<u>Bio Protection Measure 12</u> : The operational vehicle speed limit in the Project area shall be posted and restricted to a maximum 15 miles per hour to minimize the potential for vehicle impacts on wildlife. Distractions such as using electronic devices, cell phones, etc. shall be prohibited in moving vehicles in the Casa Diablo area. Visiting contractors shall be made aware of the wildlife collision avoidance rules.	Operations	MCEDD and MCCDD Planning Division	Monitor Throughout the Project Lifetime

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
35	<u>Bio Protection Measure 13</u> : To avoid harassment of wildlife or take of special status wildlife species, all dogs brought into the Project area shall be kept on leash unless they are brought into the fenced MP-I plant site or fenced M-1 replacement plant site areas and the gates are closed. Contractors shall be informed of the requirement that dogs be leashed and gates closed.	Operations	MCEDD and MCCDD Planning Division	Monitor Throughout the Project Lifetime
36	<u>Bio Protection Measure 14</u> : All constructed basins in the Project area shall have finished slopes of 1:3 or less for at least 10 percent of the basin perimeter, with no less than one such slope every 100 feet of perimeter to facilitate wildlife escape from the basins. This may be accomplished by constructing ramp-like slopes or by piling dirt inside the basins at the required slope and interval.	Design and Construction	MC Department of Public Works	Confirm and Document During Design Approval
37	<u>Bio Protection Measure 15</u> : A biological survey for amphibians shall be conducted of the existing pond on the MP-I plant within the 7-day period prior to demolition of the pond. The CDFG shall be notified if any amphibian populations are discovered during the survey. The CDFG shall be allowed to determine whether relocation or extermination of the amphibian species is indicated.	Pre-Construction	MCEDD, MCCDD Planning Division and CDFG	Confirm and Document Prior to Pond Demolition
38	<u>Bio Protection Measure 16</u> : All perchable pole tops greater than 20 feet in height located near the southern boundary of the M-1 plant site abutting undisturbed native scrub habitat, shall be fitted with passive raptor and raven perching deterrents (e.g., Nixalite® bird spikes or equivalent). Any accumulations of raptor or raven droppings on M-1 plant site structures would trigger expanding the passive raptor and raven perching deterrents to the affected structure(s). No new potential perches of 20-foot in height or greater shall be authorized in the new MP-I storage yard following decommissioning activities.	Design, Construction and Operations	MCEDD and MCCDD Planning Division	Confirm and Document Prior to Operations and Monitor Throughout the Project Lifetime
Cultural Resources				
39	<u>Cultural Design Feature 1</u> : The Applicant shall implement all environmental protection measures to reduce the adverse effects of the Project on cultural resources that were recommended in the baseline cultural resources survey reports prepared for the Project area.	Construction	MCEDD and MCCDD Planning Division	Confirm and Document During Site Grading

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
40	<u>Cultural Protection Measure 1</u> : In the unlikely event that human remains are encountered during the construction phase of the project, excavation activities shall be stopped and the County Coroner must be contacted. If the County Coroner determines that the remains are those of Native Americans, the Native American Heritage Commission (NAHC) must be contacted within 24 hours and a Most Likely Descendant will be assigned to consult with the County to develop an agreement for the treatment and disposition of the remains.	Construction	MCEDD, MCCDD Planning Division and NAHC	Confirm and Document During Site Grading
Geology and Soils				
41	<u>Geo Design Feature 1</u> : Applicant shall implement those measures recommended in the report of the geotechnical investigation of the site to mitigate impacts due to geotechnical, soils and geologic constraints.	Design and Construction	MC Public Works Department	Confirm and Document During Design Approval
42	<u>Geo Design Feature 2</u> : All buildings and structures shall be constructed to meet applicable earthquake safety codes and the 2010 Uniform Building Code adopted by Mono County.	Design and Construction	MCCDD	Confirm and Document During Design Approval
Hazards and Hazardous Materials				
43	<u>HazMat Design Feature 1</u> : The power plant site shall 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.	Design and Construction	MC Public Works Department, Environmental Health	Confirm and Document Prior to Operations
44	<u>HazMat Design Feature 2</u> : A system of pressure and flow sensing devices and regular inspection of all lines, capable of detecting leaks and spills, shall be instituted and maintained.	Design, Construction and Operations	MCEDD and MCCDD Planning Division	Confirm and Document Prior to Operations and Monitor Throughout the Project Lifetime

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
45	<u>HazMat Design Feature 3</u> : The existing program for hazardous material management and emergency response at the Casa Diablo geothermal complex shall be expanded to include the M-1 plant site and operations, including: (a) the existing Spill Pollution Control and Countermeasure (SPCC) Plan; (b) the California Accidental Release Prevention (CalARP) Program; (c) the EPA Risk Management Plan (RMP); and (d) the OSHA Process Safety Management (PSM) Program to include the new M-1 plant.	Design, Construction and Operations	MCEDD, MCCDD Planning Division and MC Health Department, Environmental Health Division	Confirm and Document Prior to Operations and Monitor Throughout the Project Lifetime
46	<u>HazMat Design Feature 4</u> : The existing program for fire prevention and suppression at the Casa Diablo geothermal complex shall be amended and integrated to include the M-1 replacement plant facilities and operating procedures.	Design, Construction and Operations	Long Valley Fire Protection District (LVFPD)	Confirm and Document Prior to Operations and Monitor Throughout the Project Lifetime
47	<u>HazMat Design Feature 5</u> : No hazardous materials, chemicals, or wastes shall be stored in the new storage yard constructed in the footprint of the decommissioned MP-I plant site.	Operations	MCEDD, Environmental Health and MCCDD Planning Division	Monitor Throughout the Project Lifetime
Hydrology and Water Quality				
48	<u>Hydro Design Feature 1</u> : The M-1 plant site shall drain to a subsurface retention basin. Overflow from this basin shall drain via sheet flow to the surface for percolation.	Design and Construction	MC Public Works Department	Confirm and Document Prior to Operations
49	<u>Hydro Design Feature 1</u> : Short-term and long-term erosion control and stormwater construction best management practices (BMPs) shall be integrated into the interim site reclamation plan for the MP-I plant site.	Construction and Operations	MC Public Works Department and Lahontan RWQCB	Confirm and Document Prior to Construction and Operations, Respectively

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
50	<u>Hydro Design Feature 3</u> : M-1 plant site construction BMPs shall be implemented, including: placement of straw wattles and/or silt fencing along the perimeter of the site, and around topsoil stockpiles; and placement of silt fences in drainage swales at the exit point of the site.	Construction	MC Public Works Department and Lahontan RWQCB	Confirm and Document Prior to Construction
51	<u>Hydro Design Feature 4</u> : M-1 plant site post-construction BMPs shall also be implemented, including: the use of erosion control blankets and hydroseeding of slopes created by grading outside of the plant site; the placement of ¾” rock placed in all areas of the plant site that are not covered by pavement or structural concrete; and rock filled trench drains and retention facilities shall provide desiltation of storm water runoff.	Post-Construction	MC Public Works Department and Lahontan RWQCB	Confirm and Document Prior to Operations
52	<u>Hydro Design Feature 5</u> : The M-1 plant site shall be designed and constructed to prevent spills from leaving the site 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, shall be instituted and maintained for the M-1 plant site facilities; the proposed M-1 plant site shall be integrated into the existing <i>Geothermal Brine Spill Prevention and Response Plan</i> prepared for the Casa Diablo geothermal complex; and a <i>Spill Prevention, Control and Countermeasure Plan</i> (SPPC Plan) shall be prepared for the plant site and integrated into the existing program for hazardous material management and emergency response at the Casa Diablo geothermal complex to, in part, reduce the potential for adverse offsite effects on water resources from spills of geothermal fluid, petroleum hydrocarbons, or hazardous substances from the M-1 plant site.	Design, Construction and Operations	MC Public Works Department, MC Health Department, Environmental Health Division and Lahontan RWQCB	Confirm and Document During Design Approval and then Monitored Throughout the Project Lifetime

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
53	<u>Hydro Design Feature 6</u> : No element of the project construction shall result in the alteration of the blue-line drainage channel, or discharge of fill material into, the blue-line drainage channel that crosses the site between the existing MP-I and proposed M-1 plant sites, adjacent to Old Highway 395. Prior to commencement of construction, the Applicant shall provide to the County the proposed engineering design for the road crossing which demonstrates to the County that no impact to this drainage channel would occur as a result of project construction.	Design and Construction	MC Department of Public Works, MCEDD and MCCDD Planning Division	Confirm and Document During Design Approval and Monitor Through Construction
54	<u>Hydro Mitigation Measure 1</u> : Headwalls and sluice gates constructed on culverts draining the Casa Diablo geothermal complex to provide area-wide emergency spill containment and prevent surface drainage from escaping the area shall be inspected and maintained routinely.	Operations	MC Public Works, Environmental Health Department and Lahontan RWQCB	Confirm and Document During Design Approval and then Monitored Throughout the Project Lifetime
55	<u>Hydro Mitigation Measure 2</u> : All geothermal fluid, petroleum product, and hazardous substance spill containment and emergency response plans proposed for the Project shall be maintained current throughout the life of the Project.	Operations	MCEDD, MCCDD Planning Division and MC Health Department, Environmental Health Division	Monitor Throughout the Project Lifetime
23* [Restated]	<u>Hydro Mitigation Measure 3</u> : The MP-I Project shall be subject to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the Mono County General Plan (Mono County General Plan, Conservation/Open Space Element, Energy Resources, Goal 1, Objectives C and D), including compliance with conditions addressing hydrologic monitoring and remediation contained in the existing Conditional Use Permit for the MP-II Geothermal Power Plant.	Operations	MCEDD, MCCDD Planning Division and the LVHAC	Monitor Throughout the Project Lifetime

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
Noise				
56	<u>Noise Design Feature 1</u> : All noisy construction activities shall be limited to daylight hours.	Construction	MCEDD and MCCDD Planning Division	Monitor During Site Construction
57	<u>Noise Design Feature 2</u> : Noise levels during construction activities shall be kept to a minimum by equipping all on-site equipment with noise attenuation devices.	Construction	MCEDD and MCCDD Planning Division	Monitor During Site Construction
58	<u>Noise Design Feature 3</u> : All project construction activities and normal operations shall comply with applicable County noise requirements.	Construction	MCEDD and MCCDD Planning Division	Monitor During Site Construction
Land Use/Planning				
5** [Restated]	<u>Land Use/Planning Design Feature 1</u> : An Outdoor Lighting Plan shall be prepared and implemented for the M-1 plant site in conformance with the Mono County Dark Sky Regulations.	Design	MC Public Works Department	Confirm and Document During Design Approval
42** (Restated)	<u>Land Use/Planning Design Feature 2</u> : All buildings and structures shall be constructed to meet applicable earthquake safety codes and the 2010 Uniform Building Code adopted by Mono County.	Design and Construction	MCCDD	Confirm and Document During Design Approval
53*** [Restated]	<u>Land Use/Planning Design Feature 3</u> : No element of the project construction shall result in the alteration of the blue-line drainage channel, or discharge of fill material into, the blue-line drainage channel that crosses the site between the existing MP-I and proposed M-1 plant sites, adjacent to Old Highway 395. Prior to commencement of construction, the Applicant shall provide to the County the proposed engineering design for the road crossing which demonstrates to the County that no impact to this drainage channel would occur as a result of project construction.	Design and Construction	MC Department of Public Works, MCEDD and MCCDD Planning Division	Confirm and Document During Design Approval and Monitor Through Construction

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
58** [Restated]	<u>Land Use/Planning Design Feature 4</u> : All project construction activities and normal operations shall comply with applicable County noise requirements.	Construction	MCEDD and MCCDD Planning Division	Monitor During Site Construction
10** [Restated]	<u>Land Use/Planning Protection Measure 1</u> : A Landscape Plan shall be prepared to provide visual screening of views of the proposed storage yard to be created in the footprint of the existing MP-I plant site, particularly along the southwestern and southeastern edges of the facility. The Landscape Plan shall be designed to achieve applicable standards set forth in Section 08.010 through 08.060 (Scenic Combining District and State Scenic Highway) of the Mono County General Plan Land Use Element and shall be approved by the County prior to the required decommissioning of the MP-I plant site. Visual screening alternatives could include installing metal slats in the chain link fence; installing and maintaining native vegetation consisting of such species as Jeffery pine, bitterbrush, and sagebrush; or other measures consistent with achieving the applicable County standards.	Prior to the End of Construction	MCEDD and MCCDD Planning Division	Confirm and Document Prior to Plant Operations

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
Cumulative Effects				
59	<p><u>Cumulative Bio Mitigation Measure 1:</u> Constraints to wildlife movement through the Casa Diablo Hot Springs area shall be evaluated as part of any new development project proposed in the area. Measures shall be included as part of each new development project that would prevent the respective project from becoming a substantial obstacle to wildlife movement through or around the respective proposed development area. Mitigation measures to reduce cumulative impacts should be project specific, but examples of suggested measures to mitigate cumulative impacts include:</p> <ul style="list-style-type: none"> • Conducting baseline deer studies of proposed projects in the Casa Diablo Hot Springs area and monitoring deer use within and near a new proposed project. • Designing pipeline corridors or other potential physical obstacles to allow for deer and other wildlife movement such that dips, piled soil crossings or other proposed constructs to facilitate wildlife travel through identified major movement corridors are adopted as part of a new proposed project. • Requiring that proposed project lighting be shielded away from identified major deer and other wildlife movement corridors. 	Design, Construction and Operations	MCEDD, MCCDD Planning Division and/or the Responsible Federal Agency and CDFG	Review Baseline Surveys and Impacts on Wildlife Movement Prior to Decisions on Project Approval and Confirm and Document During Design Approval
60	<p><u>Cumulative Bio Mitigation Measure 2:</u> Water which may accumulate in geothermal well site basins from precipitation shall be removed to a standing depth of 2 inches from the respective basins on a daily basis or as soon as operationally feasible; and liquids deposited into the basins shall either be removed daily to a standing depth of 2 inches, or the basins shall be made wildlife escapable by creating earthen ramps at slopes of 1:3 or less at intervals of 100 feet apart or less around the perimeter of the standing depth of the liquid stored in the basin. Alternatives for providing equally effective measures which would allow wildlife to escape unharmed from the well site basins may be authorized subject to Mono County and CDFG approval.</p>	Operations	MCEDD, MCCDD Planning Division and/or the Responsible Federal Agency and CDFG	Confirm and Document During Design Approval

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
61	<u>Cumulative Bio Mitigation Measure 3</u> : All existing and future geothermal power plant projects in the Hot Creek buffer zone, or in the vicinity of Casa Diablo Hot Springs, shall be subject to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the Mono County General Plan (Mono County General Plan, Conservation/Open Space Element, Energy Resources, Goal 1, Objectives C and D, as may be amended), including compliance with conditions addressing hydrologic monitoring and remediation contained in the existing Conditional Use Permit for the MP-II Geothermal Power Plant.	Operations	MCEDD, MCCDD Planning Division and/or the Responsible Federal Agency and the LVHAC	Require Monitoring and Remedial Action Program with Decisions on Respective Project Approval and Monitor Throughout the Project Lifetime
61* [Restated]	<u>Cumulative Hydro Mitigation Measure 1</u> : All existing and future geothermal power plant projects in the Hot Creek buffer zone, or in the vicinity of Casa Diablo Hot Springs, shall be subject to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the Mono County General Plan (Mono County General Plan, Conservation/Open Space Element, Energy Resources, Goal 1, Objectives C and D, as may be amended), including compliance with conditions addressing hydrologic monitoring and remediation contained in the existing Conditional Use Permit for the MP-II Geothermal Power Plant.	Operations	MCEDD, MCCDD Planning Division and/or the Responsible Federal Agency and the LVHAC	Require Monitoring and Remedial Action Program with Decisions on Respective Project Approval and Monitor Throughout the Project Lifetime
61* [Restated]	<u>Cumulative Land Use/Planning Mitigation Measure 1</u> : All existing and future geothermal power plant projects in the Hot Creek buffer zone, or in the vicinity of Casa Diablo Hot Springs, shall be subject to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the Mono County General Plan (Mono County General Plan, Conservation/Open Space Element, Energy Resources, Goal 1, Objectives C and D, as may be amended), including compliance with conditions addressing hydrologic monitoring and remediation contained in the existing Conditional Use Permit for the MP-II Geothermal Power Plant.	Operations	MCEDD, MCCDD Planning Division and/or the Responsible Federal Agency and the LVHAC	Require Monitoring and Remedial Action Program with Decisions on Respective Project Approval and Monitor Throughout the Project Lifetime

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
62	<u>Cumulative Aesthetics Protection Measure 1</u> : Applicable Mono County lighting standards shall apply to all projects in the Casa Diablo geothermal development complex.	Construction and Operations	MCEDD and MCCDD Planning Division	Confirm and Document During Respective Project Design Approval
63	<u>Cumulative Air Quality Protection Measure 1</u> : Vehicle speeds shall be restricted to a maximum speed of 15 miles per hour for project-related travel on all unpaved access roads. Vehicle speed limits shall be posted in conformance with applicable Mono County and/or U.S. Forest Service (USFS) requirements and restrictions.	Construction and Operations	MCEDD, MCCDD Planning Division and/or the BLM, USFS and GBUAPCD	Require with Decisions on Respective Project Approval and Monitor Throughout the Project Lifetime
<p>* The monitoring entities identified by abbreviation in these tabulated Conditions of Approval are as follows:</p> <p>BLM ≡ U.S. Department of Interior, Bureau of Land Management</p> <p>CDFG ≡ California Department of Fish and Game</p> <p>CDOGGR ≡ California Division of Oil, Gas and Geothermal Resources</p> <p>GBUAPCD ≡ Great Basin Unified Air Pollution Control District</p> <p>LVFPD ≡ Long Valley Fire Protection District</p> <p>LVHAC ≡ Long Valley Hydrologic Advisory Committee</p> <p>MCCDD ≡ Mono County Community Development Department</p> <p>MCEDD ≡ Mono County Economic Development Department</p> <p>RWQCB ≡ Lahontan Regional Water Quality Control Board</p> <p>USFS ≡ U.S. Department of Agriculture, Inyo National Forest</p>				

Exhibit I

Comment Letters and Attachments on the

Revised Draft EIR (RDEIR)

Exhibit II

Comment Letters and Attachments on the

Second Revised Draft EIR (RDEIR2)

Exhibit III
Unified Final EIR

FILED

OCT 17 2012

Print Form

LYNDA ROBERTS
MONO COUNTY CLERK

Notice of Determination

MC 12-29 Appendix D

To:

☒ Office of Planning and Research

U.S. Mail:

Street Address:

P.O. Box 3044

1400 Tenth St., Rm 113

Sacramento, CA 95812-3044

Sacramento, CA 95814

☒ County Clerk

County of: Mono

Address: PO Box 237

Bridgeport, CA 93517

From:

Public Agency: Mono County

Address: PO Box 347

Mammoth Lakes, CA 93546

Contact: Courtney Weiche

Phone: 760.924.1803

Lead Agency (If different from above):

Address:

Contact:

Phone:

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): 2011022020

Project Title: Mammoth Pacific I Replacement Project

Project Applicant: Mammoth Pacific L.P.

Project Location (include county): East of State Route 203 and Highway 395. Two miles east of Mammoth Lakes

Project Description:

The proposed project would replace the aging MP-I geothermal power plant with a new, more-modern and -efficient binary power plant (referred to as "M-1") while maintaining the existing geothermal wellfield, pipeline system and ancillary facilities. 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 the applicant would close and dismantle the old MP-I plant and would utilize the former plant location for equipment storage. The transition period during which both the MP-I and M-1 operations would overlap but would not exceed two years from the date the M-1 plant begins startup operations.

This is to advise that the Mono County Planning Commission has approved the above
(☒ Lead Agency or ☐ Responsible Agency)

described project on October 11, 2012 and has made the following determinations regarding the above
(date) *effective upon conclusion of appeal, if any, upholding determination, or upon Board of Supervisors' clarification of General Plan, whichever occurs later.*

1. The project [☐ will ☒ will not] have a significant effect on the environment.
2. ☒ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
☐ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [☒ were ☐ were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [☒ was ☐ was not] adopted for this project.
5. A statement of Overriding Considerations [☐ was ☒ was not] adopted for this project.
6. Findings [☒ were ☐ were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at:

437 Old Mammoth Road Suite P Mammoth Lakes, CA 93546

Signature (Public Agency):

Title: Associate Planner

Date: October 12, 2012

Date Received for filing at OPR:

Authority cited: Sections 21083, Public Resources Code.
Reference Section 21000-21174, Public Resources Code.

Revised 2011

Posted thru 11-16, 2012
Mono County Clerk-Recorder



State of California—The Resources Agency
DEPARTMENT OF FISH AND GAME
2012 ENVIRONMENTAL FILING FEE CASH RECEIPT

RECEIPT#

427130

STATE CLEARING HOUSE # (If applicable)

2011022020

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY

LEAD AGENCY

DATE

COUNTY/STATE AGENCY OF FILING

DOCUMENT NUMBER

PROJECT TITLE

PROJECT APPLICANT NAME

PHONE NUMBER

PROJECT APPLICANT ADDRESS

CITY

STATE

ZIP CODE

PROJECT APPLICANT (Check appropriate box):

☒ Local Public Agency
 ☐ School District
 ☐ Other Special District
 ☐ State Agency
 ☐ Private Entity

CHECK APPLICABLE FEES:

<input checked="" type="checkbox"/> Environmental Impact Report (EIR)	\$2,919.00	\$ 2919.00
<input type="checkbox"/> Mitigated/Negative Declaration (ND)(MND)	\$2,101.50	\$
<input type="checkbox"/> Application Fee Water Diversion (State Water Resources Control Board Only)	\$850.00	\$
<input type="checkbox"/> Projects Subject to Certified Regulatory Programs (CRP)	\$992.50	\$
<input checked="" type="checkbox"/> County Administrative Fee	\$50.00	\$ 50.00
<input type="checkbox"/> Project that is exempt from fees		
<input type="checkbox"/> Notice of Exemption		
<input type="checkbox"/> DFG No Effect Determination (Form Attached)		
<input type="checkbox"/> Other		\$

PAYMENT METHOD:

☐ Cash
 ☐ Credit
 ☒ Check
 ☐ Other

TOTAL RECEIVED \$ 2969.00

SIGNATURE

TITLE

X *Sharon A. Hale**Deputy Clerk*

WHITE - PROJECT APPLICANT

YELLOW - DFG/ASB

PINK - LEAD AGENCY

GOLDEN ROD - COUNTY CLERK

DFG 753.5a (Rev. 11/11)

ADAMS BROADWELL JOSEPH & CARDOZO

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FAX: (916) 444-6209

RECEIVED
OCT 11 2012
MONO COUNTY
Community Development

October 10, 2012

BY: EMAIL AND U.S. MAIL

Mono County Economic Development Department
ATTN: Dan Lyster
P.O. Box 2415
Mammoth Lakes, CA 93546
dlyster@mono.ca.gov

**Re: Comments on the Final Environmental Impact Report for the
Mammoth Pacific I Replacement Project, California
Clearinghouse Number 2011022020**

Dear Mr. Lyster:

We are writing on behalf of California Unions for Reliable Energy ("CURE") to provide comments on the Final Environmental Impact Report ("EIR") prepared by Mono County ("County"), pursuant to the California Environmental Quality Act ("CEQA"),¹ for the Mammoth Pacific I Replacement ("M-1") unit, a geothermal power plant facility with a net generating capacity of approximately 18.8 megawatts ("MW"), proposed by Ormat Nevada, Inc ("Applicant" or "Ormat"). The Applicant seeks a conditional use permit from the County to build, route, and reroute geothermal pipelines; construct a substation and transmission line; develop and operate, and eventually decommission, the M-1 unit; and to eventually demolish and decommission the existing Mammoth Pacific Unit I ("MP-I") power plant and ancillary facilities. The MP-I unit and the M-1 unit will operate simultaneously for approximately two years. The EIR, and these comments, refer to the proposed M-1 unit, substation, transmission line, and ancillary pipeline facilities together with the eventual decommissioning of the MP-I unit as the "Project" for the purpose of CEQA.

¹ Pub. Resources Code, §§ 21000 et seq.
2620-021cv

the comments submitted by the Geothermal Institute of Mammoth ("GIM") to correct the factual errors asserted by GIM.

I. STATEMENT OF INTEREST

CURE has an interest in enforcing environmental laws that encourage sustainable development and ensure a safe working environment for its members. Environmentally detrimental projects can jeopardize future jobs by making it more difficult and more expensive for industry to expand in Mono County, and by making it less desirable for businesses to locate and people to live in the County, including the Project vicinity. Continued degradation can, and has, caused construction moratoriums and other restrictions on growth that, in turn, reduces future employment opportunities. CURE's members live, work, recreate and raise their families in Mono County, including in and around Mammoth Lakes. Accordingly, CURE's members would be directly affected by the Project's adverse environmental impacts. CURE's members may also work on the Project itself. They will, therefore, be first in line to be exposed to any hazardous materials, air contaminants, and other health and safety hazards that exist onsite.

II. THE EIR FAILS TO INCLUDE AN ADEQUATE PROJECT DESCRIPTION

The EIR is inadequate because it fails to include a stable Project description. The courts have repeatedly held that "an accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient [CEQA document]."² Only through an accurate view of the project may affected outsiders and public decisionmakers balance the proposal's benefit against its environmental costs.³ In particular, the EIR fails to consistently describe the proposed Plan Amendment and whether the action is part of the Project. In July 2012, the County recirculated the Draft EIR for the second time to allow the public to comment on clarifying Plan Amendments proposed in the RDEIR2.⁴ The EIR now states that Plan Amendments are no longer required and that all references to the proposed Plan Amendments have been deleted from the EIR.⁵ The County's failure to consistently describe the Project throughout the environmental review process inhibits public participation and informed decisionmaking and violates CEQA.

² *County of Inyo v. County of Los Angeles* (1977) 71 Cal.App.3d 185, 193.

³ *Id.* at 192-193.

⁴ See RDEIR2, at p. 29.

⁵ FEIR, Response to Comment 12-03.

operation of a fully operational replacement plant. According to the FEIR, Ormat is contractually obligated to deliver power to SCE from the MP-I facility “but the long-term continuing utilization of the MP-I project geothermal resources could be shortened due to eventual equipment failure.”¹¹ Accordingly:

[T]he principal reason for the M-1 Replacement Project is to replace the aging, leak-prone MP-I unit, whose condensing capacity has been severely restricted due to the need to plug damaged condenser tubes, with the new, modern and more efficient M-1 unit.¹²

As such, but for the Project, the MP-I project would cease to be viable and reach the end of its operational life. The County should include an adequate analysis of the Project’s significant air quality impacts in a revised EIR.

IV. THE EIR FAILS TO ADEQUATELY ANALYZE THE PROJECT’S WATER SUPPLY IMPACTS

We previously commented that the County failed to include an adequate analysis of the environmental impacts associated with supplying water to the Project.¹³ The Supreme Court set forth the principles governing water supply analysis under CEQA in *Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova* (“*Vineyard*”).¹⁴ In *Vineyard*, the Court held that an EIR fails to meet CEQA’s purpose and goals if it fails to address the following four issues. First, an EIR must identify a project’s water supply with a sufficient degree of certainty to allow decisionmakers to “evaluate the pros and cons of supplying the amount of water that the project will need.”¹⁵ Second, an EIR evaluating a multi-phase or a planned land use project must assume that all phases of the project will be built, “and must analyze, to the extent reasonably possible, the impacts of providing water to the entire project.”¹⁶ Third, the water sources identified in the EIR “must bear a likelihood of actually proving available.”¹⁷ As explained by the Court:

¹¹ See FEIR, pp. 3, 2-32, 4-132.

¹² *Id.* at p. 4-132.

¹³ See *id.* at Comments 9-21, 9-28.

¹⁴ *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal.4th 412.

¹⁵ *Id.* at 430-31 citing *Santiago County Water Dist. v. County of Orange* 118 Cal.App.3d at 829.

¹⁶ *Id.*

¹⁷ *Id.* at 432.

performance standard is or will be satisfied.²³ We previously commented that mitigation measures BIO-MM-1 (hydrologic and biologic monitoring) and HYDRO-MM-3 (hydrological and biological monitoring), Cumulative BIO-MM-1 (deer surveys and monitoring), Cumulative HYDRO-MM-1 (hydrologic and biologic monitoring), Cumulative BIO-MM-3, and Cumulative HYDRO-MM-3 (hydrologic and biologic monitoring) will not reduce impacts to a less than significant level.²⁴ To reiterate, these measures are inadequate under CEQA and constitute improper deferral of environmental analysis because these measures lack adequate performance criteria or ensure that significant impacts will not occur.

The EIR also includes two new mitigation measures; one restricting the period of simultaneous operation of the MP-I and M-1 facilities to two years, and another restricting the rate of geothermal fluid production supply at the Casa Diablo geothermal complex during the startup operating transition period to 6,900,000 pounds per hour.²⁵ We propose the following revision to the latter condition:

The rate of geothermal fluid production supplying the Casa Diablo geothermal complex ~~during the startup operating transition period during which both the proposed M-1 power generation facilities and the existing MP-I plant power generation facilities may operate at the same time~~ shall not exceed the existing geothermal fluid flow capacity of 6,900,000 pounds per hour.

The revision is necessary to ensure that the Project – which includes the operation of the replacement M-1 facility for a period of 30 years prior to decommissioning – will not increase the rate of production above the existing fluid flow capacity. Absent this revision, the assumption in the EIR that the Project will not alter the existing fluid production regime lacks basis.

Further, the above measure should be incorporated into the Project Mitigation Implementation and Monitoring Program, in accordance with Public Resources Code section 21081.6 subd. (a)(1), to ensure that the Applicant complies with the proposed measure.

²³ Michael H. Remy et al., Guide to CEQA (2007 11th Ed), at p. 551 (collecting authorities).

²⁴ See FEIR, Comment 9A-20, 9C-02.

²⁵ FEIR, Mitigation Implementation and Monitoring Program, General Conditions 1-2; *id.* at Response to Comment 9D-07.

5. The County's failure to disclose the goals of applicable deer management plans to enable the public to evaluate potential conflicts with Mono County General Plan;³³ and

6. Comments regarding the potentially significant impacts to geothermal resources, including continual depletion of the resource, through prospective power production activities.³⁴

The County violated CEQA by failing to respond to these comments.

VII. CEQA REQUIRES THE COUNTY TO RECIRCULATE THE EIR

A lead agency is required to recirculate an EIR when "significant new information" is added to the EIR after public notice is given of the availability of the DEIR, but before certification.³⁵ The CEQA Guidelines define "significant new information" as changes in the project or environmental settings, as well as additional data or other information that deprives the public of a meaningful opportunity to comment on significant impacts or feasible mitigation measures.³⁶ Specifically, significant new information includes:

- A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented;
- A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance;
- A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it; or

³³ See FEIR, Comment and Response, 9A-11.

³⁴ See FEIR, Comment and Response 9-19.

³⁵ Pub. Resources Code, § 21092.1; Cal. Code Regs. tit. 14, § 15088.5 ("CEQA Guidelines").

³⁶ CEQA Guidelines, § 15088.5, subd. (a).

CURE's participation has yielded major environmental achievements, including the following:

1. CURE was primarily responsible for lowering BACT for NO_x emissions from 4.0 ppm to 2.0 ppm. This has cut emissions from all gas fired power plants in half, preventing literally thousands of tons of NO_x emissions in California every year;
2. CURE was first to advocate that oxidation catalysts be required to reduce emissions of toxics (particularly acrolein), VOCs and CO. Oxidation catalysts are now routinely installed on nearly all gas fired power plants in California;
3. CURE is the only party to successfully change a project from water cooled to air cooled, saving thousands of gallons of water that could be used for other beneficial uses; and
4. CURE was first to advocate that construction equipment be equipped with oxidizing soot filters. Soot filters are now commonly required on construction equipment in California.

The quality of CURE's participation has been publicly recognized by the California Energy Commission, which stated that "CURE intervention[s] ... have been responsible and thoughtful."⁴³

CURE has done at least as much, if not more than any other group in California, to improve the safety and reduce the environmental impacts of new power plants. Through the CEQA process, CURE has helped to cut smog-forming pollutants in half, increased the use of recycled water for cooling systems and pushed for groundbreaking controls on toxic air pollution as the standard for all new power plants. CURE also works with energy developers to address the socioeconomic impacts of new energy projects by ensuring that the industry hires local workers and maintains the wage standards and working conditions that workers have struggled for over many decades. CURE's participation in the CEQA process benefits the communities in which we live, by guaranteeing sustainable

⁴³ Sunrise Cogeneration and Power Project, Docket No. 98-AFC-4, Transcript of Evidentiary Hearing, p. 67 (May 25, 1999).
2620-021cv

ATTACHMENT 1

ATTACHMENT 2

ATTACHMENT 3



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- ☒ Solar Hot Water

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Calculate

California unions at odds over large-scale solar development

February 08, 2011 | Written by [Chris Meehan](#) | Hits: 194



Last month, CURE, the California Unions for Reliable Energy, sued the Bureau of Land Management over its approval of the NextEra Energy Inc.'s (Nasdaq: NEE) 250-megawatt Genesis Solar Energy Project. The organization cited concerns about the amount of water the project used. But other California unions criticized the action and said it was the latest example of CURE's

Asked whether CURE would drop the lawsuit against BLM if CURE's parent, California's State Building and Construction Trades Council, secured labor contracts with NextEra, Joseph responded, "We would not drop the lawsuit. The allegation in the article is a lie."

NextEra Energy did not respond to a request for comment by press time.

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**JOINT STATEMENT OF THE
HIGH DESERT POWER PROJECT
AND THE
CALIFORNIA UNIONS FOR RELIABLE ENERGY**

April 1999

The High Desert Power Project, LLC (HDPP) and the California Unions for Reliable Energy (CURE), are pleased to announce that they have reached an agreement to resolve all of the outstanding environmental issues raised by CURE concerning HDPP's proposed electric generating plant in Victorville, California, except for issues relating to a 32 mile long natural gas pipeline. HDPP and CURE will jointly propose to the California Energy Commission that the applicable portions of their agreement be adopted as conditions of certification on the Commission's Facility Certification.

As a result of this agreement, HDPP has agreed to the following measures to protect the environment:

A. AIR QUALITY

1. The Project shall do all of the following during construction:
 - Limit or expeditiously remove accumulated mud or dirt from adjacent public streets whenever there is visible accumulation on public streets. Dry rotary brushes shall not be used except where preceded or accompanied by sufficient wetting to limit the visible dust emissions. Blower devices shall not be used.
 - Sandbags or other erosion control measures shall be placed to prevent silt runoff to public roadways from sites with a slope greater than 10%.
 - Wind breaks shall be installed at windward side(s) of construction areas where soil disturbance is scheduled before soil is disturbed. The wind breaks shall be maintained until the soil is stabilized or permanently covered in that area.
 - Gravel pads shall be installed at all access points to prevent tracking of mud onto public roads.
 - When materials are transported off-site, all material shall be covered or effectively wetted to limit visible dust emissions.

(a) The Project shall treat and inject twelve thousand (12,000) acre-feet of water from the SWP and an additional one thousand (1,000) acre-feet from the SWP (the "Additional Water") in accordance with Sections B.1.(b) and (c) of this Agreement as quickly as technically feasible after Project operations commence;

(b) All water injected into the groundwater system (i.e., "banked" water) on behalf of the Project shall be treated prior to injection to reduce all organic and inorganic constituents in the treated water to background levels and to eliminate all microbial contaminants;

(c) All banked water shall be injected at the same location from which Project-related groundwater withdrawals will occur;

(d) The Project may withdraw water deposited in the bank, provided that at no time shall cumulative Project-related groundwater pumping exceed the cumulative amount of water previously treated and banked in accordance with Sections B.1.(b) and (c) of this Agreement, and further provided that the Additional Water deposited in the bank shall never be withdrawn by the Project;

(e) Except during the last three years of operation, whenever Project-related groundwater pumping occurs, the Project shall expeditiously restore the water bank by treating and injecting an amount of water equal to the amount of water pumped in accordance with Sections B.1.(b) and (c) of this Agreement; and

(f) Victor Valley Water District Wells 21, 27, 32, 37, Adelanto Wells 4, 8A, and all Project groundwater wells shall be monitored quarterly for water level and water quality. Monitoring of the water levels and gradient in the Mojave River alluvial aquifer and riparian zone shall also be conducted quarterly.

2. Not later than commencement of construction, the Project shall make a \$50,000 payment to the City of Victorville, California for development and implementation of a program to convert existing irrigation located on the site of the former George Air Force Base to using reclaimed water for irrigation.

ATTACHMENT 5

- d. All entrances into the construction site shall be treated with dust soil stabilization compounds. No construction vehicles shall enter the construction site unless through the treated entrance roadways. Install gravel pads at all access points to prevent tracking of mud on to public roads.
- e. All storage piles and disturbed areas that remain inactive for longer than 10 days shall be covered, or be treated with appropriate dust suppressant compounds.
- f. All vehicles used to transport solid bulk material and that have potential to cause emissions shall be provided with a cover, or the materials shall be sufficiently wetted and loaded into the trucks in a manner to provide at least one foot of freeboard. Use bedliners in bottom-dumping haul vehicles.
- g. For backfilling during earthmoving operations, water backfill material or apply dust palliative to maintain material moisture or to form crust when not actively handling; cover or enclose backfill material when not actively handling; if required mix backfill soil with water prior to moving; dedicate water truck or large hose to backfilling equipment and apply water as needed; water to form crust on soil immediately following backfilling; empty loader bucket slowly; minimize drop height from loader bucket.
- h. During clearing and grubbing, prewet surface soils where equipment will be operated; stabilize surface soil with dust palliative unless immediate construction is to continue; and use water or dust palliative to form crust on soil immediately following clearing/grubbing.
- i. While clearing forms, use single stage pours where allowed; use water spray, sweeping and/or industrial shop vacuum to clear forms; and avoid use of high pressure air to blow soil and debris from the form.
- j. During cut and fill activities, prewater with sprinklers or wobblers to allow time for penetration; prewater with water trucks or water pulls to allow time for penetration.
- k. Post a publicly visible sign with the telephone number and person to contact regarding dust and noise complaints. This person shall respond and take corrective action within 24 hrs.

2. The Project shall schedule construction of Production Well Pads OB1, OB2, and OB3 outside the shore bird breeding season.
3. The Project shall utilize well pad lighting that is shielded to direct light downward onto the well pad equipment. Plant site lighting shall be directed inward toward the facilities to minimize offsite lighting impacts. All general lighting will be shielded and focused downward. Task lighting will be switched to facilitate maintenance activities, but will be switched off unless needed.
4. All proposed transmission lines located within one (1) mile from the Salton Sea shoreline shall be equipped with bird diverters.
5. CEOE shall use pile driver shield enclosures on all pile driving equipment to contain noise created by pile drivers during construction of the Project.

C. WATER RESOURCES

1. In consultation with IID and CEC staff, CEOE shall develop and implement a Project specific conservation program that will result in the conservation of 30 acre-feet per year ("AFY"). The conservation program shall be implemented beginning at commencement of commercial operation of the Project.

**JOINT STATEMENT OF
ELK HILLS POWER, LLC
AND THE
CALIFORNIA UNIONS FOR RELIABLE ENERGY**

October, 2000

Elk Hills Power, LLC ("Elk Hills") and the California Unions for Reliable Energy ("CURE"), are pleased to announce that they have reached an agreement to resolve the outstanding environmental issues raised by CURE before the California Energy Commission concerning Elk Hills' proposed electric generating plant in Kern County, California. Under this agreement, the Elk Hills Power Project will attempt to achieve NO_x and ammonia emission rates lower than any project yet licensed by the California Energy Commission. With the water conservation measures at the Project and funded by the Project, the Project will have a reduced consumption of fresh water and will provide for off-site water conservation. The Project will switch to the less hazardous form of ammonia (aqueous ammonia), and will provide enhanced protection for workers from potential contamination at the site.

With this agreement, Elk Hills and CURE believe that the Project will be a substantial asset to Kern County and the surrounding area. Elk Hills and CURE will jointly propose to the California Energy Commission that the applicable portions of their agreement be adopted as Conditions of Certification in the Commission's Decision on the Project.

Under this agreement, Elk Hills has agreed to the following measures:

A. AIR QUALITY

In addition to specifying the performance levels provided in the air quality construction and operating permits, the Project shall also specify to vendors a guarantee of a NO_x emission rate of 2.0 ppmvd NO_x at 15% O₂ over an averaging period of one hour with an ammonia slip rate of 5.0 ppm. If the latter guarantee is provided by any of the bidding vendors, the Project shall select, install and operate such a system. The purpose of this provision is solely to explore the potential for SCR technology to achieve the above-stated performance, and this provision shall not affect the Project's air quality construction and operating permit or licensing conditions, including California Energy Commission Conditions of Certification and the U. S. EPA Prevention of Significant Deterioration Permit.

Upon request of the CURE, Elk Hills will provide copies of non-confidential summaries of the bid information relating to NO_x and ammonia slip emission rate guarantees and, for 12 full months of commercial operation following plant commissioning, continuous emissions monitoring data which is provided to the San Joaquin Valley Unified Air Quality Management District.

3. Substitution of the following for HAZ-5:

"The aqueous ammonia storage facility shall include two tanks (12,000 gallons each) designed to either the ASME Pressure Vessel Code and ANSI K61.1 or to API 620. In either case, the storage tanks shall be protected by a secondary containment basin capable of holding 150% of the storage volume of one tank plus the volume associated with 24 hours of rain assuming 25 year storm."

4. Deletion of TRANS-9.

5. Substitution of the following for TRANS-10 (this would be a new TRANS-9):

"The project owner shall develop and implement a safety management plan for delivery of ammonia. The plan shall include procedures, protective equipment requirements, training, a checklist, and specification of delivery routes."

D. WORKER SAFETY

The Parties shall jointly sponsor the following modifications to the Conditions of Certification as set forth in the Presiding Member's Proposed Decision:

1. Addition of the following to SAFETY-1 (Protocol, paragraph 1, new second sentence):

"The on-site Health and Safety Coordinator assigned to the Project during excavation and grading activities shall be a California-certified Registered Environmental Assessor Class II."

2. Addition of the following to SAFETY-1 (Protocol, paragraph 2, new first sentence):

"The REA-II shall perform a records review and field study to confirm that no contaminated sites will be encountered during construction of the Project."

Elk Hills previously announced other environmental improvements in its project in response to concerns raised by CURE and others:

- ❖ Elk Hills agreed to impose ignition timing retard and oxidizing soot filters on suitable construction equipment to reduce construction emissions.
- ❖ Elk Hills also agreed to various measures to detect and manage any contaminated soil which may be encountered during construction.

**JOINT STATEMENT OF THREE MOUNTAIN POWER, LLC
AND THE CALIFORNIA UNIONS FOR RELIABLE ENERGY (CURE)**

July 2000

Three Mountain Power and CURE are pleased to announce that they have reached an agreement to resolve all of the outstanding environmental issues raised by CURE concerning the Three Mountain Power Project, a 500-megawatt natural gas-fired electrical generating facility located near the town of Burney in Shasta County, California. As a result of this agreement, this power plant will be cleaner than any merchant power plant ever licensed in California. New mitigation measures announced include the following:

Three Mountain Power Will Reduce Its Groundwater Pumping By Almost 80 Percent.

Three Mountain Power will reduce the Project's new pumping of fresh groundwater by almost 80 percent, from 2900 acre-feet per year to no more than 600 AFY, by (1) installing a parallel hybrid wet and dry cooling system for the Project, (2) using approximately 300 AFY of reclaimed water from the Burney Water District, (3) installing a crystallizer to distill and recycle wastewater from the Project, and (4) retrofitting the existing Burney Mountain Power plant with a parallel hybrid wet and dry cooling system and reallocating a portion of the groundwater currently used by Burney Mountain Power. This solution will:

- protect Burney Falls, local wells and the endangered Shasta Crayfish from adverse impacts from the Project,
- promote the goals of State Water Resources Control Board Policy 75-58, which discourages the use of fresh inland water for power plant cooling,
- improve the high quality of groundwater in the Burney Basin by eliminating percolation of wastewater into the aquifer, and
- protect waterfowl and other wildlife by eliminating the use of evaporation ponds for wastewater disposal.



RESOLUTION R12-__

**A RESOLUTION OF THE MONO COUNTY BOARD OF SUPERVISORS
DENYING APPEAL OF CUP 12-004 AND FEIR ADOPTION
FOR THE MAMMOTH PACIFIC REPLACEMENT PROJECT
FILED BY CALIFORNIA UNIONS FOR RELIABLE ENERGY (CURE);
CERTIFYING AND ADOPTING THE FEIR FOR THE PROJECT; AND AFFIRMING THE
PLANNING COMMISSION'S APPROVAL OF CUP 12-004**

WHEREAS, the Mammoth Pacific I Replacement Project involves the replacement of the existing MP-1 power plant, located near Casa Diablo Hot Springs, with a new binary power plant to be located on the same site; reclamation and partial reuse of the existing power plant site; and the ultimate reclamation of all operations on the site (the "Project"). The existing geothermal well field and level of geothermal extraction would not be altered by the Project; and

WHEREAS, the Mono County Planning Commission did, on October 11, 2012, hold a properly noticed and advertised public hearing to hear all testimony and consider all evidence relevant to the Project, related approvals, and the Final Environmental Impact Report, consisting of the RDEIR, RDEIR2 and Final EIR (FEIR); and

WHEREAS, following the public hearing, the Planning Commission certified and approved the FEIR and Mitigation, Monitoring and Reporting Program (MMRP), and approved Conditional Use Permit 12-004, Variance 12-002, and Reclamation Plan 12-001, for the Project, effective upon the conclusion of any appeal or upon clarification by this Board of provisions in the Mono County General Plan related to setbacks from a surface water course, whichever occurs last; and

WHEREAS, on October 19, 2012, California Unions for Reliable Energy (CURE) filed an appeal of the Planning Division's actions on CUP 12-004 and FEIR adoption (the "CURE Appeal"); and

WHEREAS, having considered the appeal filed by CURE at a duly noticed public hearing held on November 13, 2012, and based on the information provided in the FEIR, public comment received, and information provided by CURE, the applicant, and by staff, the Board of Supervisors desires to affirm the Planning Division's actions on CUP 12-004 and FEIR adoption, with those modifications, if any, stated herein, or on the record and incorporated by this reference, thereby denying the appeal filed by CURE;

NOW, THEREFORE, the Mono County Board of Supervisors hereby **AFFIRMS** the findings of the Mono County Planning Commission for the Project and **FINDS** and **RESOLVES** as follows:

1. A Final Environmental Impact Report (FEIR) has been completed for the Project in compliance with CEQA; and
2. The FEIR has been presented to the Board of Supervisors, which is the decision maker with respect to the CURE Appeal; and

3. The Board of Supervisors has reviewed and considered the information contained in the FEIR for the Project; and
4. The FEIR reflects the lead agency's independent judgment and analysis; and
5. The FEIR has identified potentially significant effects of the project which, as the result of changes or alterations incorporated into the Project, have been avoided or reduced to a less-than-significant level, as set forth in Exhibit A to this resolution, which is hereby incorporated by this reference as if fully set forth herein; and
6. Potential alternatives to the proposed Project are either not feasible or do not provide environmental benefit in comparison to the proposed Project, as set forth in Exhibit A; and
7. The Mono County Board of Supervisors does hereby certify and adopt the FEIR and the mitigation monitoring and reporting program for the Mammoth Pacific I Replacement Project, and denies the appeal of FEIR certification filed by CURE.

BE IT FURTHER RESOLVED THAT the Mono County Board of Supervisors hereby:

1. Affirms and makes each of the findings of the Mono County Planning Commission set forth in Exhibit B to this resolution, which is hereby incorporated by reference as if fully set forth herein, related to approval of Conditional Use Permit 12-004; and
2. Affirms the Planning Commission's approval of Conditional Use Permit 12-004 for the Project, with the modification set forth in paragraph 3 below, including Conditions of Approval, the Mitigation Monitoring, and Reporting Program, and height exception for mechanical appurtenances, thereby denying the appeal of the approval of the CUP filed by CURE.
3. General Condition #3 of the Use Permit Conditions shall be revised to read as follows: "The combined rate of geothermal fluid production utilized by the Project, including during any interim period when the M-1 and MP-1 plants are operating simultaneously, shall not exceed the present rate of geothermal fluid flow utilized in the operation of the MP-1 plant, unless offset by equivalent reductions at the MPII plant."

PASSED AND ADOPTED this 13th day of November, 2012, by the following vote of the Planning Commission, County of Mono:

AYES :

NOES :

ABSENT :

1 ABSTAIN :

2
3 _____
4 Vikki Magee-Bauer, Chair

5
6 ATTEST:

APPROVED AS TO FORM:

7
8 _____
9 Lynda Roberts
Clerk of the Board

Marshall S. Rudolph
County Counsel

EXHIBIT A

ENVIRONMENTAL IMPACT FINDINGS PURSUANT TO CEQA GUIDELINE SECTION 15091 MAMMOTH PACIFIC I REPLACEMENT PROJECT FINAL ENVIRONMENTAL IMPACT REPORT

The State of California Public Resources Code Section 21081 and CEQA Guidelines Section 15091 require a public agency, prior to approving a project, to identify significant impacts of the project and make one or more of three allowable findings for each of the significant impacts:

- The first allowable finding is that “[c]hanges or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR.” (State CEQA Guidelines Section 15091, subd. (a)(1))
- The second allowable finding is that “[s]uch changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.” (State CEQA Guidelines, Section 15091, subd. (a)(2))
- The third allowable finding is that “[s]pecific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR.” (State CEQA Guidelines, Section 15091 (a)(3))

After reviewing the Final EIR and the public record on the Project, the County hereby makes the findings in Parts I through IV of this document regarding the significant effects of the Mammoth Pacific I Replacement Project (Project) pursuant to Section 15091 of the State CEQA Guidelines.

All effects of the Project on the environment are hereby found to be not significant after mitigation. Cumulative impacts of the Project in conjunction with other related approved, proposed, or projects currently under construction have been addressed where applicable, and would not be significant after mitigation.

PART I: FINDINGS RELATIVE TO POTENTIALLY SIGNIFICANT IMPACTS

Because certain effects of the Project were analyzed in the EIR as *potentially* significant and because project design features, alterations, or mitigation measures have been imposed which avoid or further reduce those effects, the Board of Supervisors hereby finds as follows:

A. Aesthetics

1. Potentially Significant Effect: The Project could substantially degrade the existing visual character or quality of the site and its surroundings if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features designed to screen the proposed M-1 plant from public view. These features consist of earth-tone painting, pine tree preservation, a restriction on the height of materials stored, and placement of the interconnection transmission line near ground level. In addition, a Landscape Plan has been prepared and must be approved by the

County. The Landscape Plan identifies specific visual screening measures to be implemented at the storage yard to be located in the footprint of the existing MP-I plant, which is to be removed. With implementation of these design features and the protection measure, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could create a new source of substantial light or glare that would adversely affect nighttime views in the area if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features to reduce nighttime visibility caused by lighting of the proposed M-1 plant and associated facilities. These features consist of downward projection of power plant lighting and preparation/implementation of an Outdoor Lighting Plan for the Project in conformance with County Dark Sky Regulations. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

B. Air Quality

1. Potentially Significant Effect: The Project could conflict with or obstruct implementation of the applicable air quality plan if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features designed to eliminate the potential for conflicts with applicable Great Basin Unified Air Pollution Control District (GBUAPCD) plans and policies, including obtaining an Authority to Construct permit for the proposed M-1 plant and permits to operate the diesel fueled emergency generator and firewater pump generator. All permits shall be obtained from the GBUAPCD. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could result in the violation of an air quality standard or contribute substantially to an existing air quality violation if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features to ensure that air pollution emissions from the site are reduced to the maximum extent practicable. These features consist of installing a vapor recovery unit to capture motive fluid that could otherwise be released during plant maintenance and compliance with fugitive dust emission control measures during Project construction activity.

With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

C. Biological Resources

1. Potentially Significant Effect: The Project could have a substantial adverse effect on riparian habitat and/or federally protected wetlands as defined by Section 404 of the Clean Water Act if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features designed to reduce soil erosion and sedimentation impacts associated with runoff from the Project site. These design features include installation of a subsurface retention basin at the proposed M-1 plant site, implementation of erosion control/stormwater construction best management practices (BMPs) in the interim site reclamation plan for the MP-I plant site, and implementation of M-1 plant site construction and post-construction BMPs. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could interfere with the movement of 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 if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features intended to reduce potential interference with fish and wildlife. These design features include (a) implementation of a 15 mile-per-hour speed limit for all on-site construction vehicles; (b) construction and operation noise reduction measures including use of noise attenuation devices on construction equipment; (c) incorporation of erosion/sedimentation and spill control measures into the Project design, including a Spill Prevention, Control and Countermeasure (SPCC) Plan; (d) avoiding removal of existing trees in the placement of the interconnection injection pipeline; (e) prohibition on the installation of linear barriers to movement of deer or other wildlife between the existing plant and the replacement plant; (f) construction of a new deer crossing; (f) maintenance of existing mule deer movement corridor on northeastern side of complex; (g) fencing of waste facilities to avoid attracting potential predators; (h) shielding of lighting; (i) dog leash requirements; (j) slope limitations to prevent wildlife from being trapped in basins; (k) installation of passive raptor deterrents, and (l) revegetation requirements. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

3. Potentially Significant Effect: In the absence of the Project, there could be an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service if not subject to design features, alterations, or mitigation measures.

Statement of Facts: MPLP is currently conducting the hydrologic and biological monitoring prescribed by Mono County General Plan with respect to its existing operations, but existing permit requirements for such monitoring only exist under the MP-II and PLES-I project approvals. Should these two projects be abandoned prior to the abandonment of the MP-I Replacement Project, there would be no permit requirement to continue the prescribed monitoring for what could be an extended MP-I project life. Should the existing geothermal resource production and injection activities from the MP-I Plant result in changes in the temperature, flow rate or quality of the Hot Creek headsprings supporting the critical habitat of the Owens tui chub, then this could be a potentially significant impact under CEQA. Bio Mitigation Measure 1, which subjects the Project to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the County General Plan, would ensure that such monitoring continues.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact from existing operations to a level that is less than significant.

4. Potentially Significant Effect: The Project could have an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service if not subject to design features, alterations, or mitigation measures.

Statement of Facts: As a result of the findings of the baseline biological resources survey, multiple actions were identified which, if implemented, would further reduce the potentially adverse effects of the Project on biological resources. These actions and others identified by this assessment have been compiled into required Bio Protection Measures 2 through 16. With implementation of these protection measures, Project impacts would remain less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

D. Cultural Resources

1. Potentially Significant Effect: The Project could cause a substantial adverse change in the significance of a historical or archaeological resource, may directly or indirectly destroy a unique paleontological resource, and/or may disturb undocumented human remains if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a design feature intended to reduce any potential impact to historical, archaeological, or paleontological resources that may be encountered at the Project site. This design feature requires the implementation of all environmental protection measures to reduce the adverse effects of the Project on cultural resources that were recommended in the baseline cultural resources survey reports prepared for the Project area. In addition, Cultural Protection Measure 1 is required to ensure that any human remains encountered during the construction phase of the Project are properly treated. With implementation of this design feature and protection measure, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

E. Geology and Soils

1. Potentially Significant Effect: The Project could expose structures to potential substantial adverse effects, including the risk of loss involving rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features intended to reduce any potential adverse effects resulting from seismic activity in the surrounding vicinity. These design features would require the implementation of all measures recommended in the geotechnical site investigation reports to mitigate impacts due to geotechnical, soils, and geologic constraints; as well as require that all Project structures be constructed to meet applicable earthquake safety codes and the 2010 Uniform Building Code adopted by the County. In addition, Cultural Protection Measure 1 is required to ensure that any human remains encountered during the construction phase of the Project are properly treated. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

F. Hazards and Hazardous Materials

1. Potentially Significant Effect: The Project could create a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a design feature requiring that no hazardous materials, chemicals, or wastes be stored in the new storage yard to be constructed in the footprint of the decommissioned MP-I plant. With implementation of this design feature, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features requiring that (a) the power plant site be designed and constructed to prevent fluids from leaving the site and to prevent runoff from being channeled or directed in an unnatural way so as to cause erosion or siltation; (b) install and maintain a system of pressure and flow sensing devices capable of detecting leaks and spills and regular inspection of all lines; (c) include the M-1 plant site and operations within the existing hazardous material management and emergency response program at the Casa Diablo geothermal complex; and (d) include the M-1 plant and operations within the existing fire prevention and suppression program at the Casa Diablo geothermal complex. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

G. Hydrology and Water Quality

1. Potentially Significant Effect: The Project could provide additional sources of polluted runoff if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project shall implement design features designed to reduce soil erosion and sedimentation impacts associated with runoff from the Project site. These design features include installation of a subsurface retention basin at the proposed M-1 plant site, implementation of erosion control/stormwater construction best management practices (BMPs) in the interim site reclamation plan for the MP-I plant site, and implementation of M-1 plant site construction and post-construction BMPs. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could degrade water quality if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a design feature to reduce the potential for pollution to reach surface drainages. This design feature includes incorporation of erosion/sedimentation and spill control measures into the Project design, including a Spill Prevention, Control and Countermeasure (SPCC) Plan. The power plant site must also be designed and constructed to prevent spills from leaving the site and to prevent runoff from being channeled or directed in an

unnatural way so as to cause erosion or siltation. In addition to this design feature, implementation of Hydro Mitigation Measures 1 and 2 is required in order to provide additional spill containment and emergency response planning at the Project site. Hydro Mitigation Measure 3, which would subject the Project to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the County General Plan, (to which the existing MP-1 plant is not currently subject) will further enhance such protections.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

3. Potentially Significant Effect: The Project could violate waste discharge requirements if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a design feature to avoid the alteration of or discharge of material to the existing stream channel crossing the site. No element of the project construction will result in the alteration of, or discharge of fill material to, the blue-line drainage channel that crosses the site between the existing MP-I and proposed M-1 plant sites, adjacent to Old Highway 395. Prior to commencement of construction, the Applicant shall provide to the County the proposed engineering design for the road crossing which demonstrates to the County that no impact to this drainage channel would occur as a result of project construction. With implementation of this design feature, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

H. Noise

1. Potentially Significant Effect: The Project could result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project shall implement design features to reduce noise associated with Project construction activities. These design features limit construction activities to daylight hours, require on-site construction equipment to be equipped with noise attenuation devices, and require all construction activities and normal Project operations to comply with applicable County noise requirements. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

I. Cumulative Effects

1. Potentially Significant Effect: The Project could combine with existing development in the vicinity to create a new source of substantial light or glare

that would adversely affect nighttime views in the area if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a protection measure to reduce nighttime lighting within the Casa Diablo geothermal complex. This protection measure requires that all projects within the Casa Diablo geothermal complex comply with applicable County lighting standards. With implementation of this protection measure, cumulative impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could combine with existing development in the vicinity to result in the violation of an air quality standard or contribute substantially to an existing air quality violation if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a protection measure to ensure that fugitive dust emissions from the site are reduced to the maximum extent practicable. This measure restricts Project-related vehicle speeds on all unpaved access roads to 15 miles per hour. With implementation of this protection measure, cumulative impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

3. Potentially Significant Effect: The Project could combine with existing development in the vicinity to interfere with the movement of 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 if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements Cumulative Bio Mitigation Measure 1 to reduce potential interference with fish and wildlife. This mitigation requires that constraints to wildlife movement through the Casa Diablo Hot Springs area be evaluated as part of any new development project proposed in the area. Measures shall be included as part of each new development project that would prevent the respective project from becoming a substantial obstacle to wildlife movement through or around the respective proposed development area. With implementation of this mitigation measure, cumulative impacts would be reduced to a less than significant level.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

4. Potentially Significant Effect: The Project could combine with existing development in the vicinity to have an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the

California Department of Fish and Game or U.S. Fish and Wildlife Service if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The storage of water in lined wellfield basins would continue to attract wildlife and has the potential for similar cumulative impacts on wildlife as a result of any wellfield expansion associated with new geothermal development that is not a part of the Project. The existing wellfield could be expanded by the addition of new wells and well sites to provide the additional geothermal fluid needed to support the proposed CD-4 power plant. This impact could be cumulatively significant if future lined well site basins are constructed in a manner that prevents wildlife from escaping from the basins. Cumulative Bio Mitigation Measure 2 is therefore required for County approved projects and should be considered as a requirement by federal agencies as a stipulation for approval of geothermal projects on public land in the vicinity of Casa Diablo Hot Springs. With implementation of this mitigation measure, cumulative impacts would be reduced to a less than significant level.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

5. Potentially Significant Effect: The Project could combine with existing development in the vicinity to have an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service if not subject to design features, alterations, or mitigation measures.

Statement of Facts: MPLP is currently conducting the hydrologic and biological monitoring prescribed by Mono County General Plan, but existing permit requirements for such monitoring only exist under the MP-II and PLES-I project approvals. Should these two projects be abandoned prior to the abandonment of the MP-I Replacement Project, there would be no permit requirement to continue the prescribed monitoring for what could be an extended MP-I project life. Hydro Mitigation Measure 3, would subject the Project to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the County General Plan, preventing such a lapse from occurring.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

6. Potentially Significant Effect: The Project could combine with existing and/or proposed geothermal development in the vicinity to degrade water quality if not subject to design features, alterations, or mitigation measures.

Statement of Facts: Should the continued geothermal resource production and injection activities from the MP-I Project, in combination with other existing and future geothermal power plant projects in the Hot Creek Buffer Zone, result in changes in the temperature, flow rate or quality of the Hot Creek headsprings used for Hot Creek Fish Hatchery operations, then this could be a potentially significant impact under CEQA. Cumulative Hydro Mitigation Measure 3, which would subject all existing and future geothermal power plant projects in

the Hot Creek Buffer Zone, or in the vicinity of Casa Diablo Hot Springs, to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the County General Plan, would reduce this potential impact to a less than significant level.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

PART II: FINDINGS RELATIVE TO UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL EFFECTS

No unavoidable significant environmental effects would result from implementation of the Project.

PART III: FINDINGS RELATIVE TO ALTERNATIVES

1. No Project Alternative: If the Project is denied, the existing MP-I power plant would not be replaced by the new technology proposed for the Project, and the more efficient conversion of the available geothermal heat energy to electrical energy afforded by the proposed replacement plant technology and equipment would not be realized. The aging MP-I power plant would be expected to continue to operate as long as repair and restoration of the facility remains economically practical, but the long-term continuing utilization of the MP-I project geothermal resources could be shortened due to eventual equipment failure. The No Project Alternative would not meet most of the basic project objectives. Objectives that would not be met include (a) Applicant's objectives: to *optimize the amount of electrical energy that can be generated from the available geothermal resources*, and to *ensure continuous power generation and maximize utilization of the geothermal resource ...*; and (b) the County goals, policies and objectives: to *permit the productive and beneficial development of alternative energy resources, including geothermal resources*; and to *ensure the orderly and sound economic development of geothermal resources...*

FINDING: The No Project Alternative is infeasible because it is inconsistent with and does not meet project objectives.

2. Alternative Power Plant Location (North Site): The selected North Site Alternative would be on public land administered by the USFS located north of the existing SCE substation and east of the proposed Casa Diablo IV Geothermal Development Project (CD-4) power plant site. It is assumed that the North Site Alternative would be constructed within an approximately 5.7-acre footprint essentially the same as that described for the Project. An approximately 600-foot interconnection transmission line would need to be constructed from the alternative plant site to the existing SCE substation. In addition, new production and injection fluid pipelines would need to be constructed to the North Site Alternative plant site. The new pipelines would be assumed to parallel the pipeline route of the proposed CD-4 Project from the existing MP-I plant site to the North Site Alternative plant site – a distance of about one mile. The construction, MP-I decommissioning, operations, and eventual site reclamation of the North Site Alternative geothermal development would be essentially the same as those activities described for the Project with only minor site-specific adjustments. Approval for development on the North Site Alternative would require NEPA review and approval from federal agencies.

FINDING: The North Site Alternative would result in very similar impacts to those identified for the proposed Project. However, selection of the North Site Alternative plant site would require construction of approximately one mile of new geothermal pipeline corridor resulting in greater impacts on biological resources and more construction related air emissions. The location of the North Site Alternative plant site would be within a Jeffrey Pine forested area and would be susceptible to greater potential wildland fire hazard than the proposed M-1 plant site. This was determined to be a potentially significant impact. The North Site Alternative power plant site would be less visible from major roadways than the proposed Project plant site, but visual impacts were not determined to be significant from either of the plant sites. The proposed Project is considered environmentally superior to the North Site Alternative.

3. Identification of the Environmentally Superior Alternative: The proposed Project, as amended by the conditions and mitigation/protection measures prescribed in the EIR, is the environmentally superior alternative based on the discussion and findings above.

Exhibit C
Use Permit 12-004
Findings and Rationale

I. USE PERMIT

- A. All applicable provisions of the Land Use Designations and Land Development Regulations are complied with, and the site of the proposed use is adequate in size and shape to accommodate the use and to accommodate all yards, walls and fences, parking, loading, landscaping and other required features.**

The existing MP-1 plant site decommissioning activities and the conversion of a portion of the site to a storage area, proposed as part of the Project, would be conducted on private land with a land use designation (LUD) of Resource Management (RM). The RM designation is intended “to recognize and maintain a wide variety of values in the lands outside existing communities,” including “geothermal or mineral resources.” “Mining and geothermal exploratory projects” are explicitly “uses permitted subject to use permit” and other “similar” uses may also be permitted.

The RM designation provides for a minimum parcel size of 40 acres, limits site disturbance to 10% (with a maximum lot coverage of 5%), and provides for maximum population density of 5.02 persons per 40 acres. The RM parcel consists of approximately 40 acres of privately-owned land, of which approximately 2.6 acres is presently disturbed (approximately 6.6%). This level of disturbance is pre-existing and would not be increased by the Project. The ultimate decommissioning, reclamation and restoration of this site required by the Reclamation Plan is consistent with Resource Management intent of the designation to provide for low intensity rural uses that recognize and maintain the resource value of the parcel and would eliminate site disturbance. There would be no residential use of the property.

The proposed new M-1 plant site would be located on the adjacent 50-acre parcel, which is designated as Resource Extraction (RE). The RE designation “is intended to provide for protection of the environment and resource extraction activities . . . and for processing plants utilizing on-site materials or materials found in close proximity to the site.” “Exploring, drilling, and development of geothermal resources” are explicitly “uses permitted subject use permit” and other “similar” uses may also be permitted uses. The M-1 replacement plant site construction and Project operations would be conducted entirely on private land with a LUD of RE.

The RE designation provides for a minimum parcel size of 40 acres, prohibits residential uses (other than for an employee/caretaker) and references the setbacks established by section 15.070 for resource development (100 feet from interior public streets or from a property line, 500 feet from any adjacent private dwelling, institution, school, or other building or location used for public assemblage, and, for geothermal development within the Hot Creek Buffer Zone, 500 feet from a surface watercourse). The Land Use Designations and Land Development Regulations function as the County’s zoning requirements and are subject to variance pursuant to Chapter 33 of the Mono County General Plan and State law.

All project activities would occur more than 100 feet from any internal street and more than 500 feet from adjacent uses for public assemblage. The nearest dwelling, institution, or school is located within the Town of Mammoth Lakes approximately two miles to the west of the project site. A public parking area located just to the east of US 395 and the Mammoth Lakes exit is greater than 500 feet from the project property line (Figure 19, Revised DEIR, February 2012). The project includes a request for a variance which would authorize a portion of the facility to be located within 100 feet of an external property line and within 500 feet of a surface watercourse. Such variances are authorized by Chapter 33 of the Land

Development Regulations and if granted consistent with those requirements, all provisions of the Land Use Designations and Land Development Regulations would be complied with.

As described more fully in section 4.2.2 of the EIR, the Project meets applicable standards of the Land Development Regulations related to visual impacts. An Outdoor Lighting Plan has been provided for the Project site which meets the requirements of Chapter 23 of the General Plan, the County's "Dark Sky Regulations," to mitigate nighttime visibility of the facilities. In addition, a Landscape Plan has been submitted which provides additional visual screening of the Project site. Use Permit conditions require compliance with these plans. All buildings, insulation jacketing, and visible structures would be painted to blend with the existing environment in order to minimize the visual impacts in the area and approximately six-foot-high fences would be constructed around the M-1 plant site and the M-1 plant substation to provide additional screening. Site disturbance is limited and a Reclamation Plan which meets the requirements of Chapter 26 of the General Plan and will reduce and restore site disturbance has been submitted. Compliance with the Reclamation Plan is a condition of project approval. Accordingly, the Project also meets applicable standards set forth in Section 08.010 through 08.060 Scenic Combining District and State Scenic Highway.

Section 4.110 of the Land Development Regulations provides for a maximum building height of 35 feet, but allows for greater heights to be approved through the Director Review process or Use Permit process. The project involves approval, through the Use Permit process, of mechanical appurtenances which exceed 35 feet in height. (See additional discussion below in sections II.A and II.B.)

Chapter 11 of the Land Development Regulations provides for the undergrounding of utilities, unless overhead placement is approved by Director Review permit, Use Permit, or variance. The Conservation and Open Space Element, Visual Resources, Objective C, Policy 3, Actions 3.1 through 3.8 reference these requirements. The project proposes two possible locations for an aboveground interconnection transmission line, and the applicant has applied for a variance to allow for aboveground installation.

The Project is in compliance with all other applicable provisions of the Land Use Designations and the Land Development Regulations of the Mono County General Plan.

Further, the site is adequate in size and shape to accommodate the use, and to accommodate all yards, walls, and fences, parking, loading, landscaping and other required uses. The site consists of 90 acres of privately-owned land bordered on all sides by publicly-owned land managed primarily for open space.

B. The site for the proposed use relates to streets and highways adequate in width and type to carry the quantity and kind of traffic generated by the proposed use.

As described in the EIR (see, e.g., sections 2.1.2, 2.1.6, and 3.3.8) 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 and no long-term impact to the existing roadway circulation system in the area would result.

Short-term construction traffic would increase in the immediate vicinity of the site, although the traffic volumes expected to be associated with Project construction would be light and existing volume-to-capacity ratios at the U.S. Highway 395/SR 203 interchange are sufficient to accommodate this small temporary increase.

The existing entrances to the Casa Diablo geothermal development complex would continue to provide adequate access to the new M-1 plant site. North and south U.S. Highway 395 off ramps onto State Route

203 are located less than one-quarter mile southwest of the Project site. Access to the Project site would be via State Route 203 east to Antelope Springs Road, then north to Cutoff Road, then east to the existing paved access to the replacement plant site off of the Old Highway Road. Substation Road and Old Highway Road would be used as emergency access roads that lead to a locked gate which can be opened by emergency responders and is sufficient to support emergency vehicles, in accordance with the County's Fire Safe Regulations (Chapter 22 of the Land Development Regulations).

A new paved access road would be constructed from the onsite access road to the lower pad on which the M-1 plant would be constructed. Paved access roads would also be constructed along the north, south and west sides of the new M-1 plant site, which are specifically designed in width and type to carry the quantity and kind of traffic associated with the project.

C. The proposed use will not be detrimental to the public welfare or injurious to property or improvements in the area in which the property is located.

The EIR for the Project has identified no significant impacts resulting from the proposed Project. The proposed use is the same as currently exists on the site, with the exception that a new, more modern facility would replace the existing M-1 plant. The new facility includes design features (including, but not limited to a landscaping plan, dark sky compliant lighting, and screening) not currently applicable to the existing facility. Without expanding the use of the geothermal resource or in any way increasing impacts to that resource, the proposed facility would increase the amount of geothermal energy generated on the site and reduce associated impacts. (See EIR Project Description).

The M-1 site is situated in an area where property and improvements are committed to similar compatible uses, including existing operating geothermal plants and well fields, the existing MP-1 plant proposed for decommissioning, and an SCE substation. The proposed use has been sited to minimize visual impacts from the State Scenic Highway, and when the existing plant is decommissioned, will have less of a detrimental visual presence than exists currently. (See EIR section 4.2.3.)

In addition, the proposed Project incorporates design features which will protect the public and property from the risks of fire, contamination, and other hazards. Specifically, the M-1 replacement power plant site would be designed and constructed to prevent fluids from leaving the site and endangering adjacent properties or nearby waterways. Numerous engineering, fire-control and safety measures are integrated as part of the Project to prevent releases of n-pentane, to avert or control fires, and to respond to other emergencies. (See e.g., EIR section 2.1.6.)

A diesel-powered emergency generator would be installed on the M-1 plant site to provide emergency backup power to critical plan functions in the event of a power outage. Similarly, a diesel-powered firewater pump generator would be installed to provide power to the firewater pump during fire emergencies.

In addition, MPLP has developed an integrated program to meet the following requirements, (see EIR section 2.1.6): California Accidental Release Prevention (CalARP) Program; EPA Risk Management Plan (RMP); OSHA Process Safety Management (PSM) Program for all three existing plants. Prior to delivery of n-pentane, MPLP would revise and update this program to reflect the new M-1 plant; Revise its existing Spill Prevention, Control and Countermeasure (SPCC) Plan, in conformance with 40 CFR 112, to include the new M-1 plant; Update its Emergency Response Plan (ERP); Update its Hazardous Materials Business Plan (HMBP); A Permit for Authority to Construct and Permit to Operate would be obtained from the GBUAPCD

There would be at least one employee “on call” at all times familiar with the ERP and would have the authority to commit the resources needed to carry out the contingency plan.

D. The proposed use is consistent with the map and text of this General Plan and any applicable area plan.

For a thorough discussion regarding the Project’s consistency with the General Plan see the analysis contained throughout the EIR, and particularly sections 4.10.2 and 4.10.3. The following summarizes the Project’s consistency with applicable maps, policies, land uses, and programs contained in the General Plan.

The Project is consistent with General Plan maps designating the site for Resource Management (RM) and Resource Extraction (RE). The RE designation (where the replacement plant would be located) “is intended to provide for protection of the environment and resource extraction activities.” “Exploration, drilling, and development of geothermal resources” are explicitly “uses permitted subject to use permit and other “similar uses may also be permitted.” The RM designation (where the existing plant is located) is intended to “recognize and maintain a wide variety of values in the lands outside existing communities,” including “geothermal or mineral resources.” “Mining and geothermal exploratory projects” are explicitly “uses permitted subject to use permit” and other “similar” uses may be permitted.

The Project is consistent with the objectives, policies, general land uses, and programs of the Mono County General Plan. General Plan goals encourage the productive and beneficial development of alternative energy, including geothermal resources, in manner which avoids or minimizes environmental impacts. The EIR concludes that there will be no significant environmental impacts as a result of the proposed Project. General Plan policies allow consideration of national need for alternative energy and require the applicant to demonstrate the economic benefits of the Project. (See Conservation and Open Space Element – Energy Resources.) The economic analysis of the Project describes those benefits.

Objectives C and D of Goal 1 of the Energy Resources portion of the Conservation and Open Space Element establish procedures and direction for addressing biologic and associated hydrologic impact mitigation and monitoring requirements from geothermal exploration and development. Consistent with these policies, a baseline biological resource survey was conducted (Paulus 2011) and is provided as Appendix D of the EIR. The recommended measures and project design features of this report have been incorporated and are a part of the Project.

The EIR concludes that there would be no significant impacts to visual resources as a result of the Project and that current visual impacts associated with the MP-1 facility would be reduced by the Project. Additionally, the Project would be consistent with all applicable General Plan Policies pertaining to Aesthetics/Visual Resources, provided that a variance is granted to allow transmission lines to be placed at ground level as opposed to underground.

- Aboveground utility lines. Objective C, Policy 3, Actions 3.1-3.8 Conservation/Open Space Element (Visual Resources) provides for underground installation of utility lines in conformity with County Requirements. Chapter 11 of the Land Use Regulations provides for underground installation unless approved through Use Permit or Director Review in certain specified circumstances. Actions 3.1-3.8 also allow for aboveground installation pursuant to a variance. The Project is consistent with this policy if the requested variance is granted. Additionally, the transmission lines would be eligible for an exception to the underground requirement pursuant to Chapter 11, as described in Exhibit B, section B.2.

- Mechanical appurtenances/building height. (Land Use Element – Development Standards): The Project proposes to install purge tanks, two-inch diameter vent pipes and one-inch diameter lightning masts on top of the air cooling towers which would extend up to approximately 40 feet above ground level, exceeding the permitted height of 35 feet by up to 5 feet. However, Mono County regulations allow for exceptions to be granted by the Planning Director in the cases of mechanical appurtenances or, for building heights in excess of 35 feet, through the Use Permit process. The purge tank vent pipes and lightning qualify as “mechanical appurtenances” and would thus meet the criteria for exception to be granted by the Planning Director, or by the more stringent Use Permit process. (See sections II.A and B below.)

The Project would be consistent with relevant General Plan Policies in the Conservation/Open Space Element pertaining to Air Quality as discussed on page 30 of the RDEIR2.

The Project would be consistent with relevant General Plan Policies in the Conservation/Open Space Element pertaining to Biological Resources as discussed on pages 30-32 of the RDEIR2 and section 4.4 of the RDEIR, as revised. For example, current biologic and hydrologic monitoring will continue and will also be applied to the M-1 plant; baseline studies have been prepared to document existing conditions on the Project site and mitigation measures and design features are imposed to minimize potential impacts based on those studies and recommendations.

The Project would also be consistent with relevant General Plan Policies (shown in Table 25 of the RDEIR) in the Conservation/Open Space Element pertaining to hydrology and water quality as described on pp. 30 – 36 of the RDEIR2. The Project includes design features and is subject to mitigation measures which avoid or minimize potential impacts to hydrologic resources to a level that is less than significant through, among other things, installation of a subsurface retention basin at the M-1 plant site, implementation of erosion control/stormwater construction best management practices (BMPs) and post-construction BMPs, as discussed in the EIR. (See e.g., section 4.8.3). The Project involves no additional use or extraction of water from the geothermal resource and therefore has no impact to water quality.

- Setbacks from surface watercourse. As discussed previously, Section 15.070(B)(1)(d) of the County’s Land Use Regulations imposes a 500-foot setback from surface watercourses for geothermal development within the Hot Creek Buffer Zone. Chapter 33 of the General Plan authorizes the granting of variances from any Land Development Regulation or LUD if certain conditions exist. The project requires a variance from this setback because, while it would be further from the same watercourse than the existing plant, the replacement plant would still be partially within that setback. The Energy Resources section of the Conservation and Open Space Element (Goal 1, Objective D, Policy 1, Action 1.13) lists the 500-foot setback as an “action” to protect hydrologic resources. That reference is not intended to prohibit the granting of an otherwise authorized variance and does not “re-impose” the setback requirement already imposed. If a variance is granted in accordance with Chapter 33, then the Project is consistent with the General Plan, both as currently written and with the clarifications to the General Plan included proposed by GPA 12-003(b).

The Project would be consistent with relevant General Plan Policies in the Safety Element pertaining to fire hazards as discussed on page 32 of the RDEIR2 and in section 4.7 of the RDEIR. For example, the Project would not create a significant risk from wildland or structural fire; the Project will obtain a will-serve letter from the Long Valley Fire Protection District and will implement Project HazMat Design Feature 4, which would extend the existing fire suppression and response program in place at the Casa

Diablo Geothermal Complex to cover the proposed Project. Appendix A to the RDEIR presents a list of measures that the Project would adopt in order to reduce the risk of wildland and/or structural fire. These measures include compliance with applicable requirements in the Fire Safe Ordinance and Uniform Fire Code; and the Notice of Preparation for the Draft EIR was sent to the Department of Forestry and the Long Valley Fire Protection District was consulted in the preparation of the RDEIR.

The Project would be consistent with relevant General Plan Policies in the Hazardous Waste Management Element pertaining to hazardous materials. The Project includes several design features, presented as HazMat Design Features 1 through 5 in the RDEIR.

For analysis of Project consistency with relevant General Plan Policies in the Noise Element pertaining to noise, see Section 4.9 of the RDEIR. As discussed therein, the Project, including Noise Design Features 1 through 3, would be consistent with all applicable General Plan Policies pertaining to noise.

II. MECHANICAL APPURTENANCES/BUILDING HEIGHT EXCEPTION

A. The project will not result in substantial detrimental effects on the enjoyment and use of surrounding properties.

Several mechanical appurtenances (including eight purge tanks, of about 36 inches in length and 24 inches in diameter, a two-inch diameter pipe, and a one-inch diameter lightning mast/rod) would extend up to approximately 5 feet above the 35-foot building height. These mechanical appurtenances are part of the CUP application and are evaluated on pp 4-2 – 4-35 of the RDEIR. As mechanical appurtenances, these structures could be approved through the Director Review process outlined in Section 4.110 of the General Plan, or pursuant to the more stringent Use Permit process actually undertaken. As described in the EIR, the appurtenances would be nearly completely obscured by vegetation and the super-structure of the main plant and would be colored to blend with the existing background. The analysis shown in the EIR demonstrates the project would preserve scenic vistas and would not have any impact on surrounding properties.

B. The modified height will not exceed the lifesaving equipment capabilities of the fire protection agency having jurisdiction.

The mechanical appurtenances are lightning rods and pipes – and will not be occupied. The Long Valley Fire Department was consulted in the preparation of the EIR and it was determined the height exception does not exceed the lifesaving capabilities of the protection agency. The Project is required to obtain a will-serve letter from the Long Valley Fire Protection District and will also implement Project HazMat Design Feature 4, which would extend the existing fire suppression and response program in place at the Casa Diablo Geothermal Complex to cover the proposed Project.

III. ABOVEGROUND FLUID PIPELINE

The aboveground placement of fluid pipelines is authorized because burial would create unacceptable environmental impacts or the potential to contaminate shallow groundwater resources. The Project includes the relocation of two existing aboveground fluid conveyance pipelines to connect the new plant to existing production and injection locations. As discussed in Exhibit B, the site contains numerous geotechnical and geological constraints, including hot soils, active steam vents, and earthquake faults. Aboveground placement of fluid conveyance

lines minimizes the risk of damage to those lines due to earthquake or other site features, and allows for quick identification and remediation in the unlikely event of damage.



OFFICE OF THE CLERK
OF THE BOARD OF SUPERVISORS

REGULAR AGENDA REQUEST

Print

MEETING DATE	November 13, 2012	DEPARTMENT	Community Development - Planning Division
ADDITIONAL DEPARTMENTS	Economic Development		
TIME REQUIRED	60 minutes	PERSONS APPEARING BEFORE THE BOARD	Courtney Weiche
SUBJECT	Laborers Int'l Union of North America appeal of Planning Commission's approval of Mammoth Pacific I Replacement Project		

AGENDA DESCRIPTION:

(A brief general description of what the Board will hear, discuss, consider, or act upon)

Public hearing regarding appeal of the Planning Commission approval of the Final Environmental Impact Report, Clarifying General Plan Amendment 12-003(b) [sic], Conditional Use Permit 12-004, Variance 12-002, Reclamation Plan 12-001, and Notice of Decision for the Mammoth Pacific Replacement Project filed by Laborers International Union of North America, Local 783 (LIUNA).

The LIUNA appeal, too large to attach with the packet can be viewed by going to <http://www.monocounty.ca.gov/bos/event/board-supervisors-5>. Once there, click on the link for the appeal which is listed with the agenda for 11/13/12.

RECOMMENDED ACTION:

Conduct a public hearing to receive all relevant information in considering the appeal filed by LIUNA and either affirm, affirm in part (i.e., modify), or reverse the Planning Commission's actions.

[[If the Board affirms, or affirms in part, the Planning Commission's actions, then it should: Adopt the "Resolution Denying Appeal of Planning Commission Approval of CUP 12-004, Variance 12-002, Reclamation Plan 12-001, FEIR Findings and Adoption, Notice of Determination and General Plan Amendment [sic] for the Mammoth Pacific Replacement Project Filed by Laborers International Union of North America, Local 783 (LIUNA); Certifying and Adopting the FEIR for the Project; and Affirming the Planning Commission's Project Approvals."]]

FISCAL IMPACT:

All costs associated with appeal are borne by the applicant.

CONTACT NAME: Courtney Weiche

PHONE/EMAIL: 760.924.1803 / cweiche@mono.ca.gov

SUBMIT THE ORIGINAL DOCUMENT WITH
ATTACHMENTS TO THE OFFICE OF
THE COUNTY ADMINISTRATOR

SEND COPIES TO:

**PRIOR TO 5:00 P.M. ON THE FRIDAY
32 DAYS PRECEDING THE BOARD MEETING**

MINUTE ORDER REQUESTED:

☒ YES ☐ NO

ATTACHMENTS:

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History

Time	Who	Approval
11/7/2012 11:07 AM	County Administrative Office	Yes
11/7/2012 5:46 PM	County Counsel	Yes
11/7/2012 4:12 PM	Finance	Yes

Mono County Community Development Department

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November 13, 2012

To: Mono County Board of Supervisors

From: Courtney Weiche, Associate Planner
Gerry LeFrancois, Principal Planner
Stacey Simon, Assistant County Counsel

Re: Appeal by the Laborers International Union of North America, Local Union 783 of the Planning Commission's approval of the Mammoth Pacific I Replacement Project Conditional Use Permit 12-004, Variance 12-002 & Reclamation Plan 12-001, Notice of Determination, clarifying General Plan Amendment 12-003 (b) [sic] and Final Environmental Impact Report (SCH # 2011022020).

I. RECOMMENDATION

It is recommended that the Board of Supervisor conduct a public hearing to receive all relevant information in considering the appeal by the Laborers International Union of North America, Local Union 783 (LIUNA), of the Mammoth Pacific Replacement Project, and either affirm, affirm in part, or reverse the Planning Commission's decision, making appropriate findings.

If the Board affirms, or affirms in part, the Planning Commission's decisions, then it is recommended that the Board adopt the "Resolution of the Mono County Board of Supervisors Denying Appeal of CUP 12-004, Variance 12-002, Reclamation Plan 12-001, FEIR Findings and Adoption, and Notice of Determination for the Mammoth Pacific Replacement Project, and General Plan Amendment [sic] filed by Laborers International Union of North America (LIUNA); Certifying and Adopting the FEIR for the Project; and Affirming the Planning Commission's Approvals," which is included in the Board packet as attachment 8.

II. PLANNING COMMISSION ACTIONS

Following public hearing held October 11, 2012 the Planning Commission made the required findings and took the following actions:

- A. Adopted and certified the Final EIR and Mitigation Monitoring and Reporting Program (MMRP) for Mammoth Pacific I Replacement Project (the Project);
- B. Approved Use Permit 12-004 for the Project, subject to the MMRP and Conditions of Approval, with modification of General Condition #3;
- C. Approved Variance 12-002 for the Project;
- D. Approved Reclamation Plan 12-001 for the Project;
- E. Recommended that the Board of Supervisors approve Clarifying General Plan Amendment 12-003 (b).

III. PROJECT OVERVIEW, SETTING AND LAND USE

The existing Mammoth Pacific Unit I (MP-I) project is a commercial geothermal development project operated by Mammoth Pacific L.P. (MPLP) and located near Casa Diablo Hot Springs. The existing MP-I project consists of a binary power plant with a design capacity of about 14 megawatts (MW), a geothermal wellfield, production and injection fluid pipelines, and ancillary facilities that have been operating since 1984. The existing MP-I power plant site is located approximately 1,200 feet northeast of the intersection of U.S. Highway 395 and California State Route 203 on 90 acres of private (fee) land owned by Ormat Nevada, Inc. (Ormat), the parent company of MPLP.

The Mammoth Pacific I Replacement Project (Project) was proposed by MPLP to replace the aging MP-I power plant with a new, more modern and efficient binary power plant (M-1), while maintaining the existing geothermal wellfield, pipeline system and ancillary facilities. The proposed M-1 replacement power plant would be constructed and operated within the existing Casa Diablo geothermal complex. It would be capable of generating, on average, approximately 18.8 MW (net) of electricity. No net change in the rate of geothermal fluid produced and supplying the existing Casa Diablo geothermal development complex would result, and no substantive change to the geothermal reservoir would occur as a result of the Project. 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 the old MP-I plant would be closed and dismantled. The old MP-I plant site would be converted to an equipment storage area as part of the decommissioning process and the entire site would be subject to a Reclamation Plan providing for ultimate return of the property to natural conditions. The transition period during which both plants would overlap would be a period of up to two years from the date the M-1 plant begins startup operations, but would not involve any new geothermal wells or extraction.

The new M-1 plant site would be located to the east of the existing plant on the approximately 50-acre parcel, and within an area designated as Resource Extraction (RE) which “is intended to provide for protection of the environment and resource extraction activities . . . and for processing plants utilizing on-site materials or materials found in close proximity to the site.” The existing MP-I plant site decommissioning activities and establishment of a storage area, would be conducted on private land with a land use designation of Resource Management (RM) which is intended “to recognize and maintain a wide variety of values in the lands outside existing communities,” including “geothermal or mineral resources.”

PROJECT COMPONENTS

The following approvals are required from Mono County for the Project and were granted by the Planning Commission on October 11:

- Certification of the FEIR.
- A Conditional Use Permit for the M-1 replacement plant (including the granting of a height exception for mechanical appurtenances) and decommissioning/reuse of the existing MP-I plant site as a storage area;
- A Variance for: setback reductions from property line(s); setback reductions from a stream designated by a blue line on USGS topographic maps (for structures within the 5.7-acre proposed M-1 plant site); use of the existing MP-I plant site as an equipment storage area; and to construct an aboveground electrical transmission line; and
- A Reclamation Plan.

The Project will also require grading and building permits prior to the commencement of construction.

Project approval by the Planning Commission is not effective until the Board clarifies provisions of the General Plan related to setbacks from mapped water courses for geothermal development within the Hot Creek Buffer Zone. The Planning Commission recommended that the Board approve a clarifying

General Plan amendment, which is on the Board's agenda following the appeal hearings, to effectuate this. However, the Board could provide clarification by other means including, but not limited to, providing an interpretation. Adoption of the amendment is not required for Project approval, but is recommended.

Finally, as noted previously, the Planning Commission approved alternative language to that initially proposed for General Condition of Approval #3. That language is as follows:

GC #: "The rate of geothermal fluid production supplying the Casa Diablo geothermal complex shall not exceed the existing geothermal fluid flow capacity utilized in the complex."

Following discussions with the Project EIR consultant, staff recommends that if the Board affirms the Planning Commission's approval of the Use Permit and EIR, that it further refine the Planning Commission's language to read as follows:

Revised GC #3: "The combined rate of geothermal fluid production utilized by the Project, including during any interim period when the M-1 and MP-1 plants are operating simultaneously, shall not exceed the present rate of geothermal fluid flow utilized in the operation of the MP-1 plant, unless offset by equivalent reductions at the MP-II plant."

This revised language is contained in the Resolution recommended for Board approval if it affirms (or affirms in part) the Planning Commission's approvals (attachment 8).

IV. BACKGROUND

At a public meeting on October 11, 2012, the Planning Commission visited the M-I project site and then held a public hearing on the project. At the hearing the Commission received a comment letter with attachments, from LIUNA. Following the public hearing LIUNA filed an appeal application, which was received on October 19, 2012. The application challenged the approval of the Conditional Use Permit, Variance, Reclamation Plan, Notice of Determination and the certification/approval of the FEIR. It also challenged what it described as the Planning Commission's "adoption" of General Plan Amendment 12-003(b). However, since the Planning Commission's actions on the GPA were merely advisory, that portion of the appeal is premature. The issues cited by LIUNA in its appeal and summary responses are set forth below.

APPEAL ISSUES AND RESPONSES

Issue 1: General Plan Inconsistency

There is no inconsistency between the project and the General Plan. The FEIR Responses to Comments 9-02 and 9-20 respond to the assertion that the project is inconsistent with the General Plan and refer to a complete discussion of the issue contained in the RDEIR2.

Issue 2: Inaccurate Project Description in EIR

The EIR (consisting of the RDEIR, RDEIR2 and the FEIR) contains an adequate and accurate project description. This is discussed in Final EIR Response to Comments 9-02, 9-06, 12-01 and 12-02 which all address previous statements by the commenter regarding the adequacy and/or accuracy of the project description. The comment erroneously asserts that all references to the proposed General Plan Amendments have been deleted from the EIR. In fact, the proposed clarifying General Plan revisions are

explicitly identified as being part of the project, although not required in order to approve the project, in numerous places in the EIR (e.g., p. 2, p. 160, p. 165, p. 168, p. 172, p. 174, etc.)

In addition, Bio Protection Measure 7 is not, as the commenter claims, inconsistent with the proposed project because the interconnection injection fluid pipeline and interconnection transmission lines would not pose a barrier to the movement of deer or other wildlife in the area between the existing MP-I plant and the proposed M-1 plant. As noted in the RDEIR, these lines would be located at ground level, would be small in diameter, and would not represent a “barrier” to deer (EIR page 4-67).

Issue 3: Inadequate Cumulative Impacts Analysis in EIR

The FEIR Responses to Comments 9C-02, 9-12, 9-26 refute concerns raised related to hydrology and contain references to those portions of the document presenting the information asserted to be absent. Further, the Project would not change existing utilization of the geothermal resource nor would it alter the existing wellfield and thus has no increased potential to induce seismic activity in the vicinity. Any change associated with the proposed CD-4 project would be an impact that is exclusive to that project.

The FEIR Responses to Comments 9A-02, 9A-13, 9A-14, 9A-16, and 9A-18 address the project’s deer impacts and reference applicable provisions and discussion in the RDEIR. Also, note citations to the 1987 Kucera deer study conflict with the statements made by the commenter regarding the existing deer habitat at the Project Site and the impact of the existing geothermal power production facilities on such habitat.

The FEIR Response to Comments 9D-08, 9D-09, 9D-10 address the Project’s air quality impacts and reference the applicable provisions and discussion in the RDEIR.

Issue 4: Impacts on Biological Resources

The FEIR Responses to Comments 9A-02, 9A-03, 9A-13, 9A-14, 9A-16, 9A-18 and RDEIR Revision 8 address the issues raised related to deer. Again, citations to the 1987 Kucera deer study conflict with the statements made by the commenter regarding existing deer habitat at the Project Site and the impact of existing geothermal power production facilities on such habitat.

Bio Protection Measure 7 is not, as the commenter claims, inconsistent with the proposed project because the interconnection injection fluid pipeline and interconnection transmission lines would not pose a barrier to the movement of deer or other wildlife in the area between the existing MP-I plant and the proposed M-1 plant. As noted in the RDEIR, these lines would be located at ground level, would be small in diameter, and would not represent a “barrier” to deer (EIR page 4-67). The

testimony of Dr. James Paulus at the Planning Commission hearing confirmed the foregoing, and also confirmed the effectiveness of Bio Protection Measure 8.

The presence of hot soils in the vicinity of the proposed M-1 plant site (and elsewhere in the project area) requires that interconnection lines be placed aboveground.

Cumulative Bio Mitigation Measure 1 is intended to address the combined impacts of the existing and proposed geothermal facilities at or in the immediate vicinity of Casa Diablo. This measure is not required to mitigate any direct impact of the proposed project in and of itself. Bio Protection Measures 7 through 12 are applicable to the proposed project and would address potential direct project effects on mule deer and wildlife.

Issue 5: Impacts to Air Quality

No sensitive receptors exist within approximately 1.25 miles of the Project Site, as is noted in the RDEIR (p. 4-40). Thus, no human health risk assessment of the project's anticipated short-term construction-period DPM and NOx emissions is required. The FEIR Responses to Comments 9-14, 9-15, 9D-06, 9D-07, 9D-09 and 9D-10 also address this assertion and references applicable provisions of the RDEIR where support for the conclusions are found. The RDEIR utilized the operational characteristics of the existing MP-1 plant in existence at approximately the time the NOP for the proposed project was circulated as the environmental baseline for its analysis.

Issue 6: County Should Prepare and Recirculate a Supplemental FEIR

No "significant new information" as defined in CEQA has been presented that the public was not previously afforded the opportunity to review and provide comment on in either the RDEIR or the RDEIR2. Thus, there is no justification for this request.

V. ENCLOSURES

- a) Laborers Int'l Union of North America, Local 783 (LIUNA) Appeal Application
- 2) Planning Commission Staff Report
- 3) Planning Commission Minutes
- 4) Planning Commission approval documents
 - i) Resolution and attachments
 - ii) Notice of Decision and MMRP
 - iii) Notice Determination
- 5) Planning Commission Comments submitted at the Hearing by LIUNA
- 6) Final EIR with Exhibits I, II, & III (previously distributed)
- 7) Proposed Resolution Denying Appeal and attachments

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October 11, 2012

To: Mono County Planning Commission

From: Courtney Weiche, Associate Planner
Gerry LeFrancois, Principal Planner
Stacey Simon, Assistant County Counsel

Re: Mammoth Pacific I Replacement Project including:

- 1) Certify Final EIR and Mitigation Implementation and Monitoring Program
- 2) Approve Conditional Use Permit 12-004
- 3) Approve Variance 12-002
- 4) Approve Reclamation Plan 12-001
- 5) Recommend approval of Clarifying General Plan Amendment 12-003(b)

I. RECOMMENDATION

Staff recommends that the Planning Commission adopt Resolution R12-XX taking the following actions:

- A. Adopt and certify the Final EIR and mitigation monitoring and reporting program for Mammoth Pacific I Replacement Project, finding that:
 1. In compliance with CEQA Guidelines Section 15090 (a):
 - a. The Final Environmental Impact Report (Final EIR) has been completed in compliance with CEQA;
 - b. The Final EIR was presented to the decision-making body of the lead agency, and that the decision-making body reviewed and considered the information contained in the Final EIR prior to approving the project; and
 - c. The Final EIR reflects the lead agency's independent judgment and analysis.
- B. Make required findings and approve Use Permit application 12-004 subject to the Mitigation Monitoring and Reporting Program and Conditions of Approval; and
- C. Make required findings and approve Variance 12-002 subject to the Mitigation Monitoring and Reporting Program and Conditions of Approval; and
- D. Make required findings and approve Reclamation Plan 12-001, subject to the Mitigation Monitoring and Reporting Program and Conditions of Approval; and
- E. Make required findings and recommend that the Board of Supervisors approve Clarifying General Plan Amendment 12-003 (b).

II. PROJECT OVERVIEW, SETTING AND LAND USE

The existing Mammoth Pacific Unit I (MP-I) project is a commercial geothermal development project operated by Mammoth Pacific L.P. (MPLP) and located near Casa Diablo Hot Springs. The existing MP-I project consists of a binary power plant with a design capacity of about 14 megawatts (MW), a geothermal wellfield, production and injection fluid pipelines, and ancillary facilities that have been operating since 1984. The existing MP-I power plant site is located approximately 1,200 feet northeast of

the intersection of U.S. Highway 395 and California State Route 203 on 90 acres of private (fee) land owned by Ormat Nevada, Inc. (Ormat), the parent company of MPLP. The proposed plant site would be constructed and operated within the existing Casa Diablo geothermal complex

The Mammoth Pacific I Replacement Project (Project) was proposed by MPLP to replace the aging MP-I power plant with a new, more modern and efficient binary power plant (M-1), while maintaining the existing geothermal wellfield, pipeline system and ancillary facilities. The proposed M-1 replacement power plant would be capable of generating, on average, approximately 18.8 MW (net) of electricity. No net change in the rate of geothermal fluid produced and supplying the existing Casa Diablo geothermal development complex would result, and no substantive change to the geothermal reservoir would occur as a result of the Project. During M-1 plant startup operations, the existing MP-1 plant would continue to operate until the new M-1 plant becomes commercial, after which time the old MP-1 plant would be closed and dismantled. The old MP-1 plant site would be converted to an equipment storage area as part of the decommissioning process and the entire site would be subject to a Reclamation Plan providing for ultimate return of the property to natural conditions. The transition period during which both plants would overlap would be a period of up to two years from the date the M-1 plant begins startup operations, but would not involve any new geothermal extraction.

The new M-1 plant site would be located to the east on the approximately 50-acre parcel, and within an area designated as Resource Extraction (RE) which "is intended to provide for protection of the environment and resource extraction activities . . . and for processing plants utilizing on-site materials or materials found in close proximity to the site." The existing MP-1 plant site decommissioning activities and establishment of a storage area, would be conducted on private land with a land use designation (LUD) of Resource Management (RM) which is intended "to recognize and maintain a wide variety of values in the lands outside existing communities," including "geothermal or mineral resources."

SURROUNDING LAND USES

The proposed plant site would be within an area circumscribed by the existing Casa Diablo geothermal complex, a group of three existing binary geothermal power plants located immediately northeast of the intersection of State Route 203 and Interstate Highway 395, and about two miles east of the Town of Mammoth Lakes. The off-site private lands in the Casa Diablo area predominantly designated as "Open Space", while the public lands in the Casa Diablo area are predominantly designated Resource Management.

PROJECT COMPONENTS

To summarize, the following approvals are required from Mono County for the Project:

- A Conditional Use Permit for the M-1 replacement plant (including the granting of a height exception for mechanical appurtenances) and decommissioning/reuse of the existing MP-I plant site as a storage area;
- A Variance for setback reductions from property line(s); setback reductions from streams designated by a blue line on USGS topographic maps (for structures within the 5.7-acre proposed M-1 plant site); and for grading of the existing MP-I plant site for use as an equipment storage area;
- A Variance to construct an aboveground electrical transmission line;
- A Grading Permit;
- Building Permits; and
- A Reclamation Plan.

A clarifying General Plan revision is also proposed, but is not required for approval of the Project.

PROJECT OBJECTIVE

MPLP's specific objectives for the Project are: (a) to optimize the amount of electrical energy that can be generated from the available geothermal resources; (b) to replace the existing MP-I plant with a new, more modern and efficient binary power plant; and (c) to ensure continuous power generation and maximize utilization of the geothermal resource.

The objectives of Mono County for preparing this EIR are to comply with the requirements of CEQA and to evaluate the potential environmental impacts of the Project consistent with the requirements of CEQA and the County General Plan.

III. CONDITIONAL USE PERMIT 12-004

HEIGHT EXCEPTION

Although the proposed M-1 geothermal plant would have a maximum height of approximately 35 feet above the excavated ground level, there are several mechanical appurtenances (two purge tanks, of about 36 inches in length and 24 inches in diameter, a two-inch diameter pipe, and a one-inch diameter lightning mast/rod) that extend to approximately 40 feet in height. This would exceed the permitted maximum height of 35 feet; however, Mono County regulations allow for exceptions in the cases of mechanical appurtenances. These mechanical appurtenances are a part of this CUP and are evaluated on pp 4-2 – 4-35 of the RDEIR. As described in the EIR, these appurtenances would be nearly completely obscured by vegetation and the super-structure of the main plant and would be colored to blend with the existing background. The analysis shown in the EIR demonstrates the project would preserve scenic vistas and would not have any impact on surrounding properties.

IV. VARIANCE 12-002

SETBACKS

The proposed Project includes a request for a variance from two required setbacks; 100 feet from the south line and 500 feet from the surface watercourse. The proposed M-1 replacement plant location was specifically chosen, and the requested variances are needed, to avoid the many geological and geotechnical constraints present in the project parcel area. The proposed location is necessary to minimize risks to both the plant and its operating personnel and would not result in any significant environmental impacts.

ABOVEGROUND PIPELINE

The Project includes two proposals for the interconnection pipeline, both of which have been analyzed as part of the EIR. Much of the Project site consists of geothermal soils having elevated temperatures. Generally, underground transmission lines require properly designed thermal backfill to reduce heat buildup and consequent loss of electrical conductivity or even melting of the conduit. However, such heat buildup in an underground transmission line crossing warm or hot areas in the soil cannot be mitigated with thermal backfill. There would be no new overhead transmission line poles associated with either of the interconnection transmission line options and no significant visual or other impacts.

V. CLARIFYING GENERAL PLAN AMENDMENT 12-003(b)

The County proposes to add clarifying language to the Conservation and Open Space Element of its General Plan, as well as to the land development regulations in the Land Use Element of its General Plan

The pertinent language in the General Plan Land Use Element, land development regulations, section 15.070 (B)(1)(d) reads:

“No geothermal development located within the Hot Creek Buffer Zone shall occur within 500 feet on either side of a surface watercourse (as indicated by a solid or broken blue line on U.S. Geological Survey 7.5- or 15-minute series topographic maps).”

The requirement of section 15.070(B)(1)(d) is also cited in the General Plan Conservation and Open Space Element as an action taken by the County to further the following water quality and hydrologic goals and policies:

- (1) To “establish a regulatory process with respect to both geothermal exploration and development that ensures that permitted projects are carried out with minimal or no adverse environmental impacts.” (Cons/Open Space Element p. V-37, Goal 1); and
- (2) “Geothermal exploration and development projects shall be sited, carried out and maintained by the permit holder in a manner that best protects hydrologic resources and water quality and quantity.” (Cons/Open Space Element, p. V-40, Objective D, Policy 1.)

The County proposes to add clarifying language to the Conservation and Open Space Element to clearly identify Action 1.13 (supporting Goal 1 and Objective D, Policy 1) as being imposed by and implemented through section 15.070(B)(1)(d) of the Land Development Regulations and to clarify that the 500-foot setback from any surface watercourse is a land development regulation of the General Plan subject to variance in accordance with Chapter 33 and is not “imposed twice” by virtue of being cited as an action taken in furtherance of the goals and policies set forth in the Conservation and Open Space Element.

The proposed revisions are consistent with the County’s current and past interpretation of its own General Plan and with its intent upon adoption. There would be no substantive change to the General Plan. Future geothermal development would continue to be subject to the setback requirements of Section 15.070, unless a variance were granted.

The proposed clarifying General Plan revision would not result in a significant impact to the environment, nor cause or increase any environmental impact associated with the Project or with any other project or activity in Mono County or within the Hot Creek Buffer Zone. Rather, it clarifies the existing meaning and intent of the General Plan, and preserves the setbacks imposed by section 15.070(B)(1), along with the variance procedure for any future project involving geothermal development within the Hot Creek Buffer Zone.

VI. RECLAMATION PLAN

After the existing MP-I plant is dismantled, the plant facilities would be removed from the site, the site would be re-graded, covered with gravel and converted to a fenced equipment storage yard that would also be used periodically for overflow parking. This interim restoration of the MP-I plant site is described in the Reclamation Plan submitted to Mono County and provided in the agenda packet. In addition, site reclamation at the end of the Project is described in the Reclamation Plan which covers each of the geothermal projects on private land in the Casa Diablo geothermal development complex area (including the MP-I Project, the MP-II Project, and the M-1 Replacement Plant). The Reclamation Plan provides prescriptive measures for restoration of the entire area disturbed by these projects to a natural condition at the end of the project life.

VII. ENVIRONMENTAL REVIEW

An Initial Study of the potential environmental effects of the Project was prepared, a Notice of Preparation (NOP) of the Draft Environmental Impact Report (DEIR) was filed with the California State Clearinghouse and Planning Unit within the Governor’s Office of Planning and Research (OPR) and a public notice of intent to prepare an EIR for the Project was distributed. The notice was published in local newspapers on or about February 4, 2011. It was also distributed to responsible and trustee agencies and interested members of the public identified on the Mono County interested party list. A public scoping meeting for the Project was conducted on Thursday, February 17, 2011. Mono County received a total of two written comment letters on the Project following the public notice.

DRAFT ENVIRONMENTAL IMPACT REPORT

As a result of the Initial Study, and comments received from responsible/trustee agencies and the public during scoping for the DEIR, the following environmental resource topics were identified for detailed environmental assessment.

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

The Draft EIR was originally circulated for public review from July 13, 2011 to August 26, 2011.

REVISED DRAFT ENVIRONMENTAL IMPACT REPORT (RDEIR)

After review of comments made on the earlier DEIR, it was determined that significant new information was needed to address comments on the proposed Project. Under the California Environmental Quality Act (CEQA), recirculation of a Draft EIR is required when significant new information changes the EIR. As such, a decision to revise and recirculate the Draft EIR was made to provide the public an opportunity to review additional Project information provided by the Applicant; new baseline biological resources information; and supplemental documentation not provided with the earlier published Draft EIR.

A Revised Draft Environmental Impact Report (RDEIR) was prepared. The RDEIR provided Appendices A through L to support the document. The RDEIR substantially amended the earlier Draft EIR such that reviewers were invited to submit new comments on the RDEIR for written response in this FEIR. The previous comments received on the earlier Draft EIR remain part of the administrative record, but the previous comments do not require written response.

A shortened 30-day public review period for the Recirculated Draft EIR was requested and approved by the State Clearinghouse. The public review period began at 8:00 a.m. on Friday, February 24, 2012 and ended at 5:00 p.m. on Monday, March 26, 2012.

SECOND REVISED DRAFT ENVIRONMENTAL IMPACT REPORT (RDEIR2)

In response to a concern raised by a commenter on the RDEIR, the County proposed to clarify the language of the Land Use and Conservation/Open Space Elements. In order to evaluate these proposed clarifications, a new Land Use/Planning section was added to the RDEIR to provide information for public review and comment. This second RDEIR (RDEIR2) was recirculated to provide the public and interested agencies with the opportunity to review and comment on the supplemental information provided in the new Land Use/Planning section and the associated changes to the RDEIR. Only the new Land Use/Planning section and the related changes to the text of the RDEIR were circulated for public review. Comments previously received on the RDEIR that pertain to other subjects have also been responded to and are addressed in the Final EIR, along with any agency/public comments on the RDEIR2.

All of the new or supplemental information to the RDEIR was analyzed as appropriate in various sections of the RDEIR2. The RDEIR2 provided Appendices M through O to support the document. The new or revised information included:

- Land Use/Planning Section 4.10;
- Cumulative Impact Land Use/Planning Section 5.3.10; and

- Assorted changes to earlier RDEIR text needed for document consistency with the added Land Use/Planning sections.

A shortened 30-day public review period for the RDEIR2 was requested and approved by the State Clearinghouse. However, the County subsequently decided to extend the shortened review period to the normal 45-day public review period. The public review period began at 8:00 a.m. on Friday, July 6, 2012 and the extended 45-day public review period ended at 5:00 p.m. on Monday, August 20, 2012.

FINAL ENVIRONMENTAL IMPACT REPORT

The Final EIR allows the public and Lead Agency to review revisions to the RDEIR/RDEIR2, comments, and responses to comments before approval of the project. The FEIR, which includes the RDEIR and RDEIR2, incorporated by reference) will serve as the environmental document used by Mono County when considering approval of the Project. After completing the FEIR and before approving the Project, the Lead Agency must make the following three certifications (CEQA Guidelines Section 15090).

1. The FEIR has been completed in compliance with CEQA;
2. The FEIR was presented to the decision-making body of the Lead Agency, and the decision-making body reviewed and considered the information in the FEIR prior to approving the project; and
3. The FEIR reflects the Lead Agency's independent judgment and analysis.

VIII. LDTAC REVIEW

The Land Development Technical Advisory Committee (LDTAC) has met to consider the project application and the project Conditions of Approval and Mitigation Monitoring and Reporting Program. LDTAC recommendations have been reflected in the project mitigation measures and/or Conditions of Approval.

The Community Development Director and Economic Development Director have also both reviewed and approved the staff report and various findings for the project.

IX. FINDINGS

CONDITIONAL USE PERMIT FINDINGS

If the Commission decides to approve Conditional Use Permit 12-004, the Commission should make the findings contained in Exhibit C to Planning Commission Resolution R12-XX.

VARIANCE FINDINGS

If the commission decides to approve Variance 12-002, the Commission should make the findings contained in Exhibit B to Planning Commission Resolution R12-XX.

RECLAMATION FINDINGS

If the Commission decides to approve Reclamation Plan 12-001, the Commission should make the findings contained in Exhibit D to Planning Commission Resolution R12-XX.

GENERAL PLAN AMENDMENT FINDINGS

If the Commission decides to recommend approval of General Plan Amendment 12-003(b), the Commission should make the findings contained in Exhibit E to Planning Commission Resolution R12-XX.

ENVIRONMENTAL FINDINGS PURSUANT TO CEQA GUIDELINE SECT. 15091

If the Commission decides to adopt and certify the Final EIR, the Commission should make the findings contained in Exhibit A to Planning Commission Resolution R12-XX.

X. ENCLOSURES

- 1) Resolution R12- XX [including exhibits A, B, C, D, E and F]
- 2) Reclamation Plan (including Landscape Plan)
- 3) Outdoor Lighting Plan
- 4) Black Eagle Consulting letter
- 5) Economic Analysis provided by ORMAT
- 6) Final EIR with Exhibits I, II, & III (CD copy enclosed & hard copy available upon request)
- 7) Notice of Decision/Use Permit (including Mitigation Monitoring and Reporting Program)

Mr. Ron Leiken
Ormat, Inc.
6225 Neil Road, Suite 300
Reno, NV 89511

Project No.: 0478-10-5
September 7, 2012

RE: Geological EIR Review Comments
M-1 Replacement Power Plant
Mono County, California

Dear Mr. Leiken:

Black Eagle Consulting, Inc. (BEC) has reviewed portions of the Draft Environmental Impact Report (DEIRs) for proposed relocation of the existing M-1 geothermal power plant. Black Eagle Consulting, Inc. would like to provide additional information in support of Mammoth Pacific's request for variances from the two required setbacks; 100 feet from the south line and 500 feet from the surface watercourse, west of the proposed new M-1 site. We would also like to address the requirement to bury transmission lines in the highway scenic corridor.

Black Eagle personnel have provided geotechnical exploration and expertise on the Casa Diablo geothermal power plant since the original Magma plant (current M-1 site) in the mid 1970's. We conducted extensive geologic/geotechnical investigations for the PLES I and MP II projects in 1988 and have been working to find a suitable replacement site for M-1 since 2008. This latter effort included geotechnical investigations for three sites with additional exploration and readjustment of equipment locations within the selected (currently proposed) site in order to minimize risks to both the plant and its operating personnel.

A number of geologic hazards are inherent to areas in and around geothermal activity. Faults, steam vents, warm seeps, high soil temperatures, voids, and highly compressible subsurface soils are common. Ground shaking from off-site earthquakes can result in renewal or shifting of subsurface geothermal conduits, producing hot spots and steam vents in areas that were previously cool. An existing building at the power plant had to be relocated (per our recommendation) when hot ground developed under the floor slab, following the earthquakes of 1980.

Because of our extensive experience at the Casa Diablo resource, we are very familiar with the geologic conditions at the power plant complex. The proposed M-1 replacement site has been carefully optimized as the best solution to the inherent geological and geotechnical constraints. This includes using a split level pad to reduce the depth of cut on the north and placing the required transmission line along existing roads and pipe racks just north of the site. Geological and geotechnical constraints are shown on the attached Figure 1 (Geological and Geotechnical Constraint Map). Our specific concerns are summarized below:

- Moving the M-1 replacement plant to the north (away from the south property line) would require deeper cuts that would encounter extremely hot soil as well as active steam vents and associated weak soils. An older (bedrock) east-west fault is also suspected north of the proposed replacement site. These conditions are hazardous to both the personnel and the plant equipment. Moving north also greatly increases the size of the cut slope and raises the plant elevation so that both would be more visible from US Highway 395, although that is not necessarily a geotechnical issue. Cutting the slope would require some blasting, which is of geotechnical concern.



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Geotechnical & Construction Services

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- Moving the plant to the east has all of the problems of moving north, but also overlaps the existing MP II.
- Moving the site to the south gets it closer to the property line and places critical structures on highly compressible soils, unsuitable for conventional foundation support or even placement of the necessary fill.
- Moving the site to the west would bring it even closer to the intermittent stream as well as an active, unnamed fault located about 0.1 miles to the west of the western boundary of the proposed M-1 replacement site. There are also active steam vents associated with this fault that must be avoided.
- Underground transmission lines require properly designed thermal backfill to reduce heat build up and consequent loss of electrical conductivity or even melting of the conduit. On the plant site this can best be handled by locating the lines in the fill side of the pad and using thermal backfill. A cross country underground transmission line will almost certainly cross warm to hot areas in the soil where heat build up cannot be mitigated with thermal backfill.

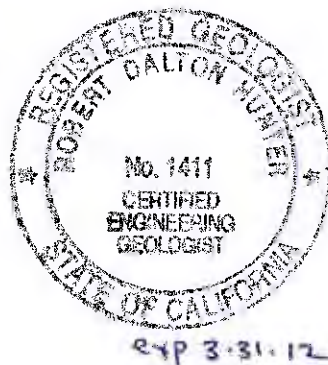
In summary, we agree that the proposed location of the M-1 plant is the best location on the property in terms of the environmental and safety issues addressed above, and support that Mono County grant the variances to the setback requirements for the proposed plant site and for the above-ground transmission line alignments.

Sincerely,

Black Eagle Consulting, Inc.



Dal Hunter, Ph.D., C.E.G.
Vice President



Attachments: Figure 1 – Geological and Geotechnical Constraint Map

DH:lskw

Copies to: Addressee (2 copies and PDF via email)

References

Black Eagle Consulting, Inc. (BEC), 2011, Geotechnical Investigation, M-1 Replacement Power Plant on the Magma Lease, Central Site, Mono County, California, Private Consultant Report.

SEA Consulting Engineers, Inc., 1988, *Geotechnical, Geologic and Seismic Hazards Investigation for the Proposed Mammoth Pacific (MP-11) and Pacific Lighting Systems (PLES-1) Geothermal Power Plants.*



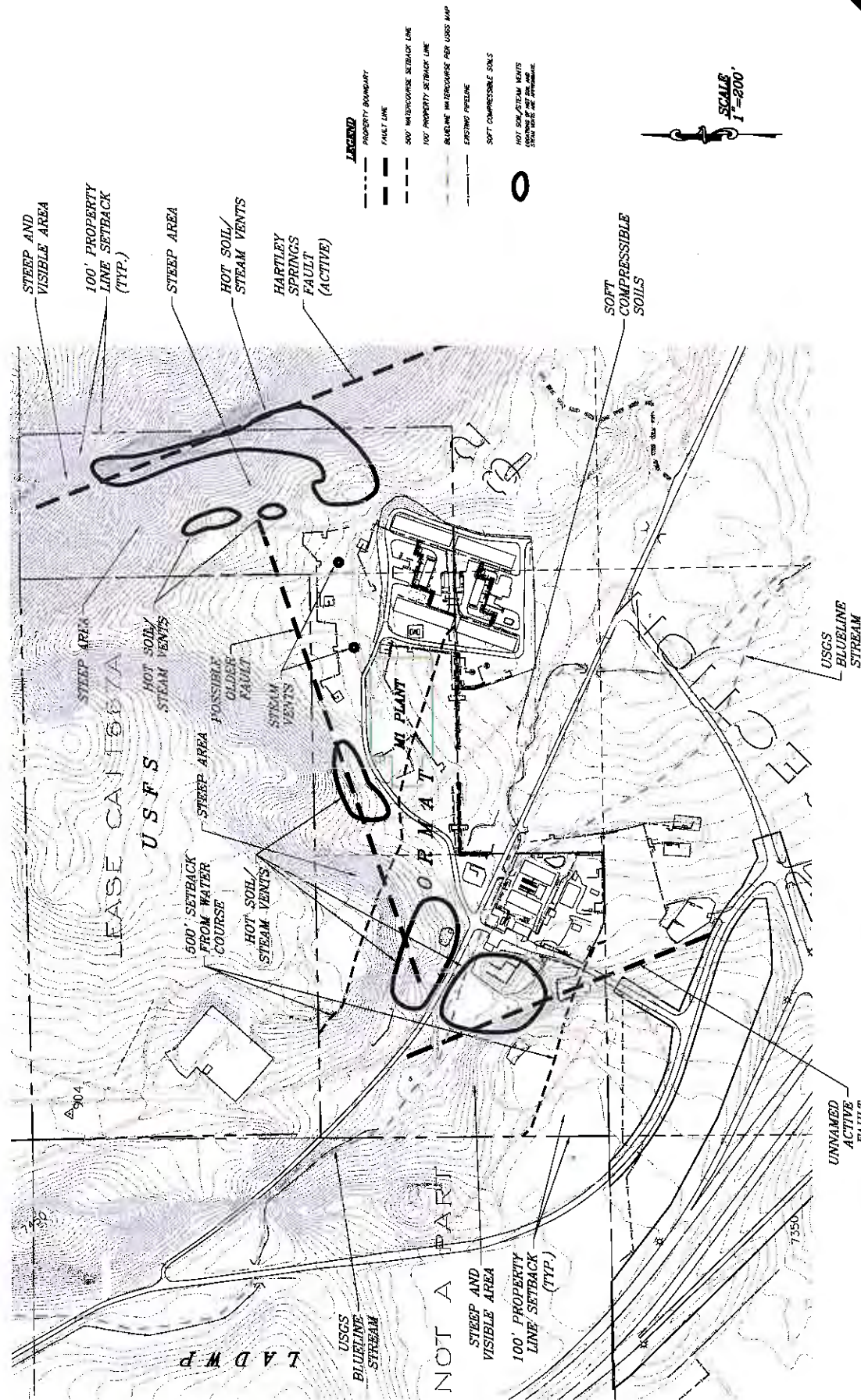
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M1 CONSTRAINTS EXHIBIT MAP

ORMAT GEOTHERMAL - MAMMOTH LAKES, CA



Mammoth Pacific MP-1, MP-2, M-1 Reclamation Plan

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1. Introduction

Mammoth Pacific, LP (MPLP) is currently operating the MP-1 and MP-2 power plants, which are located in the southeast portion of the "Magma" private property in the northwest quarter of Section 32, Township 3 South, Range 28 East of the Mount Diablo Meridian.

The MP-1 plant was the first geothermal power plant to be built at the Mammoth Pacific Complex, commencing operation in 1984 under a Conditional Use Permit issued by Mono County. MP-2 geothermal plant was established in 1990 under a separate Mono County Conditional Use Permit. Ormat Nevada, Inc., the owner of MPLP, proposes to replace the existing MP-1 plant with a new, modern, efficient, and more advanced M1 generation plant. MPLP will build the new plant slightly to the east of the MP-1 site and just west of the MP-2 site as shown in the attached Plate A. The MP-1 plant will operate for up to 2 years from the date the M-1 plant begins startup operations. MPLP will close and decommission the MP-1 plant after the M-1 plant becomes commercial. Depending on the approval and construction start date of M-1, the anticipated date for the reclamation of the MP-1 plant will be in Year 2014 or 2015. The MP-2 plant full reclamation will commence in 2045. At that time the MP-1 plant site will be reclaimed through the removal of the existing power plant facilities within the site. As an interim, MP-1 site will be reused as an equipment yard to support the Mammoth Pacific operations as it is adjacent to the Mammoth Pacific offices and existing maintenance yard. The existing offices, maintenance yard, and warehouse next to the MP-1 site will remain until all geothermal operations including the PLES plant on USFS lands end power production.

Once any power plant (MP-1, MP-2, or M-1) has been removed, reclamation of the site will be completed within one year.

Once the new M1 plant is decommissioned in 2045, the MP-1 and M-1 sites will be reclaimed as described below in Section 2 – Reclamation Plan.

Included in the reclamation will be the geothermal well sites which support the M-1, MP-1, and MP-2 plants. These wells will remain in operation until 2045. Well sites are shown on Plate B.

The end land use for the MP-1 site will be to restore the 39 acre parcel to natural site conditions consistent with the Resource Management land use designation.

The end land use for the M-1 and MP-2 sites will be to restore the 50 acre parcel to natural site conditions consistent with the Resource Extraction land use designation.

Summary of Reclamation Plan timeframe, cost, and end land use for all geothermal sites is shown below:

	MP-1 Plant	MP-2 Plant	M-1 Plant	Wells
Reclamation Start Date	Year 2014 or 2015	Year 2045	Year 2045	Year 2045
Estimated Cost	\$356,224	\$739,513	\$564,949	\$2,210,719

The reclamation date provided for the M-1 plant and the wells are estimated dates only. Ormat plans to operate the plant and wells as long as there is the geothermal resource is available. This reclamation plan will need to be revised and approved by the County if the geothermal plant will continue operations past 2045 or if the reclamation changes due to a change in end land use.

2. Reclamation Plan

This Reclamation Plan (Plan) is subject to Planning Commission approval and prepared in compliance with Mono County General Plan requirements (Chapter 35) and is designed to meet the reclamation requirements of the MP-1, MP-2, and M-1 plants. The reclamation techniques and methods in this Reclamation Plan are based on successful re-vegetation/reclamation programs initiated at the existing Casa Diablo Power Plants.

The reclamation plan addresses all surface disturbance created by the Project and abandonment of geothermal well sites. The geothermal wells will be sealed in accordance with the State and Mono County Environmental Health Department standards and requirements. Disturbed areas surrounding the wells will be reclaimed in the same manner as the plant sites.

In general, the reclamation plan includes measures for protecting wildlife and the public; minimizing erosion; demolishing structures; re-grading cut-and-fill slopes; re-vegetation; and providing the resumption of pre-project land uses. The reclamation goals are to reclaim the site to a stable, functioning landscape unit/ecosystem to allow for similar land uses, including wildlife habitat and dispersed and concentrated recreation, as currently exist, consistent with the Inyo National Forest Land and Resource Management Plan and the Mono County General Plan.

Wildlife Habitat

- A. No federal- or state-listed threatened or endangered species are known to occupy or frequent the Project area, however, there are five species of special concern to the Forest Service and CDFG associated with this habitat: mule deer, pine marten, northern goshawk, California spotted owl, and sage grouse. With removal of surface facilities and re-vegetation there would be

no residual impacts to these species.

- B. Wildlife habitat will be established on the reclaimed lands in a condition similar to the undisturbed lands surrounding the sites.
- C. There are no wetlands or other surface waters located within the Project area, therefore, no wetland habitats will be impacted.
- D. There are no perennial streams or other surface waters located within the Project area. A "blue line" stream is identified adjacent to the sites along the northerly boundary on the U.S. Geological Survey (USGS) topographic map ("Old Mammoth" quadrangle, 1:24000 series). The blueline stream is an ephemeral/intermittent identified as a stream "riparian conservation area" (RCA) by the USFS under the SNFPA ROD (USDA, Forest Service 2004). The stream flows southeast through the Casa Diablo geothermal development area emergency spill containment basin then draining into Mammoth Creek approximately 0.8 miles from the site.
- E. A more detailed on wildlife and wildlife habitat is found in Section 3.5 Biological Resources of Draft EIR.

Backfilling, Re-grading, Slope Stability and Re-contouring

Upon completion of operations, all Project-affected areas of surface disturbance will be re-contoured as necessary to blend with the surrounding topography as soon as practicable. Final reclaimed fill slopes will not exceed 2:1 (horizontal:vertical), except where site-specific geologic and engineering analyses demonstrate that the proposed final slope will have a minimum slope stability factor of safety that is suitable for the approved end use and when the proposed final slope can be successfully re-vegetated.

A final site reclamation plan for MP-1 plan is provided on Plates 1a, 1b, and 1c, attached in Appendix A. Once facilities have been removed from the plant site minor grading to shape the existing pad to slope to the northeast and backfill of the existing retention pond will be completed. As an interim, the pad will be covered with gravel to provide a surface for vehicles that will significantly reduce erosion and runoff through percolation of rainfall and snowmelt. Existing slope on the west and south sides of the plant site will be graded at 2:1 (horizontal: vertical) down to the reshaped pad. A stormwater retention basin will be graded to intercept the 20 year, 1 inch rainfall event as part of the interim reclamation plan. The basin will be graded with 3:1 side slopes to allow animals to escape from the basin. The fire suppression system will not be removed since it serves the existing office buildings.

As part of the final reclamation plan, gravel from the MP-1 site will be removed and the site will be re-vegetated. A retention basin will be located in the northeast

corner to collect the runoff from the site graded with side slopes of 3:1 to allow animals to escape from the bottom of the basin. Final reclaimed slopes, will not exceed 2:1 (horizontal: vertical) and will conform to the surrounding topography.

A site reclamation plan for the MP-2 plant site is provided on Plates 2a and 2b, attached in Appendix A. The plant structures, piping and equipment will be removed initially including concrete foundations supporting those facilities. The concrete liner from the existing pond will be removed and the pond will be backfilled. A retention basin will be installed as shown on Plate 2b, to collect the runoff from the site. Minor grading will be required once all the facilities and paving have been removed from the plant. The site will be graded at approximately 1% toward the retention basin. The concrete lined sloped separating MP-2 site and PLES site will remain until PLES site is reclaimed. A small portion of the slope located at the northern boundary of MP-2 site will be re-graded at 2:1 (horizontal: vertical).

A site reclamation plan for the M-1 plant site is provided on Plates 3a and 3b, attached in Appendix A. Once facilities have been removed from the plant site, slopes around the site will be graded at 2:1 (horizontal: vertical). The pad will be graded to slope to the south toward the existing retention pond. Existing retention system west of the pond will be removed and another retention pond will be graded with 3:1 side slopes. The two retaining walls on the site will also be removed and a slope will be constructed at a maximum of 2:1 where the walls were located.

Re-vegetation

The natural re-vegetation and planted vegetation that has already occurred on previously disturbed areas for the existing Casa Diablo Power Plants serve as a basis for determining the plant species and topographic features necessary for successful reclamation. These methods in use already include the design and construction of stable slopes, minor re-grading, ripping or sub-soiling to de-compact and loosen compacted soil, topsoiling, surface preparation through fine grading, reseeding and re-vegetation (or natural re-vegetation).

The M-1 site will be removing approximately 39 trees. Due to the lack of irrigation water available to establish trees replacement of trees is not proposed within the reclamation plan.

Seeding of disturbed areas would be completed using the following seed mixture and application rate:

Species	Pure Live Seed (Pounds per Ac.)
Big sagebrush (<i>Artemisia tridentata</i>)	0.5
Antelope bitterbrush (<i>Purshia tridentata</i>)	4
Desert peach (<i>Prunus andersonii</i>)	2
Rabbitbrush (<i>Ericameria nauseosa</i>)	0.5

Western needlegrass (<i>Achnatherum occidentale</i>)	2
Squirreltail (<i>Elymus elythoides</i>)	4
Basin wildrye (<i>Leymus cinereus</i>)	3

Preferably, seeds for this project would be collected within the immediate vicinity of the project area. If this is not possible due to poor seed availability, seed from the Eastern Slopes Subsection of the Sierra Nevada Section and Mono Section (Miles and Goudey 1997 — map available) would be acceptable. If availability still presents a problem, the seed mix may be modified in consultation with the Forest Service. Re-vegetation will occur in the fall to take advantage of fall and winter moisture.

The existing detention pond at MP-1 plant will be designated as a re-vegetation site to test the seed mix, shown on Plate 1B. Annual monitoring of this site will be conducted annually.

Success standards for re-vegetation are as follows:

- At least 3 shrubs and 8 perennial native grasses and/or forbs per 4 square meters would be established on site.
- Perennial grasses would account for at least 10% of the relative cover.
- All non-native weed species that are already present in the area would account for no more than 5% total of the relative cover at the end of the 2 year evaluation period. New non-native species introduced as a result of the project would be eradicated, i.e. 0% cover. Where this standard is not met, appropriate weed control measures will be implemented.
- At least 70% of trees planted. If this success rate is not achieved then supplemental irrigation may be required to establish trees.

Seeded slopes will be stabilized with erosion control blanket, such as "North American Green jt150."

The re-vegetated areas would be monitored for compliance with the success standards defined above. Barriers will be installed as necessary to prevent unauthorized vehicular traffic from interfering with the reclamation of temporary access routes or other project areas. Re-vegetated areas may be fenced to protect young plants from grazing animals.

The area shown on the M-1 reclamation plan as hot soils will not be held to the success standards noted above as existing areas around the project site with hot soils are either void of vegetation or poorly vegetated so it is anticipated the hot soils will not revegetate.

Failure to meet the success standards would require additional planting and/or weed control, as appropriate, until standards are met.

Drainage, Diversion Structures, Waterways and Erosion Control

Stable topographic surface and drainage conditions will be established to control erosion, prevent sedimentation, blend with the surrounding landscape, and to protect on-site and downstream sites.

Surface runoff and drainage will be controlled by silt fencing or a straw wattle until the interim gravel surface for MP-1 has been placed on the pad and/or the new vegetation has been developed to a point of controlling erosion for all sites during final reclamation.

Retention basins have been designed for each site, based on the Lahontan Regional Water Quality Control Board's Water Quality Plan for the Mammoth Creek Basin to contain the runoff volume generated from a 20 year intensity storm with a one hour duration, which is assumed to be 1 inch (0.83 feet) * Area (square feet) * C (infiltration coefficient). Retention basin sizing calculations are included in Appendix B.

Prime Agricultural Reclamation

The geothermal plant sites are not located within the prime agricultural lands and, therefore, this standard does not apply to the reclamation plan.

Other Agricultural Land

The geothermal plant sites are not located within agricultural lands of any kind and, therefore, this standard does not apply to the reclamation plan.

Building, Structure and Equipment Removal

At project decommissioning, all buildings and ancillary facilities will be reclaimed by having all structures removed and taken off-site. The on-site electric systems, geothermal and fire suppression water pipelines will be removed. The foundations for the plants, asphalt pavement except for those roads which support offsite facilities, and retaining walls will be removed. All above ground pipeline structures will be removed including the pipe and supports. Plates 1a, 2a, and 3a show the existing sites and identify the facilities to be removed. The liner at the bottom of the existing retention pond at MP-1 plant, the concrete pond at MP-2, and underground retention basin at M1 site will be removed and soil will be tested for possible hydrocarbon contamination. All contaminated soils will be removed and disposed of in accordance with state and local health and safety ordinances. All other waste to be disposed of will also be done in accordance with state and local health safety ordinances.

Stream Protection, including Surface and Groundwater

There are no perennial streams or other surface waters located within the Project area.

Topsoil Salvage, Maintenance and Redistribution

A topsoil stockpiled area for the M-1 plant will be shown on a map prior to the start of construction. Once the M-1 plant is decommissioned and removed, topsoil will be spread over the site in a minimum thickness of 3 inches.

Topsoil was not stockpiled when MP-1 and MP-2 sites were graded. Therefore, the resulting surficial soils after grading will be analyzed to determine the presence or absence of elements essential for plant growth and to determine those soluble elements that may be toxic to plants, if the soil has been chemically altered or if the growth media consists of other than the native topsoil. If soil analysis suggests that fertility levels or soil constituents are inadequate to successfully implement the re-vegetation program, fertilizer or other soil amendments may be incorporated into the soil. When native plant materials are used, preference will be given to slow-release fertilizers, including mineral and organic materials that mimic natural sources, and will be added in amounts similar to those found in reference soils under natural vegetation of the type being reclaimed.

Topsoil and suitable amended surficial soils will be planted with a vegetative cover or will be protected by other equally effective measures to prevent water and wind erosion and to discourage weeds.

Tailing and Waste Management

Geothermal drilling waste and cuttings shall be disposed of in a manner approved by the Lahontan Regional Water Quality Control Board and/or Mono County Environmental Health.

Closure of Surface Openings

Wells will be plugged in accordance with the State laws and regulations. Plugged wells will be protected from public entry in order to eliminate any threat to public safety and to preserve access for wildlife habitat.

3. Inspections

A request for annual inspection will be submitted to the Mono County Compliance Officer once each calendar year until construction activities are completed, resuming again once abandonment activities commence. Requests for annual inspections will be accompanied by a written report prepared by a qualified professional who identifies to what extent the reclamation at the site conforms or deviates from the approved reclamation plan.

The Compliance Officer will inspect or cause to be inspected the site within 30 working days of receipt of the written report, filing fee, and application for inspection. Unless otherwise agreed, failure to inspect within 30 working days shall be deemed acceptance of the report and a finding that the resource development operation is in compliance with the reclamation plan.

***Reclamation Plan
Mammoth Pacific
MP-1, MP-2, M-1 Power Plants***

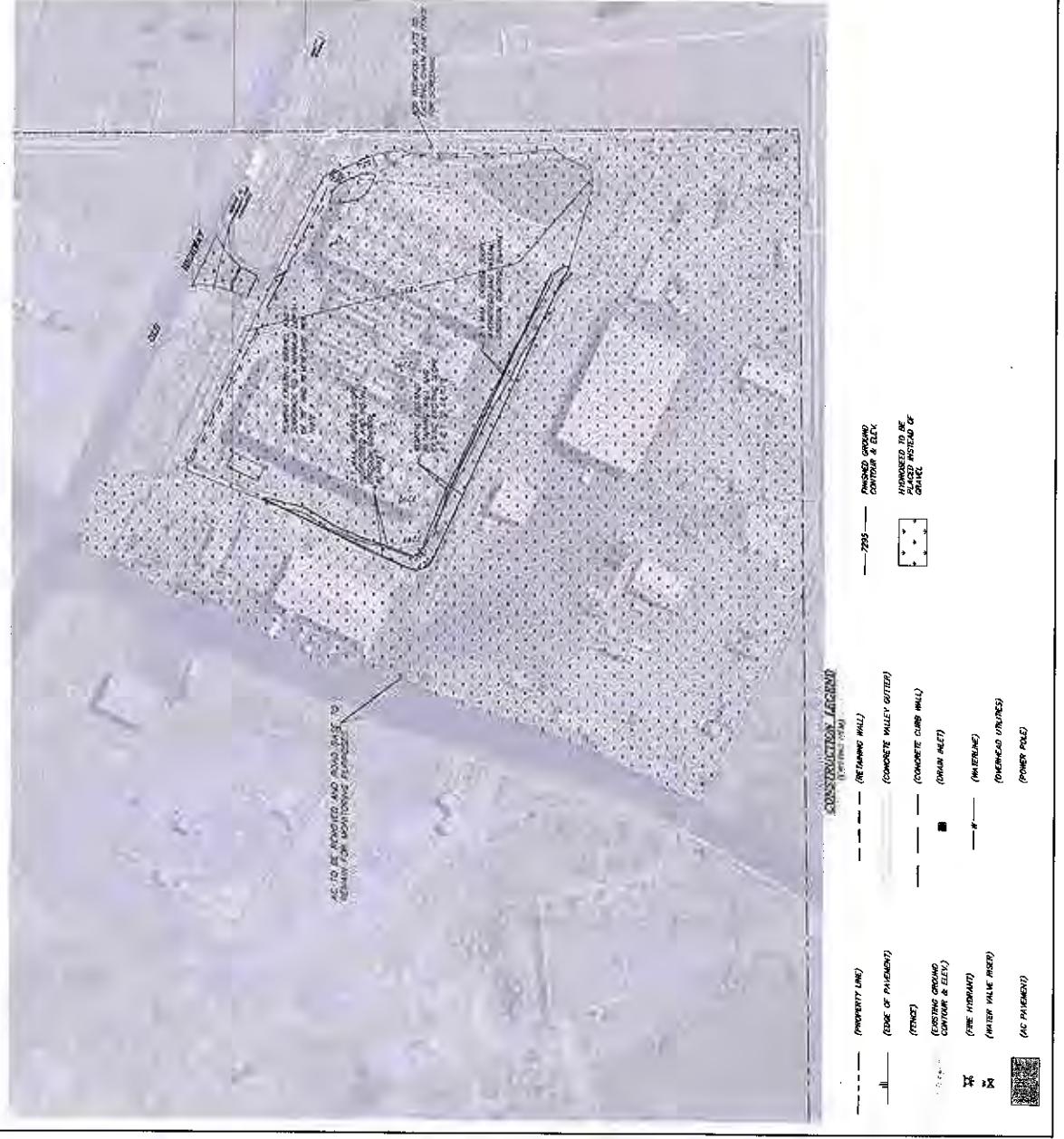
APPENDIX A
Plates





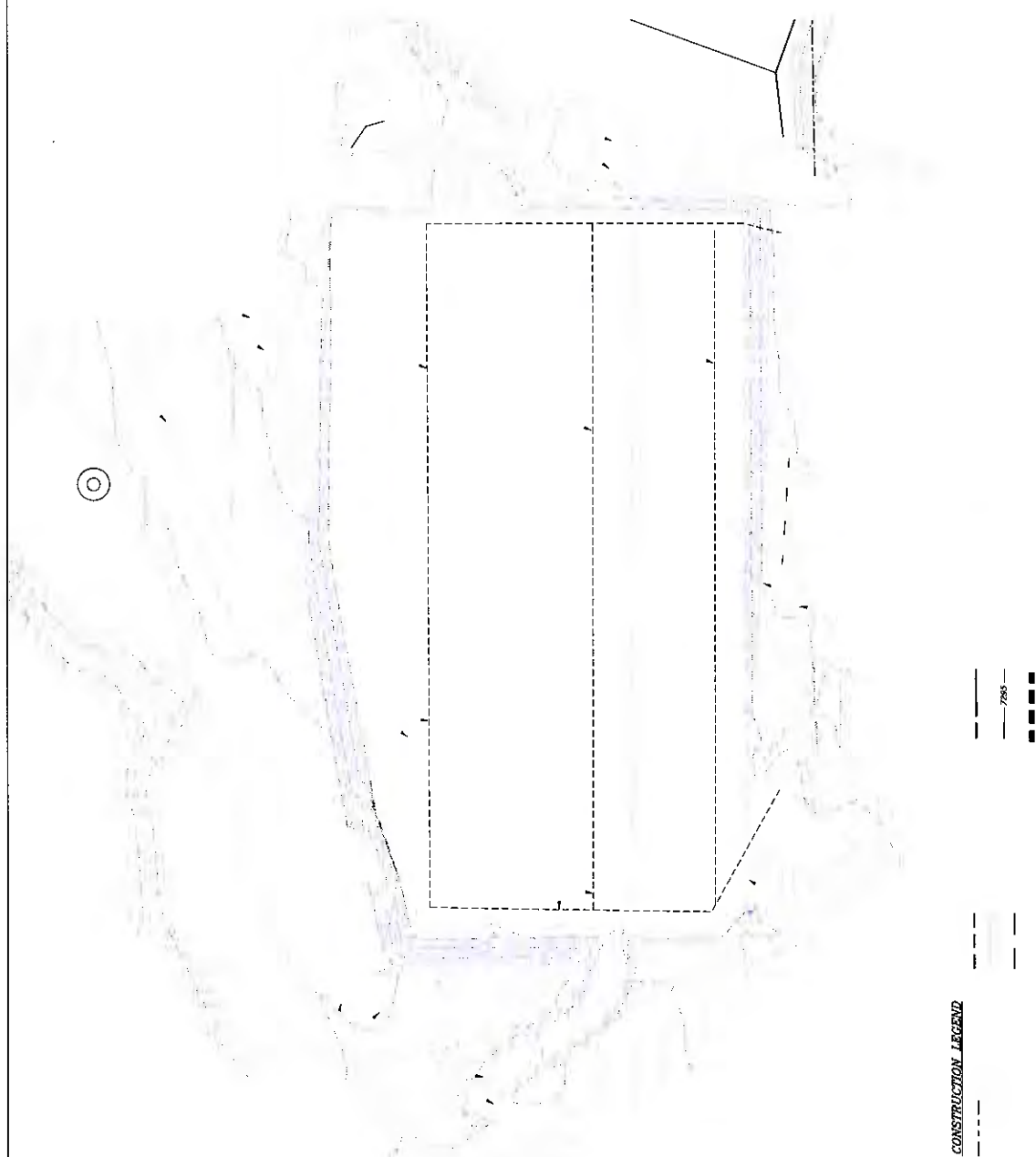
RECLAMATION NOTES:

- ### GRADING AND SITEWORK SPECIFICATIONS
- CONTRACTOR SHALL TAKE ALL SUCH MEASURES NECESSARY TO CONTROL DUST IN THE VICINITY OF THE PROJECT. DUST SHALL BE CONTROLLED BY WATER SPRAYING OR OTHER MEANS. DUST SHALL NOT BE ALLOWED TO SETTLE ON ADJACENT PROPERTIES OR PUBLIC AREAS. DUST SHALL BE MONITORED AS REQUIRED TO AVOID EXCESSIVE DUST AND INCONVENIENCES FOR ADJACENT PROPERTIES AND THE PUBLIC.
 - CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AND THE PUBLIC AT ALL TIMES. CONSTRUCTION SHALL NOT BE ALLOWED TO PROCEED IF ACCESS IS IMPAIRED. CONSTRUCTION SHALL BE STOPPED IMMEDIATELY IF ACCESS IS IMPAIRED. CONSTRUCTION SHALL BE STOPPED IMMEDIATELY IF ACCESS IS IMPAIRED.
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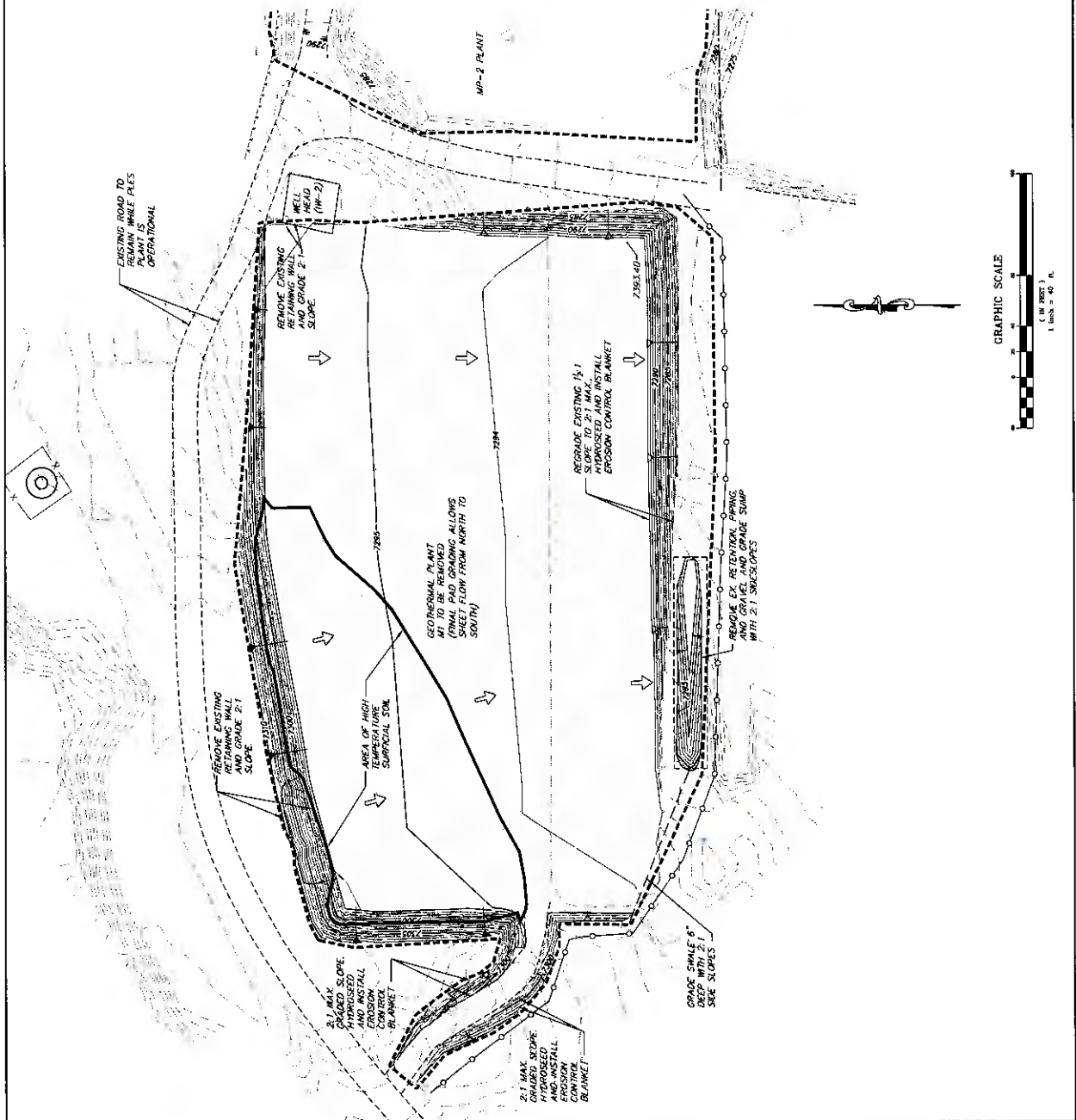


RECLAMATION NOTES:



RECLAMATION NOTES:

CONSTRUCTION LEGEND



***Reclamation Plan
Mammoth Pacific
MP-1, MP-2, M-1 Power Plants***

APPENDIX B
Retention Calculations



triad/holmes associates
civil engineering
land surveying
mammoth lakes • bishop • redwood city • napa
san Luis obispo • lompoc • pleasanton

Calc'd By: mf
Job No.: 3030.2
Date: 4/29/2011

Mammoth Geothermal Plant M1 - Reclamation Plan

Storage Volume Calculation

Input:

Rainfall Quantity	1 in	=	0.083 ft
Percolation Rate	0 in/hr	=	0.000 ft/hr

Tributary Area

	SITE (excluding road)		
	Area		Runoff Coefficient
Roof Area	0,000 sf	0%	0.95
AC Pavement	0,000 sf	0%	0.90
Landscape	203,282 sf	100%	0.25
Total Area	203,282 sf	100%	0.25

Average Volume = Total Area * Average Runoff Coefficient * Rainfall

Storage Volume Required

4,235 cf

Storage Sizing Calculations

From AutoCad Volume Calculations

Basin A	5,130 cf
Basin B	6,551 cf

Storage Volume Provided

11,681 cf

Volume required

4,235 cf

Adequate Storage?

YES



triad/holmes associates
civil engineering
land surveying
mammoth lakes • bishop • redwood city • capo
san luis obispo • lompoc • pleasanton

Calc'd By: **mf**
Job No.: **3030.2**
Date: **4/29/2011**

Mammoth Geothermal Plant MP2 - Reclamation Plan

Storage Volume Calculation

Input:

Rainfall Quantity	1 in	=	0.083 ft
Percolation Rate	0 in/hr	=	0.000 ft/hr

Tributary Area

	SITE (excluding road)		
	Area		Runoff Coefficient
Roof Area	0,000 sf	0%	0.95
AC Pavement	0,000 sf	0%	0.90
Landscape	201,523 sf	100%	0.25
Total Area	201,523 sf	100%	0.25

Average Volume = Total Area * Average Runoff Coefficient * Rainfall

Storage Volume Required

4,198 cf

Storage Sizing Calculations

From AutoCad Volume Calculations

Basin A	5,012 cf
---------	----------

Storage Volume Provided

5,012 cf

Volume required

4,198 cf

Adequate Storage?

YES



triad/holmes associates
civil engineering
land surveying
mammoth lakes • bishop • redwood city • napa
sonoma • elisano • lompoc • pleasanton

Calc'd By: **mf**
Job No.: **3030.2**
Date: **4/29/2011**

Mammoth Geothermal Plant MP1 - Reclamation Plan

Storage Volume Calculation

Input:

Rainfall Quantity	1 in	=	0.083 ft
Percolation Rate	0 in/hr	=	0.000 ft/hr

Tributary Area

	SITE (excluding road)		
	Area		Runoff Coefficient
Roof Area	0,000 sf	0%	0.95
AC Pavement	0,000 sf	0%	0.90
Landscape	67,723 sf	100%	0.25
Total Area	67,723 sf	100%	0.25

Average Volume = Total Area * Average Runoff Coefficient * Rainfall

Storage Volume Required

1,411 cf

Storage Sizing Calculations

From AutoCad Volume Calculations

Basin A	1,594 cf
---------	----------

Storage Volume Provided

1,594 cf

Volume required

1,411 cf

Adequate Storage?

YES

***Reclamation Plan
Mammoth Pacific
MP-1, MP-2, M-1 Power Plants***

APPENDIX C
Cost Estimate

2/8/2012



triad/holmes associates

civil engineering
land surveyingmammoth lakes • bishop • redwood city • napo
san francisco • longport • pleasanton

**ENGINEER'S PRELIMINARY COST ESTIMATE
MAMMOTH PACIFIC WELL REMOVAL
RECLAMATION PLAN**

Item Description	Quantity	Unit	Unit Cost	Total Cost
A. PRODUCTION WELL				
REMOVE PUMP AND WELL PIPING INCL. Well Drill Rig @\$6,000/day, 3 laborers @\$600/day and trucking@\$1,600/day	9	EA	40,000	\$ 360,000
REMOVE PIPING, CONTROL BUILDING AND RESEED SITE:incl. bulldozer and loader @ \$3,600/day, hydroseeder and operator @\$1,200/day and seed @\$10,000	9	EA	100,000	\$ 900,000
			<u>SUBTOTAL:</u>	<u>\$ 1,260,000</u>
B. INJECTION WELL				
RECLAIM PAD (remove piping, pump control bldg., concrete pad, and reseed)incl. bulldozer and loader @ \$3,600/day, hydroseeder and operator @\$1,200/day and seed @\$10,000	5	EA	20,000	\$ 100,000
			<u>SUBTOTAL:</u>	<u>\$ 100,000</u>
			SUBTOTAL ITEMS A-B:	\$ 1,360,000
			20% Contingencies	\$ 272,000
			TOTAL:	<u>\$ 1,632,000</u>



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**ENGINEER'S PRELIMINARY COST ESTIMATE
MAMMOTH PACIFIC M1
RECLAMATION PLAN**

Item Description	Quantity	Unit	Unit Cost	Total Cost
<u>A. GENERAL</u>				
MOBILIZATION incl equipment transport, employee per diem	1	LS	44,000	\$ 44,000
			SUBTOTAL:	\$ 44,000
<u>B. EROSION CONTROL</u>				
FILTER FENCING / STRAW WATTLE incl wattle at \$0.40 per lf and labor @\$20/hr	1	LS	1,500	\$ 1,500
EROSION CONTROL BLANKET incl. blanket @\$0.70/sf and laborers @\$40/hr for 20 hrs	28,316	SF	1	\$ 28,316
HYDROSEEDING incl. hydroseed and sprayer @ \$0.20 per sf and two operators @15/hr ea totalling \$0.19 per sf	203,282	SF	0.30	\$ 60,985
FINE GRADING (INC. SHAPING OF 2:1 SLOPES) w/ excavator \$3,000/day (w/operator) and bulldozer @ \$1,500/day for 4.5 days	1	LS	20,000	\$ 20,000
			SUBTOTAL:	\$ 110,801
<u>C. REMOVALS:</u>				
EQUIPMENT REMOVAL AND SALVAGE (incl. 150T crane @\$3,000/day for 40 days and 50T crane @ \$1,800/day for 80 days	1	LS	170,000	\$ 170,000
CONCRETE DEMOLITION and DISPOSAL incl. excavator and loader @ \$43/cy and trucking and disposal @ \$20/cy	1,060	CY	65	\$ 68,900
PAVING AND BASE incl. bulldozer and loader @ \$43/cy and trucking and disposal @ \$20/cy	430	CY	63	\$ 27,090
UNDERGROUND RETENTION BASIN incl. excavator and loader @ \$4,400/day and trucking and disposal @ \$20/cy	1	LS	50,000	\$ 50,000
			SUBTOTAL:	\$ 315,990
SUBTOTAL ITEMS A-C:				\$ 470,791
20% Contingencies				\$ 94,158
TOTAL:				\$ 564,949



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**ENGINEER'S PRELIMINARY COST ESTIMATE
MAMMOTH PACIFIC MP1
RECLAMATION PLAN**

Item Description	Quantity	Unit	Unit Cost	Total Cost
<u>A. GENERAL</u>				
MOBILIZATION incl equipment transport, employee per diem	1	LS	44,000	\$ 44,000
			SUBTOTAL:	\$ 44,000
<u>B. EROSION CONTROL</u>				
FILTER FENCING / STRAW WATTLE incl wattle at \$0.40 per lf and labor @\$20/hr	1	LS	1,500	\$ 1,500
EROSION CONTROL BLANKET incl. blanket @\$0.70/sf and laborers @\$40/hr for 20 hrs	4,553	SF	1	\$ 4,553
HYDROSEEDING incl. hydroseed and sprayer @ \$0.20 per sf and two operators @15/hr ea totalling \$0.19 per sf	64,678	SF	0.30	\$ 19,403
FINE GRADING (INC. SHAPING OF 2:1 SLOPES) w/ excavator \$3,000/day (w/operator) and bulldozer @ \$1,500/day for 4.5 days	1	LS	20,000	\$ 20,000
			SUBTOTAL:	\$ 25,456
<u>C. REMOVALS:</u>				
EQUIPMENT REMOVAL AND SALVAGE (incl. 150T crane @\$3,000/day for 20 days and 50T crane @ \$1,800/day for 40 days	1	LS	75,000	\$ 75,000
CONCRETE DEMOLITION and DISPOSAL incl. excavator and loader @ \$43/cy and trucking and disposal @ \$20/cy	1,797	CY	63	\$ 113,211
PAVING AND BASE incl. bulldozer and loader @ \$43/cy and trucking and disposal @ \$20/cy	622	CY	63	\$ 39,186
			SUBTOTAL:	\$ 227,397
SUBTOTAL ITEMS A-C:				\$ 296,853
20% Contingencies				\$ 59,371
TOTAL:				\$ 356,224

2/8/2012



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**ENGINEER'S PRELIMINARY COST ESTIMATE
MAMMOTH PACIFIC MP2
RECLAMATION PLAN**

Item Description	Quantity	Unit	Unit Cost	Total Cost
<u>A. GENERAL</u>				
MOBILIZATION incl equipment transport, employee per diem	1	LS	44,000	\$ 44,000
			SUBTOTAL:	\$ 44,000
<u>B. EROSION CONTROL</u>				
FILTER FENCING / STRAW WATTLE incl wattle at \$0.40 per lf and labor @\$20/hr	1	LS	1,500	\$ 1,500
EROSION CONTROL BLANKET incl. blanket @\$0.70/sf and laborers @\$40/hr for 34 hrs	2,653	SF	1	\$ 2,653
HYDROSEEDING incl. hydroseed and sprayer @ \$0.20 per sf and two operators @15/hr ea totalling \$0.19 per sf	201,523	SF	0.30	\$ 60,457
FINE GRADING (INC. SHAPING OF 2:1 SLOPES) w/ excavator \$3,000/day (w/operator) and bulldozer @ \$1,500/day for 4.5 days	1	LS	20,000	\$ 20,000
			SUBTOTAL:	\$ 64,610
<u>C. REMOVALS:</u>				
EQUIPMENT REMOVAL AND SALVAGE (incl. 150T crane @\$3,000/day for 40 days and 50T crane @ \$1,800/day for 80 days	1	LS	150,000	\$ 150,000
CONCRETE DEMOLITION and DISPOSAL incl. excavator and loader @ \$43/cy and trucking and disposal @ \$20/cy	3,377	CY	63	\$ 212,751
PAVING AND BASE incl. bulldozer and loader @ \$43/cy and trucking and disposal @ \$20/cy	2,300	CY	63	\$ 144,900
			SUBTOTAL:	\$ 507,651
SUBTOTAL ITEMS A-C:				\$ 616,261
20% Contingencies				\$ 123,252
TOTAL:				\$ 739,513

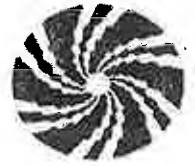
DESIGN CRITERIA	
- TYPE	TYPE MATERIALS AND DESIGN CODE
- WIND LOAD	AS PER CANADIAN S
- FOUNDATION	AS PER DESIGN CODE AND SOIL REPORT # 1
- FLOOR LOAD	AS PER DESIGN CODE AND SOIL REPORT # 1
- ROOF LOAD	AS PER DESIGN CODE AND SOIL REPORT # 1
- SEISMIC	AS PER DESIGN CODE AND SOIL REPORT # 1
- DRAINAGE	AS PER DESIGN CODE AND SOIL REPORT # 1
- INSULATION	AS PER DESIGN CODE AND SOIL REPORT # 1
- COEFFICIENT OF THERMAL EXPANSION	AS PER DESIGN CODE AND SOIL REPORT # 1



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March 26, 2012

Dan Lyster
Director
Mono County Economic Development Department
P.O. Box 2415
Mammoth Lakes, CA 93546

Scott Burns
Director
Mono County Community Development Department
P.O. Box 347
Mammoth Lakes, CA 93546

**Subject: Mammoth Pacific I Replacement Project
Comment on Revised Draft EIR – Project Benefits**

Dear Director Lyster and Director Burns:

The purpose of this letter is to provide a brief summary of the Mammoth Pacific, L.P. I Replacement Project (Project) as well as a summary of the environmental (and economic and social) benefits to help ensure the Planning Commission and Board of Supervisors have an understanding of the purposes of the Project as they study the Draft Environmental Impact Report (DEIR). The DEIR, of course, includes a complete project description under the "project description" section and more specifically as needed in the following sections of that document. Some of the project benefits are also mentioned in the DEIR, but this letter concisely lists some of the benefits.

Ormat representatives will appear at the Planning Commission and Board of Supervisor (if needed) hearing(s) to provide an overview of the Project and to answer any questions that may arise.

We respectfully request that you include this letter in the Final EIR on the project so that it will be available to Mono County officials and the general public.

PURPOSE AND DESCRIPTION OF THE M-1 PROJECT

Mammoth Pacific, L.P. is a wholly owned subsidiary of Ormat Technologies, Inc. Ormat is a pure-play clean energy company that has 500 employees in the United States. Its operations are consistent with policies at various levels of government, including Mono County, that encourage the safe development of alternative energy resources as a means of reducing the country's dependence on fossil fuels.

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As described in the DEIR, Ormat, by and through its subsidiary Mammoth Pacific, L.P. (MPLP), proposes to replace the existing MP-I (also called G-1) power plant at the Casa Diablo geothermal complex with an advanced generation plant called M-1. The MP-I plant will be torn down, decommissioned and the site reclaimed after the new plant is on-line. The new plant will be constructed on land owned by MPLP immediately adjacent to and on the same parcel as the existing plant.

The MP-I plant was the first geothermal plant constructed at Casa Diablo. It commenced operations in 1984 after receiving a conditional use permit from Mono County. It has been in continuous operation since that time. It was one of the first geothermal plants in the United States utilizing binary cycle technology. It was therefore *first generation* technology. Geothermal technology has advanced significantly in the last 28 years.

As a result of *advanced generation* technologies, the new M-1 plant will utilize the geothermal resource in a manner that will result in the production of approximately 15 percent more energy with the same amount of resource used by the existing plants. There will be no increase in the amount of the geothermal fluid used in the process. The plant will consist of one Ormat Energy Converter (OEC). An OEC is proprietary modular binary geothermal power generation equipment manufactured by Ormat that includes a vaporizer, turbines, generators, an air-cooled condenser (the cooling system), a pre-heater, pumps and piping. There will be no additional wells drilled. The only new pipelines will consist of pipes on the MPLP property to connect with existing pipes connected to the well-field. The expected life of the new plant is 30 years.

PROJECT BENEFITS

Mono County's alternative energy policies state that the County may request the applicant to provide information on economic benefits to the community of a geothermal development project. Pursuant to the County's request, that information was provided in the form of a study by the independent economic consulting firm of Wahlstrom and Associates. Wahlstrom's report, which has been submitted for the record, is entitled "*Economic Benefits of proposed M-1 Geothermal Power Replacement Plant, Mono County, California.*" It shows that the project will provide some \$46.1 million of new investment in materials, equipment and services. Ormat submitted for the record an additional analysis entitled "*Supplemental Economic and Societal Benefits Report: Geothermal Operations in the Casa Diablo Area.*" This report summarizes the economic, technologic and other benefits of geothermal development generally at Casa Diablo.

The benefits of the replacement project include, but are not limited to, the following:

- More efficient production of renewable, clean green energy from the same resource without significant environmental effects.

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- Construction jobs utilizing local contractors to the extent possible.
- Continuation of stable, long-term well-paying energy/green jobs in Mono County.
- Increased revenues to state and local governments in the form of property, sales, income and employment taxes, generated both by the new plant's increased efficiencies and its longer life span.
- Quieter operations as a result of the advanced generation technologies.
- Substantially less fugitive emissions than with the existing plant.
- The working pressure of the OEC is lower than with the existing system, resulting in reduced leakage of the working fluid and increased safety.
- Substantially less lubricating oil because the new design requires less oil, is more leak-resistant, and has fewer moving parts.
- Substantially reduced fire hazard for the reasons listed in the DEIR, including a reduced on-site need for flammable working fluid and up-graded fire protection system utilized in the project design.
- To the extent electricity production is increased and sent to the grid, it will offset emissions of pollutants and green-houses gases that would otherwise be produced by conventional fossil fuel plants elsewhere on the grid.
- There have been no documented significant adverse environmental effects from the existing geothermal operation at Casa Diablo. A more efficient and safe plant utilizing advanced generation technologies has also not been shown to have any potential effects.

As requested above, please include this letter in the Final EIR on the project so that it will be available to Mono County officials and the general public, and also please place a copy of this in the administrative record for the M-1 project.

Very truly yours,

Ron Leiken, QEP
Environmental/Regulatory Affairs Administrator

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September 27, 2011

Dan Lyster
Economic Development Department
PO Box 2415
Mammoth Lakes, CA 93546

Subject: Supplemental Report of Economic Benefits of Geothermal Operations

Dear Mr. Lyster:

With respect to its application for the construction of the M-1 geothermal replacement plant, Ormat provided the County with the report by Wahlstrom & Associates entitled "*Economic Benefits of Proposed M-1 Geothermal Power Replacement Plant, Mono County, California.*" That report shows that the M-1 project will provide some \$46.1 million of new investment in materials, equipment and services. That would obviously be a substantial economic benefit to Mono County and the broader local community. The report was provided pursuant to applicable provisions of the Mono County General Plan and at the request of the Mono County Director of Community Development.

Ormat has also compiled the attached supplemental report. This report summarizes the economic and related benefits of geothermal development generally at the Casa Diablo site. We respectfully request, as we did with the former report, that you add it to the administrative record of both the M-1 and CD-4 projects.

Thank you for your consideration of this matter.

Very truly yours,

Ron Leiken, QEP
Environmental/Regulatory Affairs Administrator

Cc: Scott Burns
Mono County Director of Community Development

Stacey Simon
Mono County, Assistant County Counsel

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**SUPPLEMENTAL ECONOMIC AND SOCIETAL BENEFITS REPORT:
GEOTHERMAL OPERATIONS IN THE CASA DIABLO AREA
MONO COUNTY**

This report is a supplement to the report prepared by the independent economic consulting firm Wahlstrom & Associates dated September 6, 2011, and entitled *Economic Benefits of Proposed M-1 Geothermal Power Replacement Plan, Mono County California*. The Wahlstrom report was previously provided to Mono County in connection with the consideration of the M-1 geothermal replacement plant application. That report was specific to the economic benefits of the M-1 project. This report summarizes the economic benefits of geothermal development generally in the Casa Diablo area of Mono County. This report is submitted on behalf of Mammoth Pacific, LP, the operator of the Casa Diablo projects.

Ormat is a pure-play clean energy company with 500 employees in the United States. Its geothermal operations in Mono County provide local green jobs and clean, renewable energy tied into the local grid. The following is a non-exclusive list of some of the general economic benefits of Ormat's geothermal development in the Casa Diablo area:

- Stable primary employment and tax revenues independent of the national economy
- Economic benefits derived from continuous operation since 1984
- Property tax contributions (\$726,120 paid to Mono County in 2010)
- Direct local purchases totaling nearly \$1 million in 2010
- Periodic local construction jobs for small projects at the existing facilities
- 23 full-time equivalent employees
- Total payroll of approximately \$2.2 million to local employees
- Payroll taxes of approximately \$180,000 per year
- Royalties paid to Mono County from operations on federal lands of approximately \$90,000 per year, paid through the Bureau of Land Management
- Use of local lodging, restaurant and retail services by Ormat corporate employees and by Ormat contractors in the area on business
- Hiring of local construction and professional services.

Economics are only part of the picture of benefits that MPLP brings to Mono County. These geothermal operations also provide environmental and societal benefits. This is also a non-exclusive list:

- Production of approximately 29 MW, or enough to power some 21,750 homes
- Production of renewable, clean and sustainable energy

- Geothermal energy is "base-load," producing energy to the grid 24/7, whereas many other renewable energies are intermittent
- No fossil fuels are consumed to generate energy
- The 29 MW of geothermal power are annually avoiding emission of about 200,000 tons of CO₂ from fossil fuel plants
- Geothermal production has the least surface use and visual impact of any other form of energy production, whether renewable or non-renewable
- Low visual impact allows blending with the surrounding environment
- Conserves fossil fuels and contributes to the diversity of energy resources
- Enhances national security by reducing dependence on imported fuels
- Contributes to meeting state and national renewable energy goals
- Geothermal operations are "field proven;" 10,000 MW are produced world-wide
- No substantial adverse environmental effects of Casa Diablo operations in the 26 years of operations
- Ormat operations at Casa Diablo have been the subject of awards from elected officials, trade associations and community groups based on its record for environmental protection and operations excellence
- Participation in and contribution to local educational and cultural programs
- Work with local, federal and state authorities to assure environmentally safe operations, and to ensure worker safety.



**ECONOMIC BENEFITS OF
PROPOSED M-1 GEOTHERMAL POWER
REPLACEMENT PLANT
MONO COUNTY, CALIFORNIA**

**Prepared for
Ormat Technologies**

**Prepared by
Wahlstrom & Associates**

September 6, 2011

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Appendix: Retail Spending Leakage Tables	

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2. Construction Worker Schedule.....	4
3. Summary of Direct, Indirect and Induced Benefits Generated by the Proposed Geothermal Power Replacement Plant	7

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1. PROJECT DESCRIPTION

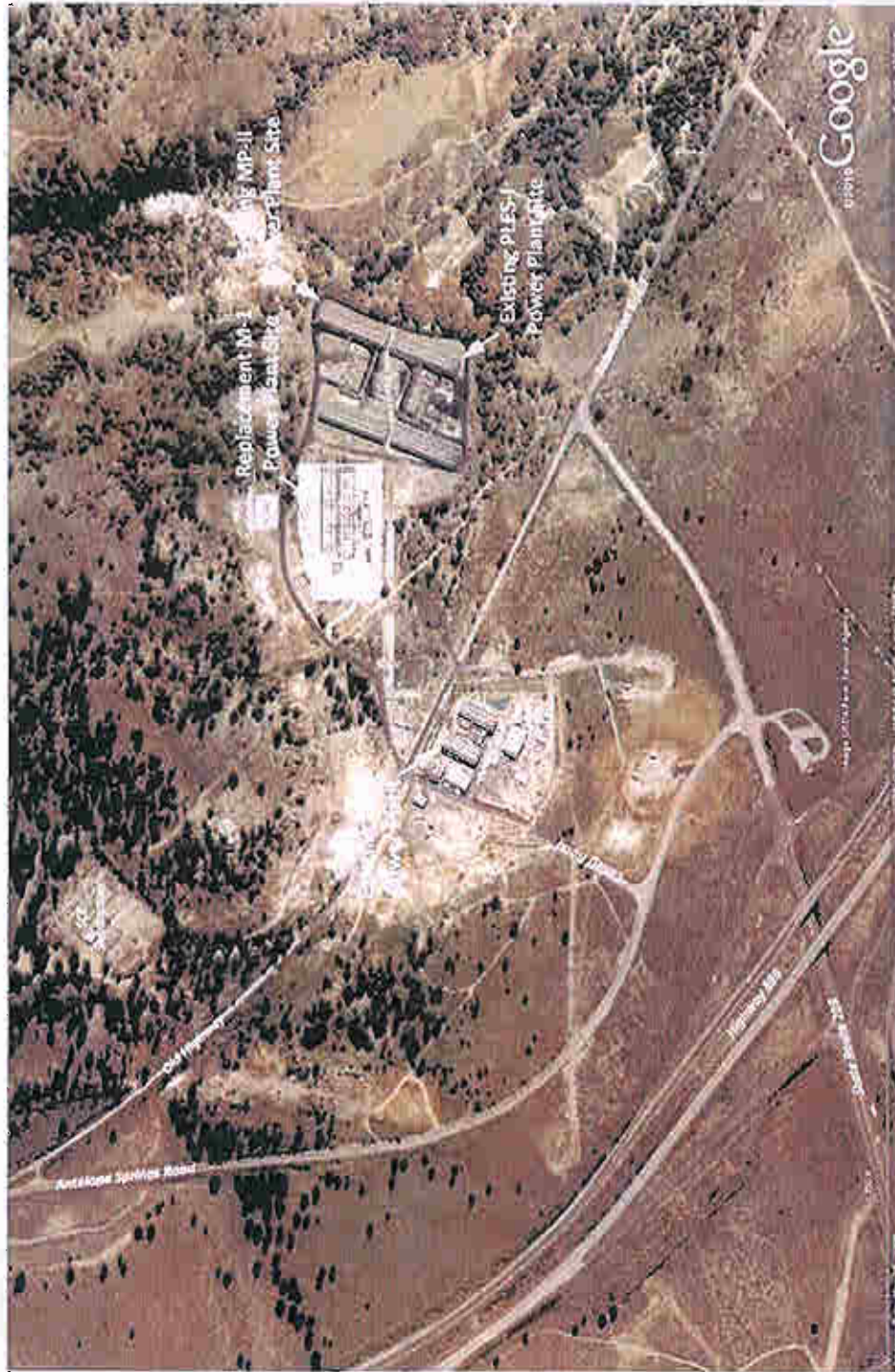
The Mammoth Pacific geothermal complex is located on unincorporated land in Mono County, 2.5 miles east of the Town of Mammoth Lakes, northeast of the junction at US Highway 395 and State Route 203. The complex includes three geothermal power plants built between 1984 and 1990 that have a generating capacity of 29 megawatts (MW). The existing facility produces enough electricity to power approximately 21,750 homes. The electricity is sold under long-term contracts to Southern California Edison.

During late 2010, Ormat Nevada, Inc. (ONI) acquired sole ownership of the geothermal complex site, power plants, equipment, and future rights to develop additional geothermal facilities on more than 10,000 acres of undeveloped federal land. The Company proposes to replace the 7 MW 1984 facility (G1) with a more modern and efficient advanced technology plant (M1) that can produce 18 MW of electricity.

The new plant will be located only 500 feet from the existing plant (See Figure 1). A pipeline will connect the replacement plant with the existing wells, which means that no new geothermal wells will need to be constructed. In addition, a new 12.47 KV substation/switching station will be constructed to connect the new power plant to the existing transmission line.

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FIGURE 1
Replacement Power Plant Location



New Investment and Jobs

The proposed project will require \$46.1 million of new investment in materials, equipment, and services. The investment will generate one year of jobs for out-of-area and local construction, and engineering and professional services contractors. The project applicant estimates that 70 percent of contractors on site will permanently reside out of the area, and 30 percent will be local contractors. However, the new investment will not change the facility operations staff, which will remain at 23 full-time workers. The allocation of the new investment and the type of jobs that will be created are summarized below.

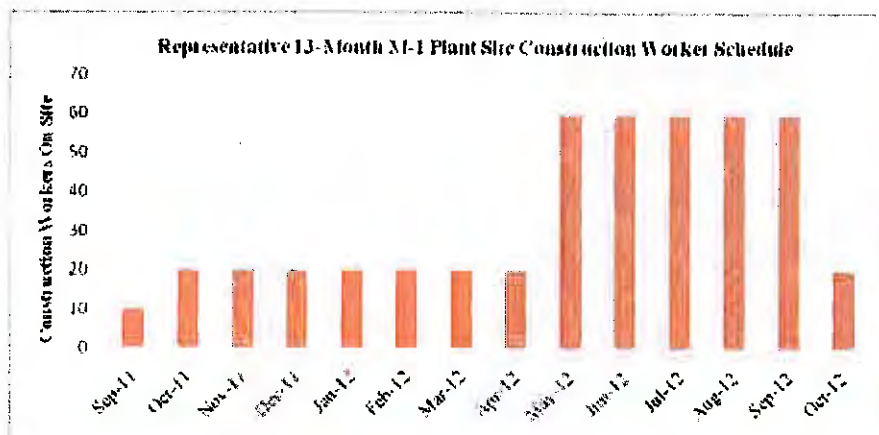
- The Project Applicant will purchase \$32.5 million of materials and equipment needed to assemble the replacement power plant generating unit, substation, spare parts, pentane, and a new building for the construction workforce. Power plant equipment and materials will be purchased from world markets and trucked into Mono County.
- \$5.1 million to purchase mechanical, electrical, and other skilled construction services from companies and individuals from outside the region. Specialized contractors will construct the new power plant's electrical and mechanical systems, as well as a new transmission line and substation.
- \$3.8 million to purchase engineering and other professional services. The project applicant estimates \$500,000 of engineering services will be purchased, and 80 percent of the services will be outsourced to firms that reside out the region.
- \$3.3 million to purchase the services of Mono and Inyo County firms to assist the replacement power plant construction project. Earthwork, concrete, and landscaping are services that local contractors can competitively provide.
- \$1.4 million will purchase construction management services provided by a combination of Ormat employees and independent contractors. Approximately 50 percent of this expenditure will be used to recruit additional Ormat employees and contractors to Mono County. The remainder will be spent on out of the area contractors.

Project Schedule

The proposed project schedule will have 20 construction workers continuously on site between October 2011 and April 2012. Up to 60 construction workers will be on site between May through the end of September 2012. The construction workforce will then decline to 20-persons by the end of October 2012 (See Figure 2).

The existing plant would continue to operate until the new plant becomes commercial, which may take as long as two years. After that time, the existing facility will be dismantled, the site graded, and the pad covered.

FIGURE 2
Construction Worker Schedule



2. MONO COUNTY'S ECONOMIC SETTING

The proposed project will be a boost to Mono County's economy, which is still losing jobs. Mono County's private sector job base expanded from 4,100 jobs in 1992 to 5,600 jobs by 2006 (Table 1). This amounts to a 2.2 percent annual rate of growth over a 14-year period, which exceeds California's 1.6 percent job growth rate during the same period.

However, Mono County lost 200 private sector jobs between 2007 and 2009, which amounted to a three-year 1.3 percent annual rate of job loss. An additional 200 private sector jobs were lost between 2009 and 2010.¹ However, the recession-generated loss of jobs in Mono County was less severe than California's job loss because the area's economy is less dependent on the manufacturing, retail, and technology sectors that were hit hard by the recession.

Mono County's economy is highly dependent on tourism as nearly 60 percent of the private jobs are generated by lodging facilities and restaurants. Retail businesses generates another 12 percent of county jobs, with construction and real estate/leasing another 6 percent each.

¹ Source: California Employment Development Department

Gross County Product

The value of goods and services produced in Mono County exceeds \$1 billion (see Table 2, column 2). The three largest economic sectors include accommodations (\$270 million), real estate (\$224 million), and public sector wages (\$163 million).

Employee wages paid among all industries amount to \$346 million (column 4). Self-employed individuals earned \$72 million of proprietor income (Column 5), and corporate profits, rents, and interest earned on real estate assets amounted to \$228 million (Column 6).

Mono County's Construction Industry

The past trends and current conditions within Mono County's construction industry (Table 3) provides a benchmark to evaluate the proposed project's economic impacts, as summarized below.

- Mono County lost more than 240 construction jobs between 2007 and 2009 as the recession drastically reduced the demand to build new residential and commercial space. The recession caused Mono County to lose approximately 40 percent of its 2006 construction job base.
- The construction industry generated \$95 million of production value, which accounts for 9 percent of Mono County's gross product (see column 2). The construction industry output has significantly declined since 2007 along with the decline of construction industry jobs.
- Self-employed persons generate approximately 50 percent of Mono County's construction industry earnings. Wage and salary employees generate the other half of industry earnings.
- The construction of nonresidential structures, which includes the proposed power plant replacement project, generates \$32 million of industry output. Construction companies that build other nonresidential structures pay \$6.8 million of salaries, and sole proprietors earn \$7.2 million of fees.

3. ECONOMIC BENEFITS OF THE POWER PLANT REPLACEMENT PROJECT

The construction of a replacement power plant should contribute \$9.9 million to Mono County's economy during the project's one-year construction phase. Additional fiscal benefits will be yielded by the higher property taxes that are generated by the new power plant investment. It is anticipated that local contractors will get \$3.1 million of business, and the indirect and induced spending by local contractors and out of area workers will contribute another \$6.8 million to the local economy.

The proposed project will also create 81 jobs in Mono County during the life of the construction activity. It is anticipated that contracts obtained by local establishments will generate 12 jobs. The vast majority of jobs will be generated by additional spending at support businesses that provide lodging, restaurants, take out food, retail, recreation, and other consumer services.

It is important to note that the new power plant investment would retain a steady number of jobs for many years into the future. The existing power plant would be decommissioned and existing jobs would be lost without the new investment. The economic benefits summarized in Figure 3 are described and explained below.

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Figure 3
Summary of Direct, Indirect and Induced Benefits Generated by the Proposed Geothermal Power Replacement Plant

Type of Contract	Value of Investment (\$ million)	Direct Purchases in Mono County	Mono County Indirect Multiplier Spending	Mono County Induced Multiplier Spending	Total Mono County Spending Impacts	Jobs Created For Mono County Workers To Construct The Power Plant Replacement Project	Indirect and Induced Jobs Created in Mono County	Total Jobs Created in Mono County
Purchase of equipment and materials on the world market	\$32.5	\$0	\$0	\$0	\$0	0	0	0
Contracts with out-of-area construction firms that recruit workers to temporarily reside in Mono County	\$5.1	\$0	\$1,510,000	\$260,000	\$1,770,000	0	18	18
Contracts with local firms to help construct the power plant replacement project	\$3.3							
Contracts with Mono County firms	\$3.0	\$3,000,000	\$400,000	\$510,000	\$3,910,000	11	2	20
Contracts with Inyo County firms	\$0.3	\$0	\$0	\$0	\$0	0	0	0
Construction management contracts	\$1.4							
Contracts with out-of-area construction management firms and/or Ormat employees that temporarily reside in Mono County	\$0.7	\$0	\$130,000	\$30,000	\$160,000	0	2	2
Contracts with out-of-area construction management firms and/or Ormat employees that work away from the site	\$0.7	\$0	\$0	\$0	\$0	0	0	0
Civil engineering and Other Indirect Expenses	\$3.8							
Mono County Civil Engineering Firms	\$0.1	\$100,000	\$10,000	\$20,000	\$130,000	1	0	1
Out of area Civil engineering firms	\$0.4	\$0	\$60,000	\$10,000	\$70,000	0	1	1
Other indirect expenses	\$3.3	\$0	\$3,300,000	\$560,000	\$3,860,000	0	39	39
TOTALS	\$46.1	\$3,100,000	\$5,410,000	\$1,390,000	\$9,890,000	12	68	81

Data Sources: 2007 U.S. Census of Construction Industries, Ormat Technologies, California Energy Commission, IMPLAN Multipliers

Analysis: Wahlstrom & Associates

Notes

Columns (1 & 2): Information on investment by type of contract is provided by Ormat Technologies
Column (3): Mono County indirect spending multipliers from IMPLAN. See Table X for W&A estimates of spending by construction worker that temporarily reside in Mono County
Column (4): Mono County induced spending multipliers from IMPLAN.
Column (5) equals Column (2) + Column (3) + Column (4)
Column (6): Column (3) * wages/employee data from the U.S. Census of Construction Industries Data. See Table X
Column (7) equals Column (3) + Column (4) / \$100,000 assuming that local businesses generate \$100,000 of earning per employee
Column (8) equals Column (6) + Column (7)

Materials and Equipment (\$32.5 million)

Materials and equipment needed to assemble the replacement power plant will be purchased from world markets and trucked into Mono County. This expenditure will not generate direct or indirect purchases in Mono County, nor will it create any local jobs.

Out of Area Construction Firms (\$5.1 million)

Mechanical, electrical, and other skilled construction services will be purchased from companies and individuals that reside outside the region. Specialized contractors will be recruited to live in the area while they are working on specific tasks related to the power plant replacement project. It is estimated that the temporary workers will spend \$1.5 million on lodging and consumer services while residing in Mono County.² The indirect spending will generate another \$260,000 of induced spending, which will contribute to the creation or retention of 18 consumer services jobs in Mammoth Lakes and Mono County.

Local Construction Contractors (\$3.3 million)

The Project Applicant anticipates that Mono County firms will be awarded 9 percent of the local contracts, and Inyo County firms will be awarded 10 percent of the local business; \$3 million of contracts with Mono County businesses will generate another \$400,000 of indirect spending and \$510,000 of induced spending.³ We estimate that 11 contractor jobs will be created or retained by the local construction contracts. Another 9 consumer service jobs will be created or retained by the indirect and induced spending with consumer service establishments.

Construction Management Contracts (\$1.4 million)

Ormat anticipates using \$700,000 of additional construction management services by recruiting additional Staff or entering into contracts with construction management firms to work at the site on specific tasks. The out of area staff or contractors will contribute \$200,000 of indirect spending to the local economy and \$30,000 of induced spending.⁴ Approximately 2 consumer service jobs will be created or retained by contractor spending.

The remaining construction management activity will be contracted to out-of-area firms or Ormat Staff that will not travel to the site and make any economic contributions to Mono County's economy.

² See Appendix Table 4 for indirect spending calculations by out of area contractors

³ Calculations are made using the IMPLAN input-output model for Mono County. The model indicates that each construction dollar invested in the local economy will generate indirect impacts at a rate of 13.5% and induced impacts at a rate of 17%.

⁴ See Table 4 for indirect spending calculations

Civil Engineering and Other Indirect Expenses (\$3.8 million)

Ormat anticipates using \$100,000 of local civil engineering services. Firms and individuals that are awarded civil engineering contracts will generate another \$30,000 of indirect and induced spending. The total spending should create or retain one job.

Another \$400,000 of civil engineering services will be purchased from out-of-area firms who will work on site to perform specific tasks. The out of area contractors will generate another \$70,000 of indirect and induced spending in the local economy. The spending will be sufficient to support one consumer job.

Finally, Ormat anticipates another \$3.3 million of purchases on housing, transportation, and other consumer services from local vendors. Nearly \$3.9 million of indirect and induced spending should create or retain 39 consumer jobs in the local economy.

Ongoing Operations

Mammoth Pacific typically spends \$500,000 or more on local services and materials to support the power plant. Without the new plant, approximately 25 percent of the local spending would be lost as the existing facility is ultimately decommissioned and dismantled.

* * *

APPENDIX: Economic Impact Analysis Tables

**Table 1: Employment Trends in Mono County and California
1992-2009**

Table 2: Mono County Product and Industry Outputs, 2010

Table 3: Construction Industry Outputs in Mono County

**Table 4: Estimates of Indirect Benefits Generated by
Out-of-area Contractors**

**Table 5: Employment and Earnings Among Establishments Engaged in
Power Plant and Civil Engineering Construction**

*** * ***

Table 1
Employment Trends in Mono County and California, 1992 - 2009

	1992	2003	2006	2009	Percent Private Sector Jobs 2009	Job Growth 1992 - 2006	Job Growth 2007 - 2009	Annual Growth Rate 1992 - 2006	Annual Growth Rate 2007 - 2009
California									
Total Employment	12,505,100	14,768,000	15,435,500	14,456,500		2,930,400	-979,000	1.5%	-2.2%
Total Private Employment	10,057,900	11,986,800	12,608,000	11,605,200		2,550,100	-1,002,800	1.6%	-2.7%
Construction Employment	495,500	796,800	933,700	623,100	4%	438,200	-310,600	4.6%	-12.6%
Mono County									
Total Employment	5,200	7,100	7,100	7,000		1,900	-100	2.3%	-0.5%
Total Private Employment	4,100	5,500	5,600	5,400		1,500	-200	2.2%	-1.3%
11 Agriculture, Forestry, Fishing and Hunting	30	20	30	30	1%	0	0	0.0%	0.0%
21 Mining, Quarrying, and Oil and Gas Extraction	28	15	1	1	0%	-26	0	-20.8%	-1.4%
22 Utilities	8	4	2	2	0%	-6	0	-9.0%	-1.4%
23 Construction	330	560	580	340	6%	251	-242	4.1%	-16.3%
31-33 Manufacturing	50	60	60	40	1%	10	-20	1.3%	-12.6%
42 Wholesale Trade	20	20	30	10	0%	10	-20	2.9%	-30.7%
44-45 Retail	570	740	730	640	12%	160	-90	1.8%	-4.3%
48-49 Transportation & Warehousing	8	4	49	78	1%	42	28	14.0%	16.3%
51 Information	48	44	24	25	0%	-24	1	-4.8%	1.4%
52 Finance and Insurance	62	57	54	44	1%	-8	-9	-1.0%	-6.1%
53 Real Estate and Rental and Leasing	248	391	422	300	6%	174	-122	3.9%	-10.8%
54 Professional, Scientific, and Technical Services	102	191	225	120	2%	123	-105	5.8%	-18.9%
55 Management of Companies and Enterprises	0	1	1	0	0%	1	-1	0.0%	0.0%
56 Administrative Support, Waste Management and Remediation	85	133	29	218	4%	-55	189	-7.3%	94.9%
61 Educational Services	4	2	4	4	0%	0	0	0.5%	-1.4%
62 Health Care and Social Assistance	209	151	13	14	0%	-197	2	-18.2%	3.8%
71 Arts, Entertainment, and Recreation	62	96	95	102	2%	33	7	3.1%	2.5%
72 Accommodation and Food Services	2,103	2,826	3,042	3,210	59%	940	168	2.7%	1.8%
81 Other Services (except Public Administration)	159	207	237	232	4%	77	-4	2.9%	-0.6%
91 Public Administration	1,060	1,530	1,500	1,640		440	140	2.5%	3.0%

Source: California Employment Development Department and IMPLAN ES 202 Files
Analysis: Wahlstrom & Associates

Table 2
Mono County Gross County Product and Industry Outputs, 2010

Description	Employment (1)	Industry Output (2)	Industry Output % Total (3)	Employee Compensation (4)	Proprietor Income (5)	Other Property Income (6)	Indirect Business Tax (7)	Indirect Business Tax % Total (8)
Total	9,600	\$1,056,400,000		\$345,900,000	\$71,900,000	\$221,700,000	\$66,000,000	
11 Agriculture, Forestry, Fishing and Hunting	20	\$7,400,000	1%	\$200,000	\$900,000	\$1,500,000	\$100,000	0%
21 Mining, Quarrying, and Oil and Gas Extraction	30	\$17,500,000	2%	\$3,600,000	\$400,000	\$4,500,000	\$900,000	1%
22 Utilities	10	\$6,900,000	1%	\$1,400,000	\$0	\$2,600,000	\$800,000	1%
23 Construction	740	\$95,100,000	9%	\$19,300,000	\$20,300,000	\$5,500,000	\$700,000	1%
31-33 Manufacturing	40	\$16,100,000	2%	\$1,500,000	\$60,000	\$1,100,000	\$1,400,000	2%
42 - Wholesale Trade	10	\$2,400,000	0%	\$800,000	\$90,000	\$300,000	\$300,000	1%
44 - 45 Retail	930	\$56,800,000	5%	\$21,300,000	\$6,800,000	\$9,600,000	\$10,200,000	15%
48 Transportation	50	\$9,800,000	1%	\$2,200,000	\$100,000	\$1,000,000	\$200,000	0%
49 - Warehousing and Storage	40	\$3,000,000	0%	\$1,500,000	\$700	\$400,000	\$10,000	0%
51 - Information	40	\$6,800,000	1%	\$1,300,000	400,000	1,000,000	\$200,000	0%
52 - Finance and Insurance	90	\$16,400,000	2%	\$2,300,000	\$1,600,000	\$3,900,000	\$300,000	0%
53 - Real Estate, Rentals & Leasing	990	\$224,200,000	21%	\$10,900,000	\$12,400,000	\$114,300,000	\$25,300,000	38%
54 - Professional, Scientific and Technical	290	\$29,300,000	3%	\$7,600,000	\$6,800,000	\$5,500,000	\$700,000	1%
55 - Management of Companies and Enterprises	40	\$1,100,000	0%	\$700,000	\$60,000	\$100,000	\$5,000	0%
56 - Administrative, Waste Management and Remediation	200	\$18,600,000	2%	\$6,100,000	\$500,000	\$2,500,000	\$500,000	1%
61 - Education Services	20	\$1,100,000	0%	\$700,000	\$20,000	\$70,000	\$10,000	0%
62 - Health Care	140	\$11,100,000	1%	\$1,700,000	\$4,400,000	\$400,000	\$80,000	0%
71 - Arts, Entertainment and Recreation	570	\$49,000,000	5%	\$13,500,000	\$3,800,000	\$9,300,000	\$4,600,000	7%
72 - Accommodations and Food Services	2,990	\$269,600,000	26%	\$96,300,000	\$2,900,000	\$36,000,000	\$19,300,000	29%
81 - Other Services	510	\$51,200,000	5%	\$15,7800,000	\$10,500,000	\$1,400,000	\$400,000	1%
91 - Public Administration	1,880	\$163,000,000	15%	\$137,300,000	\$0	\$25,700,000	\$0	0%

Source: Minnesota Implan Group

Analysis: Wahlstrom & Associates

Notes:

Column 1 - Includes self employment

Column 2 - Value of industry production in producer prices

Column 4 - Includes wages, salaries, benefits & employer taxes

Column 5 - Self employment earnings including capital consumption allowance

Column 6 - Includes corporate profits, rent, interest and capital consumption allowance

Column 7 - Includes sales taxes, excise taxes, fees, fines, licenses & property taxes. All payments to government except payroll taxes and end of year corporate taxes.

Table 3
Construction Industry Outputs in Mono County

Description	Employment (1)	Industry Output (2)	Employee Compensation (3)	Proprietor Income (4)	Other Property Income (5)	Indirect Business Tax (6)
Total Industry Output	9,635	\$1,056,400,000	\$345,900,000	\$71,900,000	\$227,700,000	\$66,000,000
23 Construction	741	\$95,100,000	\$19,300,000	\$20,300,000	\$6,500,000	\$700,000
34 - Construction of new commercial and health care structures	162	\$18,900,000	\$4,300,000	\$4,500,000	\$1,000,000	\$200,000
35 - Construction of new manufacturing structures	49	\$5,400,000	\$1,300,000	\$1,400,000	\$300,000	\$30,000
36 - Construction of other new nonresidential structures	261	\$32,200,000	\$6,800,000	\$7,200,000	\$1,700,000	\$200,000
37 - 38 - Construction of new residential structures	144	\$24,800,000	\$3,800,000	\$4,000,000	\$2,300,000	\$100,000
39 - Maintenance and repair of nonresidential structures	86	\$9,000,000	\$2,300,000	\$1,900,000	\$800,000	\$80,000
40 - Maintenance and repair of residential structures	37	\$4,700,000	\$800,000	\$1,400,000	\$400,000	\$30,000

Source: Minnesota Implan Group

Analysis: Wahlstrom & Associates

Notes:

Column 1 - Includes self employment

Column 2 - Value of industry production in producer prices

Column 3 - Includes wages, salaries, benefits & employer taxes

Column 4 - Self employment earnings including capital consumption allowance

Column 5 - Includes corporate profits, rent, interest and capital consumption allowance

Column 6 - Includes sales taxes, excise taxes, fees, fines, licenses & property taxes. All payments to government except payroll taxes and end of year corporate taxes.

Table 4
Estimates of Indirect Benefits Generated by Out of Area Contractors

Type of Contract	Value of Investment (\$ Million) (1)	Value per Employee (2)	Full Time Workers (3)	Workers that Temporarily Reside in Mono County (4)	Number of Days in Mono County per Worker (5)	Consumer Spending per day (6)	Total Indirect Spending (7)
Power plant construction (out-of-area firms)	\$5.1	\$208,000	25	22	428	160	\$1,511,000
Contracts with out-of-area construction management firms and/or Ormat employees that temporarily reside in Mono County	\$0.7	\$219,000	3	3	428	160	\$197,000
Contracts with out-of-area civil engineering firms that temporarily reside in Mono County	\$0.4	\$277,000	1	1	428	160	\$59,000
Construction management	\$7	\$219,000	6	4	428	160	\$131,000

Data Sources: 2007 U.S. Census of Construction Industries, Ormat Technologies, California Energy Commission

Analysis: Wahlstrom & Associates

Notes

Column (1): Information on investment by type of contract is provided by the Project Applicant

Column (2): U.S. Census of Construction Industries Data, See Table 5

Column (3): Column (1)/(2)

Column (4) Assumes 60% of out of area contractors will reside in Mono County and 40% will reside in Inyo County

Column (5) Project is scheduled to start construction in the beginning of September, 2011 and will be completed by the end of October, 2012

Column (6) Per Diem rates paid to California Energy Commission contractors

Column (7) equals Column (4) + Column (5) + Column (6)

Table 5
Employment and Earnings Among Establishments
Engaged in Power Plant and Civil Engineering Construction

NAICS	Construction Sectors	Establishments	Employees	Construction Workers	Other Workers	Value of Construction (\$ Thousand)	Value per All Employees	Value per Construction Employee
237130	Power & communication line & related structures	5,289	187,706	148,104	39,602	\$30,783,389	\$164,000	\$208,000
237990	Other heavy industry & civil engineering construction	4,077	70,461	55,948	65,797	\$15,504,377	\$220,000	\$277,000
237991	Construction Management	130	4,664			\$1,023,357	\$219,000	

Source: U.S. Census of Construction Industries, 2007

Analysis: Wahlstrom & Associates

MONO COUNTY PLANNING COMMISSION

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DRAFT MINUTES OCTOBER 11, 2012

COMMISSIONERS PRESENT: Scott Bush, Chris Lizza, Mary Pipersky, Dan Roberts, Steve Shipley.

STAFF PRESENT: Scott Burns, CDD director; Gerry Le Francois, principal planner; Courtney Weiche, associate planner; Garrett Higerd, public works; Stacey Simon, assistant county counsel; C.D. Ritter, commission secretary

1. **CALL TO ORDER & PLEDGE OF ALLEGIANCE:** Chair Steve Shipley called the meeting to order at the Town/County Conference Room, Minaret Village Mall, Mammoth Lakes at 10: a.m. and led the pledge of allegiance.
2. **PUBLIC COMMENT:** None.
3. **MEETING MINUTES:**

MOTION: Adopt minutes of September 13, 2012, as submitted:
(Lizza/Roberts. Ayes: 3. Absent: Pipersky. Abstain due to absence: Bush.)

4. **PUBLIC HEARING:**

A. GENERAL PLAN AMENDMENT 12-003 (a) & USE PERMIT 12-003 with associated Deed Restriction/Foster. The proposal is to change the land use designation of APN 015-060-047 from Single-Family Residence to Commercial Lodging, High, subject to restrictions contained in Conditional Use Permit (CUP) 12-003 and deed restriction to allow for transient rentals. Any other use, beyond the approved CUP 12-003 and deed restriction, under the CL-H designation would require further planning review and permitting. The .68-acre parcel is located at 4835 Hwy. 158 in the Down Canyon area of June Lake. The CUP includes conditions for future permitted land uses, and is subject to GPA approval by the Board of Supervisors. The Planning Commission may recommend that the Board of Supervisors approve the proposed General Plan Amendment subject to the conditions of approval for CUP 12-003 and deed restriction. The project qualifies as a CEQA exemption. *Staff: Courtney Weiche, associate planner*

Courtney Weiche reviewed the project, and applicants were present. Entire house would be rented, so it's not a bed-and-breakfast. Use is restricted solely to transient rental, not any other CL-H uses. Jacuzzi will be drained after each rental use.

Commissioner Shipley wondered if the land use designation change would migrate to adjoining properties. *Always an option; the area could go from SFR to commercial.*

Commissioner Roberts recalled that Carson Peak Inn was contentious. Some didn't want commercial, but historically, it's a commercial node.

OPEN PUBLIC COMMENT: Robert Foster, applicant, cited his parents' long-term presence in the community when involved with June Mountain. With an entrepreneurial streak for himself and June Lake, he wanted a high-end home to rent to high-end clientele. He's trying to go green, be above-board. Six cars would fit, but he wants only three. Adjacent to Four Seasons and Carson Peak Inn, neighbors likely are not interested. He has a strong interest in sustainable economic growth and wants to keep property as part of his heritage.

Simon requested a legal description of the property.

DISTRICT #1
COMMISSIONER
Mary Pipersky

DISTRICT #2
COMMISSIONER
Steve Shipley

DISTRICT #3
COMMISSIONER
Daniel Roberts

DISTRICT #4
COMMISSIONER
Scott Bush

DISTRICT #5
COMMISSIONER
Chris Lizza

Nadia Foster, co-applicant, cited the time invested in transforming the home into a beautiful retreat and preserving its qualities. It loses luxury feel if more than eight people stay. The Fosters' personal restrictions are more severe than Mono's. **CLOSE PUBLIC COMMENT.**

MOTION: Find that the project is exempt from CEQA as a Categorical Exemption and direct staff to file a Categorical Exemption; approve Resolution R12-04; recommend approval of GPA 12-003(a) to the Mono Supervisors (BOS); and make required findings in project staff report; and approve Conditional Use Permit 12-003 subject to Conditions of Approval with associated deed restriction. The permit takes effect upon BOS approval. (Bush/Lizza. Ayes: 4. Absent: Pipersky.)

ADJOURN TO SITE VISIT AT GEOTHERMAL PLANT: 10:37 a.m.

- 5. SITE VISIT OF MAMMOTH PACIFIC I REPLACEMENT PROJECT.** The site visit was for the provision of visual information regarding the site only – no action was taken nor comments received.

--- LUNCH BREAK ---

6. PUBLIC HEARING:

B. MAMMOTH PACIFIC I REPLACEMENT PROJECT FINAL ENVIRONMENTAL IMPACT REPORT (FEIR), CLARIFYING GENERAL PLAN AMENDMENT 12-003 (b), CONDITIONAL USE PERMIT 12-004, VARIANCE 12-002 & RECLAMATION PLAN 12-001. The Planning Commission may: 1) certify the FEIR; 2) approve Conditional Use Permit 12-004 for the M-1 Replacement Plant (including the granting of a height exception for mechanical appurtenances) and decommissioning/reuse of the existing MP-I plant site as a storage area; 3) approve Variance 12-002 for setback reductions from an exterior property line and blue line stream, and to construct an above-ground electrical transmission line; and 4) approve Reclamation Plan 12-001. The Planning Commission may also recommend that the Board of Supervisors certify the FEIR and approve General Plan Amendment 12-003 to clarify the County's intent and interpretation of Chapter 15, section 15.070 (B)(1)(d) and Objective D, Policy 1, Action 1.13 of the Energy Resources section of the Conservation and Open Space Element pertaining to setbacks from a blue-line stream. The proposed project would replace the aging MP-I geothermal power plant with a new, more-modern and -efficient binary power plant (referred to as "M-1") while maintaining the existing geothermal wellfield, pipeline system and ancillary facilities. No new offices or other structures are proposed, with the exception of a small substation to be placed on the north side of the project site. The M-1 plant would be located ~500' east of the existing MP-I plant, which is located ~1,200' northeast of the intersection of US Highway 395 and State Route 203 on 90 acres of private (fee) land owned by Ormat Nevada, Inc. The M-1 replacement power plant is anticipated to increase the net electricity generation by 34% while utilizing the same geothermal resources for the existing MP-I facility. 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 the applicant would close and dismantle the old MP-I plant and would utilize the former plant location for equipment storage. The transition period during which both the MP-I and M-1 operations would overlap but would not exceed two years from the date the M-1 plant begins startup operations. *Staff: Courtney Weiche, associate planner, and Gerry Le Francois, principal planner*

Courtney Weiche and Gerry Le Francois reviewed the current facility, in operation since 1984, and presented the proposed CUP, variance, reclamation plan, and Clarifying General Plan Amendment. Rob Carnahan, Project Environmental Services, presented CEQA materials. A public scoping meeting was held February 2011, and EIR on project impacts was released July 2011. Six agency and public comments were received. A revised/recirculated DEIR in February 2012 received 10 comments. Based on comments, clarifications to General Plan were made as an additional component. RDEIR2 had revisions, but did not replace RDEIR. New land use and planning items were added. Two comments were received after July 2012 release.

Stacey Simon cited documents received just today from Lozeau/Drury, Adams Broadwell, Joseph & Cardozo. Commissioner Shipley stated that last-minute documents can't be read in two minutes without any background. Revised Resolution R12-05 was made available to the public, with minor changes to Exhibits B and C, which were explained by staff.

OPEN PUBLIC COMMENT: Fred Stump, Long Valley Fire Protection District, is still conducting fire code review, and retained consulting firm using designers hired by Ormat. Height was not an issue for FPD.

Any history of incidents? In 1980s, leaked fluid ignited, with exposure problems for adjacent piping. A fire-protective water system has been installed since. A second system for redundancy has been proposed.

Ron Leiken represented Ormat, a publicly traded company on the New York Stock Exchange. Ormat has been around since 1960s, is a geothermal pioneer in 24 countries, and supplies equipment to other companies. Mammoth Pacific was a subsidiary of Ormat until 2010, when Ormat purchased all interest. MP-1, built in 1984, owns 90 acres. Leiken discussed Ormat's excellent environmental record of no adverse impacts. Economic benefits: stable primary employment, with royalties to feds (\$90,000/yr). Recognition: Ormat has received awards and recognition from agencies. New M-1 plant would replace MP-I, produce 15% more energy with same amount of resource, and be reclaimed as storage site when M-1 becomes operational. Steam emanates from a natural steam vent, not emission from the plant. Ormat tried to avoid site limitations, and the proposed site is the only one found. Without a variance, project would have geologic and related impacts. An economic boost during construction would be \$9.9 million to Mono County and hiring local contractors.

Elizabeth Klebaner, California Unions for Reliable Energy, sent comments on all EIRs, with focus on CEQA: 1) conflict with General Plan; 2) air quality: excess emissions, uncontrolled leaks; 3) biological impacts: no geothermal within 500' of blue-line stream. Setbacks hold unless revised in Specific Plan (SP). Variance is applicable only if not in conflict with Specific Plan policies. Mono included Long Valley HAC information, but data do not relieve Mono from impacts that were not evaluated or mitigated. Invalid to claim it does not affect Hot Creek. She disagreed that resource is stable. Conclusion: Take no action, direct staff to fix deficiencies in EIR, recirculate.

Commissioner Bush asked Klebaner why she was here. "Who do you represent?" he inquired. *CURE = California Unions for Reliable Energy, which is interested in sustainable projects. Its stakeholders recreate/reside in Mono and include thousands of members.* Bush requested a list of residents to talk to. Commissioner Shipley noted statements contradictory to the opposite side. What is the source of expertise? Who said what? *Separate analysis.* Commissioners are lay people who don't want to debate. Bush stated Ormat is not a new thing. "It's been running 28 years with no big problems. Now they're telling us it's terrible? It's been a good experience so far," he said.

Mitchell Tsai, Laborers International Union of North America, Local Union 783, cited concern that the project not be detrimental to residents or workers. Mitigate impacts, comply with environmental laws. Ensure sustainable levels of mule deer. Their expert biologist concluded significant impact on mule deer. Impacts have not been reduced to less-than-significant levels.

Commissioner Bush asked Tsai if he wanted to stop the plant also. Bush commented that deer seem to be resilient, and the herd hangs around. Tsai cited issues with FEIR: Failure to adopt mitigation measures, particularly no lineal barriers that would block migration (he suggested underground). Bush asked if mitigation is enough to stop a project that's been running well for nearly 30 years. Stacey Simon clarified that County's deer expert did not conclude that there would be a significant impact to deer. Tsai contended that additional replacement facility would eliminate 5.7 acres of critical deer habitat. Commissioner Shipley asked if a field study was done or they relied on prior information. Every project that comes up involves deer migration. Who said what, when, how. Road kill occurs every year. Bush noted that normally the goal is to stop a project, but Tsai represents people who would work on the project.

Curt Nan Nest described Ormat as a great contract to work with, into safety issues, and employees are friends who live in Inyo and Mono raising families. All experts looked at this project.

Rick Joy, who has worked in Mono County since early 1980s, knows Ormat's reputation and wants to take advantage of natural geothermal resource.

David Harvey, Mammoth Lakes planning commissioner but not here in that role, has worked with Ormat for years, and thought it unconscionable to delay the process any more. No significant negative impacts have occurred in 30 years of operation. An EIR is a subjective document that folks will pick to pieces forever. The commission will take testimony and make a decision. "It's time to move forward, get local economy back on track; local laborers are ready and willing to work. Make good positive decisions for our community. The tactic is delay, delay, delay," he said.

Brent Allen, nearly 30-yr Mono resident, has worked with Ormat since it came here and found it responsible and optimistic about resource use. He wanted to support companies here to help us.

Jim McDade, vendor from Inyo County, saw Ormat as safety conscious. He supported the project, as he relies on what goes on in Mono County.

Dan Lyster chairs the Long Valley Hydrologic Advisory Council (HAC), which has collected monitoring data the last 26 years. Changes have occurred, but causes are uncertain. "Scientists do not editorialize on change," he said. Precipitation and seismic events influence the system. No effects have been attributed to the facility. HAC monitors hydrology only, not air. Changes occurred due to low precipitation and low runoff. Systems are all tied together. Fish hatchery is still operating, plant too.

Commissioner Lizza asked Lyster if streams through property are fed by an ephemeral stream, and would the flow end up in Mammoth Creek? *It used to flow into Mammoth Creek. More flow occurred last year, but never enough to adequately support biological resources because they're affected by precipitation.* Commissioner Shipley noted grass growing throughout, looked like drainage ditch. Scott Burns stated policies were developed 20 years ago, after plant was built. Any effect on streambed from existing plant? *Not to Lyster's knowledge.*

--- STAFF REQUESTED RECESS AT 2:55 P.M. TO CONFER, RECONVENED AT 3:24 P.M. ---

Dr. Jim Paulus, project biologist who has consulted here for 20 years, described Ormat as one of his better clients. He has done a lot of research (four studies in last year) and found Ormat to be conscientious. Confusion emerges about judging impact and sufficient mitigations. Comments seemed to result from unfamiliarity with the area, possibly not being around deer. He showed on a whiteboard a constrained corridor between structures as the only place for deer. Aboveground transmission line being added to existing transmission line rack – no new barrier. Mitigation would set aside corridors for preservation, not further block existing corridor, with earthen ramp over existing pipes. A small number of deer reside here. Only 1.5%-2% go to Mammoth Creek for water or migration.

Stacey Simon asked Dr. Paulus to address assertion by LIUNA's consultant that loss of area under site of proposed plant is significant impact, but Dr. Paulus disagreed, didn't see deer using it.

Rob Carnahan, EIR consultant, addressed purported General Plan conflict, air quality emissions (does not emit ozone itself), and biological impact on deer (citation provided by commenter's deer expert in 1987 was undercut by study cited). Lyster noted attempts to mitigate impact of pipelines last several years. Vegetation intended to screen pipeline was eaten by deer.

Stacey Simon noted that staff initially saw a tough call whether to respond to General Plan comment, but realized clarification would just moot the issue and ensure that the language was consistent with the County's intention and prior interpretation. Mono integrated zoning into its General Plan pursuant to 1998 Attorney General opinion, and setbacks are traditional zoning regulations. Ch. 33 provides for variances from Land Development Regulations (zoning-type requirements) located in the General Plan. A 500' setback for geothermal development within the Hot Creek Buffer Zone from blue-line streams is established by Land Development Regulations. Mandatory General Plan elements are traditional, broad goals and policies all the way down to action items. Majority of action items refer to something already done or that should be done in future. Goal is protecting hydrologic resources. Action 1.13 is merely a reference to the Land Development Regulation in Chapter 15, not a re-imposition of that regulation. Commenter claims it was imposed twice in different General Plan elements. Revise Conservation/Open Space Element to be consistent. A variance is a discretionary act and the commission may or may not approve, at its discretion, but the alleged General Plan inconsistency would become a moot issue by clarifying. Asserted it's a conflict, but staff doesn't think it is. The County has adopted regulations restricting geothermal development within 500' of a water course unless a variance is granted. Staff didn't see inconsistency. It was misreading of language, so change language to be clear to all parties. It's a non-issue from staff perspective. Simon suggested clarifying Condition #3: *The rate of geothermal fluid production supplying the Casa Diablo geothermal complex shall not exceed existing geothermal fluid flow utilized in the complex.*

Chair Shipley asked if there was any additional public comment. There being none, public comment was closed. **CLOSE PUBLIC COMMENT.**

DISCUSSION: Commissioner Lizza noted only a 50' section appears to intrude into 100' setback, not entire plant. Ephemeral stream is impacted much more by existing plant. Deer population: Evaluated by expert and CDFG had no negative comments. Union representatives talk about families, but workers would be away from family if working here. Far less environmental impact results from geothermal than fossil fuels. "It's difficult to respond to input and comments presented at the beginning of a meeting when document is several pages long. If you want serious consideration, get it to commission earlier, or it seems like a delay tactic. Late submission of comments at a meeting doesn't show respect to commission or desire to evaluate comments."

Commissioner Bush heard no one state outright opposition to the project, but thought it could be better or more thorough. Every expert saw the project as a positive. He favored this project that would put people to work.

Commissioner Roberts reminded that staff had recirculated the EIR, and he saw no reason for more delay.

Commissioner Shipley considered successful track record of the plant, nearly nonexistent impacts, putting people to work, and an upgrade for safety and efficiency as win/win. Impact on deer is nonexistent. Locating plant in already-disturbed site leaves nothing to reclaim, just brush to grow back. He stated he was totally in favor of this project that's been "rehashed a million times over," and recommended moving forward.

MOTION: Recommend adoption of Resolution R12-05 taking the following actions:

- Adopt and certify the Final EIR and mitigation monitoring and reporting program for Mammoth Pacific 1 Replacement Project, finding that:
 1. In compliance with CEQA Guidelines Section 15090 (a);
 - a. The Final EIR has been completed in compliance with CEQA;
 - b. The Final EIR was presented to the decision-making body of the lead agency, and that the decision-making body reviewed and considered the information contained in the Final EIR prior to approving the project; and
 - c. The Final EIR reflects the lead agency's independent judgment and analysis.
- Make required findings and approve Use Permit application 12-004 subject to the Mitigation Monitoring and Reporting Program and Conditions of Approval, as modified; and
- Make required findings and approve Variance 12-002 subject to the Mitigation Monitoring and Reporting Program and Conditions of Approval; and
- Make required findings and approve Reclamation Plan 12-001, subject to the Mitigation Monitoring and Reporting Program and Conditions of approval; and
- Make required findings and recommend that the Board of Supervisors approve Clarifying General Plan Amendment 12-003(b), with rewording to the Conservation/Open Space Element suggested by Commissioner Lizza: *Action 1.13: No geothermal development located within the Hot Creek Buffer Zone shall occur.* The County has adopted land development regulations for geothermal development within 500 feet on either side of a surface watercourse (as indicated by a solid or broken blue line on U.S. Geological Survey 7.5- or 15-minute series topographic maps) within the Hot Creek Buffer Zone (See Mono County Land Development Regulations, Chapter 15, section 15.070(B)(1)(d) ,) which are subject to variance only in accordance with Chapter 33 of the Mono County General Plan.
- Condition #3: The rate of geothermal fluid production supplying the Casa Diablo geothermal complex ~~during the startup operating transition period during which both the proposed M-1 power generation facilities and the existing MP-1 plant power generation facilities may operate at the same time~~ shall not exceed existing geothermal fluid flow utilized in the complex.
(Bush/Roberts. Ayes: 4. Absent: Pipersky.)

7. WORKSHOP: None

8. REPORTS:

A. DIRECTOR: 1) November meeting: White Mountain Specific Plan/Tract Map revision and D395 overhead line. 2) Cell tower: Conditions satisfied. 3) June Lake winter: Residents are developing a plan. 4) Flood maps: Higerd held well-attended meeting in Chalfant Valley. Update floodplain regulations in a cleanup GPA.

B. COMMISSIONERS: None.

9. ADJOURN: 4:11 p.m.

Prepared by C.D. Ritter, commission secretary



RESOLUTION R12-05

**A RESOLUTION OF THE MONO COUNTY PLANNING COMMISSION
CERTIFYING THE FINAL ENVIRONMENTAL IMPACT REPORT
FOR THE MAMMOTH PACIFIC I REPLACEMENT PROJECT,
APPROVING A CONDITIONAL USE PERMIT, VARIANCE, AND RECLAMATION PLAN
FOR THE PROJECT, AND RECOMMENDING THAT THE BOARD OF SUPERVISORS
APPROVE A CLARIFYING AMENDMENT TO THE MONO COUNTY GENERAL PLAN
REGARDING GEOTHERMAL DEVELOPMENT
WITHIN 500 FEET OF A MAPPED WATERCOURSE**

WHEREAS, the Mammoth Pacific I Replacement Project proposes to replace the existing MP-1 power plant, located near Casa Diablo Hot Springs, with a new, more modern and efficient binary power plant to be located on the same site; to provide for reclamation and partial reuse of the existing power plant site; and to provide for the ultimate reclamation of all operations on the site, without altering the existing geothermal well field or changing the level of geothermal extraction (the "Project"); and

WHEREAS, the Project includes approval of a Conditional Use Permit; approval of a variance from the 100-foot property-line and 500-foot stream setbacks applicable to geothermal development, authorization for the placement of an aboveground transmission pipeline, and a recommendation that the Board of Supervisors add clarifying language to the Mono County General Plan related to the 500-foot stream setback; and

WHEREAS, Mono County has caused to be prepared an Environmental Impact Report (EIR) pursuant to the California Environmental Quality Act (CEQA) for the Project; and

WHEREAS, the Mono County Planning Commission did, on October 11, 2012, hold a properly noticed and advertised public hearing to hear all testimony relevant to the Project, Final EIR, and approvals; and

WHEREAS, based on the information provided in the draft and Final EIRs, public comment received on the Project, and taking into account the recommendations of staff, the Mono County Planning Commission desires to approve the Conditional Use Permit, grant the requested variance, approve the Reclamation Plan, and recommend that the Board of Supervisors approve the clarifying General Plan amendment.

NOW, THEREFORE, Mono County Planning Commission hereby **FINDS** and **RESOLVES** that:

1. A Final Environmental Impact Report (Final EIR) has been completed for the Project in compliance with CEQA; and
2. The Final EIR has been presented to the Planning Commission, which is the decision maker with respect to the Conditional Use Permit, Variance, and Reclamation Plan for the Project and is the advisory body to the Board of Supervisors with respect to the proposed General Plan Amendment; and

3. The Planning Commission has reviewed and considered the information contained in the Final EIR (and the draft EIRs) for the Project; and
4. The Final EIR reflects the lead agency's independent judgment and analysis; and
5. The Final EIR has identified potentially significant effects of the project which, as the result of changes or alterations incorporated into the Project, have been avoided or reduced to a less-than-significant level, as set forth in Exhibit A to this resolution, which is hereby incorporated by this reference as if fully set forth herein; and
6. Potential alternatives to the proposed Project are either not feasible or do not provide environmental benefit in comparison to the proposed Project, as set forth in Exhibit A; and
7. The Mono County Planning Commission does hereby certify and adopt the Final EIR and the mitigation monitoring and reporting program for the Mammoth Pacific I Replacement Project.

BE IT FURTHER RESOLVED THAT the Mono County Planning Commission hereby:

1. Makes each of the findings set forth in Exhibit B to this resolution, which is hereby incorporated by reference as if fully set forth herein, related to approval of a variance from specified provisions of the Land Development Regulations and Land Use Designation; and
2. Approves Variance 12-002 authorizing a variance from the 100-foot property line setback, a variance from the 500-foot surface watercourse setback, and a variance from the provisions of section 11.010 of the General Plan related to the undergrounding of utilities for the Project, as described in the EIR.

BE IT FURTHER RESOLVED THAT the Mono County Planning Commission hereby:

1. Makes each of the findings set forth in Exhibit C to this resolution, which is hereby incorporated by reference as if fully set forth herein, related to approval of a Conditional Use Permit for the Project; and
2. Approves Conditional Use Permit 12-004 for the Project, including all Conditions of Approval, the Mitigation Monitoring, and Reporting Program, and a height exception for mechanical appurtenances, as described in the EIR.

BE IT FURTHER RESOLVED THAT the Mono County Planning Commission hereby:

1. Makes each of the findings set forth in Exhibit D to this resolution, which is hereby incorporated by reference as if fully set forth herein, related to approval of a Reclamation Plan for the Project; and

2. Approves Reclamation Plan 12-001 for the Project.

BE IT FURTHER RESOLVED THAT, the Mono County Planning Commission hereby:

1. Finds that the proposed change to the text of the Land Development Regulations of the General Plan in General Plan Amendment 12-003(b) is consistent with the General Plan and any applicable area plan as set forth in Exhibit E to this resolution, which is attached hereto and hereby incorporated by reference; and
2. Recommends that the Board of Supervisors approve the Final EIR and GPA 12-003(b), which clarifies existing language in the Mono County General Plan related to setbacks from a surface watercourse applicable to geothermal development.

PASSED AND ADOPTED this 11th day of October, 2012, by the following vote of the Planning Commission, County of Mono:

AYES : Scott Bush, Chris Lizza, Dan Roberts, Steve Shipley

NOES :

ABSENT : Mary Pipersky

ABSTAIN :

Steve Shipley, Chair

ATTEST:

APPROVED AS TO FORM:

CD Ritter
Secretary of the Planning Commission

Stacey Simon
Assistant County Counsel

EXHIBIT A

DRAFT ENVIRONMENTAL IMPACT FINDINGS PURSUANT TO CEQA GUIDELINE SECTION 15091 MAMMOTH PACIFIC I REPLACEMENT PROJECT FINAL ENVIRONMENTAL IMPACT REPORT

The State of California Public Resources Code Section 21081 and CEQA Guidelines Section 15091 require a public agency, prior to approving a project, to identify significant impacts of the project and make one or more of three allowable findings for each of the significant impacts:

- The first allowable finding is that “[c]hanges or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR.” (State CEQA Guidelines Section 15091, subd. (a)(1))
- The second allowable finding is that “[s]uch changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.” (State CEQA Guidelines, Section 15091, subd. (a)(2))
- The third allowable finding is that “[s]pecific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR.” (State CEQA Guidelines, Section 15091 (a)(3))

After reviewing the Final EIR and the public record on the Project, the County hereby makes the findings in Parts I through IV of this document regarding the significant effects of the Mammoth Pacific I Replacement Project (Project) pursuant to Section 15091 of the State CEQA Guidelines.

All effects of the Project on the environment are hereby found to be not significant after mitigation. Cumulative impacts of the Project in conjunction with other related approved, proposed, or projects currently under construction have been addressed where applicable, and would not be significant after mitigation.

PART I: FINDINGS RELATIVE TO POTENTIALLY SIGNIFICANT IMPACTS

Because certain effects of the Project were analyzed in the EIR as *potentially* significant and because project design features, alterations, or mitigation measures have been imposed which avoid or further reduce those effects, the Planning Commission hereby finds as follows:

A. Aesthetics

1. Potentially Significant Effect: The Project could substantially degrade the existing visual character or quality of the site and its surroundings if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features designed to screen the proposed M-1 plant from public view. These features consist of earth-tone painting, pine tree preservation, a restriction on the height of materials stored, and placement of the interconnection transmission line near ground level. In addition, a Landscape Plan has been prepared and must be approved by the

County. The Landscape Plan identifies specific visual screening measures to be implemented at the storage yard to be located in the footprint of the existing MP-I plant, which is to be removed. With implementation of these design features and the protection measure, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could create a new source of substantial light or glare that would adversely affect nighttime views in the area if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features to reduce nighttime visibility caused by lighting of the proposed M-1 plant and associated facilities. These features consist of downward projection of power plant lighting and preparation/implementation of an Outdoor Lighting Plan for the Project in conformance with County Dark Sky Regulations. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

B. Air Quality

1. Potentially Significant Effect: The Project could conflict with or obstruct implementation of the applicable air quality plan if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features designed to eliminate the potential for conflicts with applicable Great Basin Unified Air Pollution Control District (GBUAPCD) plans and policies, including obtaining an Authority to Construct permit for the proposed M-1 plant and permits to operate the diesel fueled emergency generator and firewater pump generator. All permits shall be obtained from the GBUAPCD. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could result in the violation of an air quality standard or contribute substantially to an existing air quality violation if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features to ensure that air pollution emissions from the site are reduced to the maximum extent practicable. These features consist of installing a vapor recovery unit to capture motive fluid that could otherwise be released during plant maintenance and compliance with fugitive dust emission control measures during Project construction activity.

With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

C. Biological Resources

1. Potentially Significant Effect: The Project could have a substantial adverse effect on riparian habitat and/or federally protected wetlands as defined by Section 404 of the Clean Water Act if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features designed to reduce soil erosion and sedimentation impacts associated with runoff from the Project site. These design features include installation of a subsurface retention basin at the proposed M-1 plant site, implementation of erosion control/stormwater construction best management practices (BMPs) in the interim site reclamation plan for the MP-I plant site, and implementation of M-1 plant site construction and post-construction BMPs. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could interfere with the movement of 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 if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features intended to reduce potential interference with fish and wildlife. These design features include (a) implementation of a 15 mile-per-hour speed limit for all on-site construction vehicles; (b) construction and operation noise reduction measures including use of noise attenuation devices on construction equipment; (c) incorporation of erosion/sedimentation and spill control measures into the Project design, including a Spill Prevention, Control and Countermeasure (SPCC) Plan; (d) avoiding removal of existing trees in the placement of the interconnection injection pipeline; (e) prohibition on the installation of linear barriers to movement of deer or other wildlife between the existing plant and the replacement plant; (f) construction of a new deer crossing; (g) maintenance of existing mule deer movement corridor on northeastern side of complex; (h) fencing of waste facilities to avoid attracting potential predators; (i) shielding of lighting; (j) dog leash requirements; (k) slope limitations to prevent wildlife from being trapped in basins; (l) installation of passive raptor deterrents, and (m) revegetation requirements. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

3. Potentially Significant Effect: In the absence of the Project, there could be an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service if not subject to design features, alterations, or mitigation measures.

Statement of Facts: MPLP is currently conducting the hydrologic and biological monitoring prescribed by Mono County General Plan with respect to its existing operations, but existing permit requirements for such monitoring only exist under the MP-II and PLES-I project approvals. Should these two projects be abandoned prior to the abandonment of the MP-I Replacement Project, there would be no permit requirement to continue the prescribed monitoring for what could be an extended MP-I project life. Should the existing geothermal resource production and injection activities from the MP-I Plant result in changes in the temperature, flow rate or quality of the Hot Creek headsprings supporting the critical habitat of the Owens tui chub, then this could be a potentially significant impact under CEQA. Bio Mitigation Measure 1, which subjects the Project to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the County General Plan, would ensure that such monitoring continues.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact from existing operations to a level that is less than significant.

4. Potentially Significant Effect: The Project could have an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service if not subject to design features, alterations, or mitigation measures.

Statement of Facts: As a result of the findings of the baseline biological resources survey, multiple actions were identified which, if implemented, would further reduce the potentially adverse effects of the Project on biological resources. These actions and others identified by this assessment have been compiled into required Bio Protection Measures 2 through 16. With implementation of these protection measures, Project impacts would remain less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

D. Cultural Resources

1. Potentially Significant Effect: The Project could cause a substantial adverse change in the significance of a historical or archaeological resource, may directly or indirectly destroy a unique paleontological resource, and/or may disturb undocumented human remains if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a design feature intended to reduce any potential impact to historical, archaeological, or paleontological resources that may be encountered at the Project site. This design feature requires the implementation of all environmental protection measures to reduce the adverse effects of the Project on cultural resources that were recommended in the baseline cultural resources survey reports prepared for the Project area. In addition, Cultural Protection Measure 1 is required to ensure that any human remains encountered during the construction phase of the Project are properly treated. With implementation of this design feature and protection measure, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

E. Geology and Soils

1. Potentially Significant Effect: The Project could expose structures to potential substantial adverse effects, including the risk of loss involving rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features intended to reduce any potential adverse effects resulting from seismic activity in the surrounding vicinity. These design features would require the implementation of all measures recommended in the geotechnical site investigation reports to mitigate impacts due to geotechnical, soils, and geologic constraints; as well as require that all Project structures be constructed to meet applicable earthquake safety codes and the 2010 Uniform Building Code adopted by the County. In addition, Cultural Protection Measure 1 is required to ensure that any human remains encountered during the construction phase of the Project are properly treated. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

F. Hazards and Hazardous Materials

1. Potentially Significant Effect: The Project could create a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a design feature requiring that no hazardous materials, chemicals, or wastes be stored in the new storage yard to be constructed in the footprint of the decommissioned MP-I plant. With implementation of this design feature, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features requiring that (a) the power plant site be designed and constructed to prevent fluids from leaving the site and to prevent runoff from being channeled or directed in an unnatural way so as to cause erosion or siltation; (b) install and maintain a system of pressure and flow sensing devices capable of detecting leaks and spills and regular inspection of all lines; (c) include the M-1 plant site and operations within the existing hazardous material management and emergency response program at the Casa Diablo geothermal complex; and (d) include the M-1 plant and operations within the existing fire prevention and suppression program at the Casa Diablo geothermal complex. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

G. Hydrology and Water Quality

1. Potentially Significant Effect: The Project could provide additional sources of polluted runoff if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project shall implement design features designed to reduce soil erosion and sedimentation impacts associated with runoff from the Project site. These design features include installation of a subsurface retention basin at the proposed M-1 plant site, implementation of erosion control/stormwater construction best management practices (BMPs) in the interim site reclamation plan for the MP-I plant site, and implementation of M-1 plant site construction and post-construction BMPs. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could degrade water quality if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a design feature to reduce the potential for pollution to reach surface drainages. This design feature includes incorporation of erosion/sedimentation and spill control measures into the Project design, including a Spill Prevention, Control and Countermeasure (SPCC) Plan. The power plant site must also be designed and constructed to prevent spills from leaving the site and to prevent runoff from being channeled or directed in an

unnatural way so as to cause erosion or siltation. In addition to this design feature, implementation of Hydro Mitigation Measures 1 and 2 is required in order to provide additional spill containment and emergency response planning at the Project site. Hydro Mitigation Measure 3, which would subject the Project to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the County General Plan, (to which the existing MP-1 plant is not currently subject) will further enhance such protections.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

3. Potentially Significant Effect: The Project could violate waste discharge requirements if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a design feature to avoid the alteration of or discharge of material to the existing stream channel crossing the site. No element of the project construction will result in the alteration of, or discharge of fill material to, the blue-line drainage channel that crosses the site between the existing MP-I and proposed M-1 plant sites, adjacent to Old Highway 395. Prior to commencement of construction, the Applicant shall provide to the County the proposed engineering design for the road crossing which demonstrates to the County that no impact to this drainage channel would occur as a result of project construction. With implementation of this design feature, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

H. Noise

1. Potentially Significant Effect: The Project could result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project shall implement design features to reduce noise associated with Project construction activities. These design features limit construction activities to daylight hours, require on-site construction equipment to be equipped with noise attenuation devices, and require all construction activities and normal Project operations to comply with applicable County noise requirements. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

I. Cumulative Effects

1. Potentially Significant Effect: The Project could combine with existing development in the vicinity to create a new source of substantial light or glare

that would adversely affect nighttime views in the area if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a protection measure to reduce nighttime lighting within the Casa Diablo geothermal complex. This protection measure requires that all projects within the Casa Diablo geothermal complex comply with applicable County lighting standards. With implementation of this protection measure, cumulative impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could combine with existing development in the vicinity to result in the violation of an air quality standard or contribute substantially to an existing air quality violation if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a protection measure to ensure that fugitive dust emissions from the site are reduced to the maximum extent practicable. This measure restricts Project-related vehicle speeds on all unpaved access roads to 15 miles per hour. With implementation of this protection measure, cumulative impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

3. Potentially Significant Effect: The Project could combine with existing development in the vicinity to interfere with the movement of 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 if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements Cumulative Bio Mitigation Measure 1 to reduce potential interference with fish and wildlife. This mitigation requires that constraints to wildlife movement through the Casa Diablo Hot Springs area be evaluated as part of any new development project proposed in the area. Measures shall be included as part of each new development project that would prevent the respective project from becoming a substantial obstacle to wildlife movement through or around the respective proposed development area. With implementation of this mitigation measure, cumulative impacts would be reduced to a less than significant level.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

4. Potentially Significant Effect: The Project could combine with existing development in the vicinity to have an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the

California Department of Fish and Game or U.S. Fish and Wildlife Service if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The storage of water in lined wellfield basins would continue to attract wildlife and has the potential for similar cumulative impacts on wildlife as a result of any wellfield expansion associated with new geothermal development that is not a part of the Project. The existing wellfield could be expanded by the addition of new wells and well sites to provide the additional geothermal fluid needed to support the proposed CD-4 power plant. This impact could be cumulatively significant if future lined well site basins are constructed in a manner that prevents wildlife from escaping from the basins. Cumulative Bio Mitigation Measure 2 is therefore required for County approved projects and should be considered as a requirement by federal agencies as a stipulation for approval of geothermal projects on public land in the vicinity of Casa Diablo Hot Springs. With implementation of this mitigation measure, cumulative impacts would be reduced to a less than significant level.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

5. Potentially Significant Effect: The Project could combine with existing development in the vicinity to have an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service if not subject to design features, alterations, or mitigation measures.

Statement of Facts: MPLP is currently conducting the hydrologic and biological monitoring prescribed by Mono County General Plan, but existing permit requirements for such monitoring only exist under the MP-II and PLES-I project approvals. Should these two projects be abandoned prior to the abandonment of the MP-I Replacement Project, there would be no permit requirement to continue the prescribed monitoring for what could be an extended MP-I project life. Hydro Mitigation Measure 3, would subject the Project to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the County General Plan, preventing such a lapse from occurring.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

6. Potentially Significant Effect: The Project could combine with existing and/or proposed geothermal development in the vicinity to degrade water quality if not subject to design features, alterations, or mitigation measures.

Statement of Facts: Should the continued geothermal resource production and injection activities from the MP-I Project, in combination with other existing and future geothermal power plant projects in the Hot Creek Buffer Zone, result in changes in the temperature, flow rate or quality of the Hot Creek headsprings used for Hot Creek Fish Hatchery operations, then this could be a potentially significant impact under CEQA. Cumulative Hydro Mitigation Measure 3, which would subject all existing and future geothermal power plant projects in

the Hot Creek Buffer Zone, or in the vicinity of Casa Diablo Hot Springs, to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the County General Plan, would reduce this potential impact to a less than significant level.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

PART II: FINDINGS RELATIVE TO UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL EFFECTS

No unavoidable significant environmental effects would result from implementation of the Project.

PART III: FINDINGS RELATIVE TO ALTERNATIVES

1. No Project Alternative: If the Project is denied, the existing MP-I power plant would not be replaced by the new technology proposed for the Project, and the more efficient conversion of the available geothermal heat energy to electrical energy afforded by the proposed replacement plant technology and equipment would not be realized. The aging MP-I power plant would be expected to continue to operate as long as repair and restoration of the facility remains economically practical, but the long-term continuing utilization of the MP-I project geothermal resources could be shortened due to eventual equipment failure. The No Project Alternative would not meet most of the basic project objectives. Objectives that would not be met include (a) Applicant's objectives: to *optimize the amount of electrical energy that can be generated from the available geothermal resources*, and to *ensure continuous power generation and maximize utilization of the geothermal resource ...*; and (b) the County goals, policies and objectives: to *permit the productive and beneficial development of alternative energy resources, including geothermal resources*; and to *ensure the orderly and sound economic development of geothermal resources...*

FINDING: The No Project Alternative is infeasible because it is inconsistent with and does not meet project objectives.

2. Alternative Power Plant Location (North Site): The selected North Site Alternative would be on public land administered by the USFS located north of the existing SCE substation and east of the proposed Casa Diablo IV Geothermal Development Project (CD-4) power plant site. It is assumed that the North Site Alternative would be constructed within an approximately 5.7-acre footprint essentially the same as that described for the Project. An approximately 600-foot interconnection transmission line would need to be constructed from the alternative plant site to the existing SCE substation. In addition, new production and injection fluid pipelines would need to be constructed to the North Site Alternative plant site. The new pipelines would be assumed to parallel the pipeline route of the proposed CD-4 Project from the existing MP-I plant site to the North Site Alternative plant site – a distance of about one mile. The construction, MP-I decommissioning, operations, and eventual site reclamation of the North Site Alternative geothermal development would be essentially the same as those activities described for the Project with only minor site-specific adjustments. Approval for development on the North Site Alternative would require NEPA review and approval from federal agencies.

FINDING: The North Site Alternative would result in very similar impacts to those identified for the proposed Project. However, selection of the North Site Alternative plant site would require construction of approximately one mile of new geothermal pipeline corridor resulting in greater impacts on biological resources and more construction related air emissions. The location of the North Site Alternative plant site would be within a Jeffrey Pine forested area and would be susceptible to greater potential wildland fire hazard than the proposed M-1 plant site. This was determined to be a potentially significant impact. The North Site Alternative power plant site would be less visible from major roadways than the proposed Project plant site, but visual impacts were not determined to be significant from either of the plant sites. The proposed Project is considered environmentally superior to the North Site Alternative.

3. Identification of the Environmentally Superior Alternative: The proposed Project, as amended by the conditions and mitigation/protection measures prescribed in the EIR, is the environmentally superior alternative based on the discussion and findings above.

Exhibit B
Variance 12-002
Findings and Rationale

A. Because of special circumstances (other than monetary hardship) applicable to the property, including its size, shape, topography, location, or surroundings, the strict application of the provision of the land use designations or land development regulations deprives such property of privileges (not including the privilege of maintaining a nonconforming use or status) enjoyed by other property in the vicinity and in an identical land use designation.

1. Setbacks. The proposed Project includes a request for a variance from two required setbacks; 100 feet from the south line and 500 feet from a surface watercourse. The proposed locations on the site were specifically chosen, and the requested variances are needed, to avoid the many geological and geotechnical constraints present in the Project parcel area and to minimize lot disturbance. As stated in the letter from Black Eagle Consulting, Inc. (BEC) dated September 7, 2012, (the “BEC Letter”), the proposed location is necessary to minimize risks to the plant, its supporting facilities, and operating personnel. In addition, continued use of the existing plant site for ancillary facilities reduces site disturbance by avoiding the relocation of those uses to another area on the site.

A number of geologic hazards are inherent to the surrounding areas on the parcel. To the north and east of the proposed plant location (away from the south property line) are extremely hot soils as well as active steam vents and associated weak soils. These conditions are hazardous to both personnel and plant equipment. Moving the facilities north would also greatly increase the size of the cut slope and raises the elevation so that they would be more visible from Highway 395. Site disturbance would also increase, as the existing plant location would not be utilized.

Moving the facilities to the south would cause them to be closer to the property line and would place critical structures on highly compressible soils, unsuitable for conventional foundation support or even placement of the necessary fill. Moving the replacement plant to the west would bring it even closer to the intermittent stream as well as to an active, unnamed fault located about 0.1 miles to the west of the western boundary of the proposed site. There are active steam vents associated with this fault that must be avoided.

Other properties within the Hot Creek Buffer Zone are currently developed with geothermal facilities (as described in section 5.1.1 of the EIR, and figure 38) or proposed for future development and thus enjoy the privileges of such use. Because those properties are not subject to the same geological and geophysical constraints, such uses are conforming.

2. Aboveground transmission line. As noted in the EIR and the BEC Letter, much of the Project site consists of geothermal soils having elevated temperatures. Generally, underground transmission lines require properly designed thermal backfill to reduce heat buildup and consequent loss of electrical conductivity or even melting of the conduit. However, such heat buildup in an underground transmission line crossing warm or hot areas in the soil cannot be mitigated with thermal backfill and a variance to place the

transmission line above ground is necessary and does not constitute a special privilege. (See BAC Letter, September 7, 2012).

B. The grant of variance will not constitute a special privilege inconsistent with the limitations upon other properties in the vicinity and in the land use designation in which the property is situated.

1. Setbacks. As illustrated in the BEC letter and in FEIR Drawing 1, development of the Project site is highly constrained as a result of steep slopes, fault zones, and geothermal soils/fumaroles. The site is also bisected by an intermittent surface watercourse. The combination of these conditions is unique to the Project site, and other parcels designated RE and/or within the Hot Creek Buffer Zone are not similarly limited. In fact, several are already developed with geothermal facilities or proposed for such development. (See FEIR Figure 1 and RDEIR sections 5.1.1 and 5.1.2.)

The only other non-federally-owned parcel within the Casa Diablo portion of the Hot Creek Buffer Zone, owned by LADWP, consists of 194 acres. The LADWP parcel has ample area available for geothermal development such as that proposed on the Project site (see FEIR Drawing 1). Accordingly, the grant of a variance for the proposed Project would not constitute a special privilege inconsistent with the limitations on other nearby or similarly-situated properties but instead, would put it on par with such properties. The County's land use regulations do not apply on federal land.

2. Aboveground transmission line. Mono County Land Development Regulations authorize the placement of distribution facilities such as the proposed transmission line underground without discretionary approval by the County. (See Mono County General Plan, Section 11.010(B).) Those regulations provide for aboveground placement pursuant to director review permit or use permit if any one of four findings can be made. (See Mono County General Plan, Section 11.010(D).) Alternatively, a variance may be granted to allow aboveground use where the conditions justifying a variance exist. (See Mono County General Plan Chapter 33). The proposed aboveground line is capable of being approved pursuant to either procedure, as either of the required findings can be made. Specifically, under Section 11.010(D)(1), the pipeline will not significantly disrupt the character of the area (See RDEIR sections 2.1.3 and 4.2.3 concluding that there will not be a significant visual impact associated with the Project or the aboveground pipeline; see also the discussion of the existing environment, indicating the presence of other above ground transmission lines and geothermal infrastructure in the vicinity.) Likewise, the finding for aboveground placement under Section 11.010(D)(2) can be made since aboveground placement would decrease the line's exposure to environmental hazards (e.g., heated soils) thus making it environmentally superior to undergrounding. (See BEC Letter.) Other private properties in the area meeting these (or the other listed) criteria are also eligible to request approval for aboveground utilities pursuant to Section 11.010, if they meet the stated criteria.

Accordingly, the grant of a variance would not constitute a special privilege inconsistent with limitations imposed on other properties.

C. The grant of variance will not be detrimental to the public welfare or injurious to property or improvements in the area in which the property is situated.

1. Setbacks. A number of geologic hazards are inherent to the surrounding area. The proposed location of the M-1 replacement plant (and supporting facilities) would actually

lessen any exposure to hazardous conditions and would minimize risks to both the plant and its operating personnel, in comparison to other locations on the property. (See, e.g., BEC Letter.) Adjoining property consists of thousands of acres of undeveloped land owned by the federal government. The only other nearby development consists of similar geothermal operations. Accordingly, a minor variation from the property line setback would have no impact on improvements or property in the area.

And Project design features and required mitigation measures, including installation of a subsurface retention basin and a sediment trap, implementation of erosion control/stormwater construction best management practices (BMPs), post-construction BMPs, restrictions on the existing plant site during its interim use for storage (e.g., prohibition on cleaning or fueling equipment, limitations on what may be stored, and height limitations) that will reduce and avoid the possibility of hydrologic impacts on the site as discussed in section 4.8.3 of the EIR and the Reclamation Plan, as well as reduce visual impacts as discussed on pages 4-2 through 4-35 of the EIR. Finally, the Project involves no expansion in water use or use of the geothermal resource. As such, there is no impact to water quantity.

2. Aboveground transmission line. The Project includes two proposals for the interconnection transmission line, both of which were analyzed in the EIR. The EIR concludes that there will not be a significant visual impact associated with the Project or the aboveground line. (See sections 2.1.3 and 4.2.3; see also the discussion of the existing environment on page 2 of the EIR, which describes the presence of other above ground transmission lines and geothermal infrastructure in the vicinity.) Because either option would be located near ground level (either within an existing pipe rack or on its own T-bar supports and suspended approximately 2-3 feet above ground level) as opposed to overhead, visual impacts associated with either option would be virtually non-existent. There would be no new overhead transmission line poles associated with either of the interconnection transmission line options. Indeed, placement of the transmission line underground presents a risk to the lines and to operation if such lines fail.

D. The grant of variance will not be in conflict with established map and text of the general and specific plans and policies of the County.

1. Setbacks. As discussed in section 4.10.3 of the EIR, the 500-foot surface watercourse and 100-foot exterior property line setbacks are subject to variance in accordance with Chapter 33 of the General Plan. The Project requires a variance from the 500-foot setback because, while the replacement plant would be further from the same watercourse than the existing plant, it would still be partially within that setback. And the existing plant site (to be used for interim storage) would continue to be within the setback. The granting of such a variance is not inconsistent with the text or maps of the General Plan, including but not limited to, the Energy Resources section of the Conservation and Open Space Element (Goal 1, Objective D, Policy 1, Action 1.13). That section lists the 500-foot setback imposed by the Land Development Regulations as an “action” to further the policy of protecting hydrologic resources. The reference is not intended to prohibit the granting of an otherwise authorized setback variance where no hydrologic impacts would result, and does not “re-impose” the setback requirement already imposed. Setbacks are classic development standards which may be adjusted through variance procedures where necessary due to site-specific constraints, such as those that exist here. Finally, Project design features and mitigation measures imposed as mandatory conditions of approval avoid or minimize potential impacts to hydrologic resources by preventing fluids from

reaching adjacent waterways and limiting geothermal extraction to existing levels, as discussed above and in section 4.8.3 of the EIR. The proposed variance is consistent with the map and text of the General Plan as currently written and as proposed to be clarified by GPA 12-003(b).

The variance from the 100-foot property line setback is also authorized in accordance with Chapter 33 of the General Plan and would not be in conflict with any program, policy, goal, or objective of the General Plan.

2. Aboveground transmission line. See discussion under finding B.2 above, which is incorporated by this reference.

Exhibit C
Use Permit 12-004
Findings and Rationale

I. USE PERMIT

- A. All applicable provisions of the Land Use Designations and Land Development Regulations are complied with, and the site of the proposed use is adequate in size and shape to accommodate the use and to accommodate all yards, walls and fences, parking, loading, landscaping and other required features.**

The existing MP-1 plant site decommissioning activities and the conversion of a portion of the site to a storage area, proposed as part of the Project, would be conducted on private land with a land use designation (LUD) of Resource Management (RM). The RM designation is intended “to recognize and maintain a wide variety of values in the lands outside existing communities,” including “geothermal or mineral resources.” “Mining and geothermal exploratory projects” are explicitly “uses permitted subject to use permit” and other “similar” uses may also be permitted.

The RM designation provides for a minimum parcel size of 40 acres, limits site disturbance to 10% (with a maximum lot coverage of 5%), and provides for maximum population density of 5.02 persons per 40 acres. The RM parcel consists of approximately 40 acres of privately-owned land, of which approximately 2.6 acres is presently disturbed (approximately 6.6%). This level of disturbance is pre-existing and would not be increased by the Project. The ultimate decommissioning, reclamation and restoration of this site required by the Reclamation Plan is consistent with Resource Management intent of the designation to provide for low intensity rural uses that recognize and maintain the resource value of the parcel and would eliminate site disturbance. There would be no residential use of the property.

The proposed new M-1 plant site would be located on the adjacent 50-acre parcel, which is designated as Resource Extraction (RE). The RE designation “is intended to provide for protection of the environment and resource extraction activities . . . and for processing plants utilizing on-site materials or materials found in close proximity to the site.” “Exploring, drilling, and development of geothermal resources” are explicitly “uses permitted subject use permit” and other “similar” uses may also be permitted uses. The M-1 replacement plant site construction and Project operations would be conducted entirely on private land with a LUD of RE.

The RE designation provides for a minimum parcel size of 40 acres, prohibits residential uses (other than for an employee/caretaker) and references the setbacks established by section 15.070 for resource development (100 feet from interior public streets or from a property line, 500 feet from any adjacent private dwelling, institution, school, or other building or location used for public assemblage, and, for geothermal development within the Hot Creek Buffer Zone, 500 feet from a surface watercourse). The Land Use Designations and Land Development Regulations function as the County’s zoning requirements and are subject to variance pursuant to Chapter 33 of the Mono County General Plan and State law.

All project activities would occur more than 100 feet from any internal street and more than 500 feet from adjacent uses for public assemblage. The nearest dwelling, institution, or school is located within the Town of Mammoth Lakes approximately two miles to the west of the project site. A public parking area located just to the east of US 395 and the Mammoth Lakes exit is greater than 500 feet from the project property line (Figure 19, Revised DEIR, February 2012). The project includes a request for a variance which would authorize a portion of the facility to be located within 100 feet of an external property line and within 500 feet of a surface watercourse. Such variances are authorized by Chapter 33 of the Land

Development Regulations and if granted consistent with those requirements, all provisions of the Land Use Designations and Land Development Regulations would be complied with.

As described more fully in section 4.2.2 of the EIR, the Project meets applicable standards of the Land Development Regulations related to visual impacts. An Outdoor Lighting Plan has been provided for the Project site which meets the requirements of Chapter 23 of the General Plan, the County's "Dark Sky Regulations," to mitigate nighttime visibility of the facilities. In addition, a Landscape Plan has been submitted which provides additional visual screening of the Project site. Use Permit conditions require compliance with these plans. All buildings, insulation jacketing, and visible structures would be painted to blend with the existing environment in order to minimize the visual impacts in the area and approximately six-foot-high fences would be constructed around the M-1 plant site and the M-1 plant substation to provide additional screening. Site disturbance is limited and a Reclamation Plan which meets the requirements of Chapter 26 of the General Plan and will reduce and restore site disturbance has been submitted. Compliance with the Reclamation Plan is a condition of project approval. Accordingly, the Project also meets applicable standards set forth in Section 08.010 through 08.060 Scenic Combining District and State Scenic Highway.

Section 4.110 of the Land Development Regulations provides for a maximum building height of 35 feet, but allows for greater heights to be approved through the Director Review process or Use Permit process. The project involves approval, through the Use Permit process, of mechanical appurtenances which exceed 35 feet in height. (See additional discussion below in sections II.A and II.B.)

Chapter 11 of the Land Development Regulations provides for the undergrounding of utilities, unless overhead placement is approved by Director Review permit, Use Permit, or variance. The Conservation and Open Space Element, Visual Resources, Objective C, Policy 3, Actions 3.1 through 3.8 reference these requirements. The project proposes two possible locations for an aboveground interconnection transmission line, and the applicant has applied for a variance to allow for aboveground installation.

The Project is in compliance with all other applicable provisions of the Land Use Designations and the Land Development Regulations of the Mono County General Plan.

Further, the site is adequate in size and shape to accommodate the use, and to accommodate all yards, walls, and fences, parking, loading, landscaping and other required uses. The site consists of 90 acres of privately-owned land bordered on all sides by publicly-owned land managed primarily for open space.

B. The site for the proposed use relates to streets and highways adequate in width and type to carry the quantity and kind of traffic generated by the proposed use.

As described in the EIR (see, e.g., sections 2.1.2, 2.1.6, and 3.3.8) 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 and no long-term impact to the existing roadway circulation system in the area would result.

Short-term construction traffic would increase in the immediate vicinity of the site, although the traffic volumes expected to be associated with Project construction would be light and existing volume-to-capacity ratios at the U.S. Highway 395/SR 203 interchange are sufficient to accommodate this small temporary increase.

The existing entrances to the Casa Diablo geothermal development complex would continue to provide adequate access to the new M-1 plant site. North and south U.S. Highway 395 off ramps onto State Route

203 are located less than one-quarter mile southwest of the Project site. Access to the Project site would be via State Route 203 east to Antelope Springs Road, then north to Cutoff Road, then east to the existing paved access to the replacement plant site off of the Old Highway Road. Substation Road and Old Highway Road would be used as emergency access roads that lead to a locked gate which can be opened by emergency responders and is sufficient to support emergency vehicles, in accordance with the County's Fire Safe Regulations (Chapter 22 of the Land Development Regulations).

A new paved access road would be constructed from the onsite access road to the lower pad on which the M-1 plant would be constructed. Paved access roads would also be constructed along the north, south and west sides of the new M-1 plant site, which are specifically designed in width and type to carry the quantity and kind of traffic associated with the project.

C. The proposed use will not be detrimental to the public welfare or injurious to property or improvements in the area in which the property is located.

The EIR for the Project has identified no significant impacts resulting from the proposed Project. The proposed use is the same as currently exists on the site, with the exception that a new, more modern facility would replace the existing M-1 plant. The new facility includes design features (including, but not limited to a landscaping plan, dark sky compliant lighting, and screening) not currently applicable to the existing facility. Without expanding the use of the geothermal resource or in any way increasing impacts to that resource, the proposed facility would increase the amount of geothermal energy generated on the site and reduce associated impacts. (See EIR Project Description).

The M-1 site is situated in an area where property and improvements are committed to similar compatible uses, including existing operating geothermal plants and well fields, the existing MP-1 plant proposed for decommissioning, and an SCE substation. The proposed use has been sited to minimize visual impacts from the State Scenic Highway, and when the existing plant is decommissioned, will have less of a detrimental visual presence than exists currently. (See EIR section 4.2.3.)

In addition, the proposed Project incorporates design features which will protect the public and property from the risks of fire, contamination, and other hazards. Specifically, the M-1 replacement power plant site would be designed and constructed to prevent fluids from leaving the site and endangering adjacent properties or nearby waterways. Numerous engineering, fire-control and safety measures are integrated as part of the Project to prevent releases of n-pentane, to avert or control fires, and to respond to other emergencies. (See e.g., EIR section 2.1.6.)

A diesel-powered emergency generator would be installed on the M-1 plant site to provide emergency backup power to critical plan functions in the event of a power outage. Similarly, a diesel-powered firewater pump generator would be installed to provide power to the firewater pump during fire emergencies.

In addition, MPLP has developed an integrated program to meet the following requirements, (see EIR section 2.1.6): California Accidental Release Prevention (CalARP) Program; EPA Risk Management Plan (RMP); OSHA Process Safety Management (PSM) Program for all three existing plants. Prior to delivery of n-pentane, MPLP would revise and update this program to reflect the new M-1 plant; Revise its existing Spill Prevention, Control and Countermeasure (SPCC) Plan, in conformance with 40 CFR 112, to include the new M-1 plant; Update its Emergency Response Plan (ERP); Update its Hazardous Materials Business Plan (HMBP); A Permit for Authority to Construct and Permit to Operate would be obtained from the GBUAPCD

There would be at least one employee “on call” at all times familiar with the ERP and would have the authority to commit the resources needed to carry out the contingency plan.

D. The proposed use is consistent with the map and text of this General Plan and any applicable area plan.

For a thorough discussion regarding the Project’s consistency with the General Plan see the analysis contained throughout the EIR, and particularly sections 4.10.2 and 4.10.3. The following summarizes the Project’s consistency with applicable maps, policies, land uses, and programs contained in the General Plan.

The Project is consistent with General Plan maps designating the site for Resource Management (RM) and Resource Extraction (RE). The RE designation (where the replacement plant would be located) “is intended to provide for protection of the environment and resource extraction activities.” “Exploration, drilling, and development of geothermal resources” are explicitly “uses permitted subject to use permit and other “similar uses may also be permitted.” The RM designation (where the existing plant is located) is intended to “recognize and maintain a wide variety of values in the lands outside existing communities,” including “geothermal or mineral resources.” “Mining and geothermal exploratory projects” are explicitly “uses permitted subject to use permit” and other “similar” uses may be permitted.

The Project is consistent with the objectives, policies, general land uses, and programs of the Mono County General Plan. General Plan goals encourage the productive and beneficial development of alternative energy, including geothermal resources, in manner which avoids or minimizes environmental impacts. The EIR concludes that there will be no significant environmental impacts as a result of the proposed Project. General Plan policies allow consideration of national need for alternative energy and require the applicant to demonstrate the economic benefits of the Project. (See Conservation and Open Space Element – Energy Resources.) The economic analysis of the Project describes those benefits.

Objectives C and D of Goal 1 of the Energy Resources portion of the Conservation and Open Space Element establish procedures and direction for addressing biologic and associated hydrologic impact mitigation and monitoring requirements from geothermal exploration and development. Consistent with these policies, a baseline biological resource survey was conducted (Paulus 2011) and is provided as Appendix D of the EIR. The recommended measures and project design features of this report have been incorporated and are a part of the Project.

The EIR concludes that there would be no significant impacts to visual resources as a result of the Project and that current visual impacts associated with the MP-1 facility would be reduced by the Project. Additionally, the Project would be consistent with all applicable General Plan Policies pertaining to Aesthetics/Visual Resources, provided that a variance is granted to allow transmission lines to be placed at ground level as opposed to underground.

- Aboveground utility lines. Objective C, Policy 3, Actions 3.1-3.8 Conservation/Open Space Element (Visual Resources) provides for underground installation of utility lines in conformity with County Requirements. Chapter 11 of the Land Use Regulations provides for underground installation unless approved through Use Permit or Director Review in certain specified circumstances. Actions 3.1-3.8 also allow for aboveground installation pursuant to a variance. The Project is consistent with this policy if the requested variance is granted. Additionally, the transmission lines would be eligible for an exception to the underground requirement pursuant to Chapter 11, as described in Exhibit B, section B.2.

- Mechanical appurtenances/building height. (Land Use Element – Development Standards): The Project proposes to install purge tanks, two-inch diameter vent pipes and one-inch diameter lightning masts on top of the air cooling towers which would extend up to approximately 40 feet above ground level, exceeding the permitted height of 35 feet by up to 5 feet. However, Mono County regulations allow for exceptions to be granted by the Planning Director in the cases of mechanical appurtenances or, for building heights in excess of 35 feet, through the Use Permit process. The purge tank vent pipes and lightning qualify as “mechanical appurtenances” and would thus meet the criteria for exception to be granted by the Planning Director, or by the more stringent Use Permit process. (See sections II.A and B below.)

The Project would be consistent with relevant General Plan Policies in the Conservation/Open Space Element pertaining to Air Quality as discussed on page 30 of the RDEIR2.

The Project would be consistent with relevant General Plan Policies in the Conservation/Open Space Element pertaining to Biological Resources as discussed on pages 30-32 of the RDEIR2 and section 4.4 of the RDEIR, as revised. For example, current biologic and hydrologic monitoring will continue and will also be applied to the M-1 plant; baseline studies have been prepared to document existing conditions on the Project site and mitigation measures and design features are imposed to minimize potential impacts based on those studies and recommendations.

The Project would also be consistent with relevant General Plan Policies (shown in Table 25 of the RDEIR) in the Conservation/Open Space Element pertaining to hydrology and water quality as described on pp. 30 – 36 of the RDEIR2. The Project includes design features and is subject to mitigation measures which avoid or minimize potential impacts to hydrologic resources to a level that is less than significant through, among other things, installation of a subsurface retention basin at the M-1 plant site, implementation of erosion control/stormwater construction best management practices (BMPs) and post-construction BMPs, as discussed in the EIR. (See e.g., section 4.8.3). The Project involves no additional use or extraction of water from the geothermal resource and therefore has no impact to water quality.

- Setbacks from surface watercourse. As discussed previously, Section 15.070(B)(1)(d) of the County’s Land Use Regulations imposes a 500-foot setback from surface watercourses for geothermal development within the Hot Creek Buffer Zone. Chapter 33 of the General Plan authorizes the granting of variances from any Land Development Regulation or LUD if certain conditions exist. The project requires a variance from this setback because, while it would be further from the same watercourse than the existing plant, the replacement plant would still be partially within that setback. The Energy Resources section of the Conservation and Open Space Element (Goal 1, Objective D, Policy 1, Action 1.13) lists the 500-foot setback as an “action” to protect hydrologic resources. That reference is not intended to prohibit the granting of an otherwise authorized variance and does not “re-impose” the setback requirement already imposed. If a variance is granted in accordance with Chapter 33, then the Project is consistent with the General Plan, both as currently written and with the clarifications to the General Plan included proposed by GPA 12-003(b).

The Project would be consistent with relevant General Plan Policies in the Safety Element pertaining to fire hazards as discussed on page 32 of the RDEIR2 and in section 4.7 of the RDEIR. For example, the Project would not create a significant risk from wildland or structural fire; the Project will obtain a will-serve letter from the Long Valley Fire Protection District and will implement Project HazMat Design Feature 4, which would extend the existing fire suppression and response program in place at the Casa

Diablo Geothermal Complex to cover the proposed Project. Appendix A to the RDEIR presents a list of measures that the Project would adopt in order to reduce the risk of wildland and/or structural fire. These measures include compliance with applicable requirements in the Fire Safe Ordinance and Uniform Fire Code; and the Notice of Preparation for the Draft EIR was sent to the Department of Forestry and the Long Valley Fire Protection District was consulted in the preparation of the RDEIR.

The Project would be consistent with relevant General Plan Policies in the Hazardous Waste Management Element pertaining to hazardous materials. The Project includes several design features, presented as HazMat Design Features 1 through 5 in the RDEIR.

For analysis of Project consistency with relevant General Plan Policies in the Noise Element pertaining to noise, see Section 4.9 of the RDEIR. As discussed therein, the Project, including Noise Design Features 1 through 3, would be consistent with all applicable General Plan Policies pertaining to noise.

II. MECHANICAL APPURTENANCES/BUILDING HEIGHT EXCEPTION

A. The project will not result in substantial detrimental effects on the enjoyment and use of surrounding properties.

Several mechanical appurtenances (including eight purge tanks, of about 36 inches in length and 24 inches in diameter, a two-inch diameter pipe, and a one-inch diameter lightning mast/rod) would extend up to approximately 5 feet above the 35-foot building height. These mechanical appurtenances are part of the CUP application and are evaluated on pp 4-2 – 4-35 of the RDEIR. As mechanical appurtenances, these structures could be approved through the Director Review process outlined in Section 4.110 of the General Plan, or pursuant to the more stringent Use Permit process actually undertaken. As described in the EIR, the appurtenances would be nearly completely obscured by vegetation and the super-structure of the main plant and would be colored to be blend with the existing background. The analysis shown in the EIR demonstrates the project would preserve scenic vistas and would not have any impact on surrounding properties.

B. The modified height will not exceed the lifesaving equipment capabilities of the fire protection agency having jurisdiction.

The mechanical appurtenances are lightning rods and pipes – and will not be occupied. The Long Valley Fire Department was consulted in the preparation of the EIR and it was determined the height exception does not exceed the lifesaving capabilities of the protection agency. The Project is required to obtain a will-serve letter from the Long Valley Fire Protection District and will also implement Project HazMat Design Feature 4, which would extend the existing fire suppression and response program in place at the Casa Diablo Geothermal Complex to cover the proposed Project.

III. ABOVEGROUND FLUID PIPELINE

The aboveground placement of fluid pipelines is authorized because burial would create unacceptable environmental impacts or the potential to contaminate shallow groundwater resources. The Project includes the relocation of two existing aboveground fluid conveyance pipelines to connect the new plant to existing production and injection locations. As discussed in Exhibit B, the site contains numerous geotechnical and geological constraints, including hot soils, active steam vents, and earthquake faults. Aboveground placement of fluid conveyance

lines minimizes the risk of damage to those lines due to earthquake or other site features, and allows for quick identification and remediation in the unlikely event of damage.

Exhibit D
Reclamation Plan 12-001
Findings and Rationale

A. The reclamation plan complies with the provisions of CEQA.

The Reclamation Plan is a component of the Mammoth Pacific Replacement Project. A Final Environmental Impact Report has been prepared for the Project. (SCH # 2011022020) and certified by the Planning Commission prior to adoption of the EIR.

B. The reclamation plan is consistent with the objectives and policies set forth in this General Plan and any applicable area or specific plans.

The project is consistent with the objectives and policies of the General Plan. The Land Use Element, Mammoth Vicinity Policies Objective C, Policy 4 & Action 4.1 provides:

Policy 4: Regulate geothermal and mining and reclamation activities in the Mammoth vicinity in a manner that retains the scenic, recreational, and environmental integrity of the Mammoth vicinity.

The Mammoth Pacific Reclamation Plan requires removal of the MP-1 plant, and removal of the MP-2 plant once these facilities are decommissioned. The proposed M-1 plant would also be removed once the plant is decommissioned in 2045. The offices, maintenance yard, warehouse, roads and wells would be removed once these facilities are no longer needed. Some roads and wells may remain to support geothermal production on USFS property for the PLES plant. The PLES plant is on Inyo National Forest lands and not subject to the reclamation plan.

Removal and site reclamation of the above facilities retains the scenic and environmental integrity of the area.

Action 4.1: All geothermal, mining and reclamation activities shall comply with the policies of the county's Conservation/Open Space Element and the county's Reclamation Ordinance.

The Conservation and Open Space Element of the General Plan, Energy Resources, provides that Geothermal exploration and development projects shall be sited, carried out and maintained by the permit holder in a manner that best protects hydrologic resources and water quality and quantity. Pursuant to that policy, permit conditions assure that required reclamation is completed within one year after a project is completed. The Reclamation plan contains provisions that assure the protection of springs, streams, and fumaroles from erosion, sediment transport, and similar adverse effects. Plan provisions also assure that project sites are restored as closely as reasonably possible to natural conditions, as determined by the MCEDD, in consultation with the Visual Review Committee.

Below is a summary of plant removal cost and timeframes listed in the Reclamation Plan:

	MP-1	MP-2	M-1	Wells
<i>Reclamation start date</i>	2014 or 2015	2045	2045	2045
<i>Cost</i>	\$356,224	\$739,513	\$564,949	\$2,210,719

Project conditions require reclamation activities to be completed within one year of plant removal.

The reclamation plan has erosion control and retention basins for each plant site to protect on-site springs, streams, and fumaroles from erosion, and requires that the site be monitored to assure that project sites are restored as closely as reasonably possible to natural conditions.

- C. Appropriate conditions have been imposed to ensure and verify that the site during and after reclamation will not cause a public hazard, nor be detrimental to the public health, safety, or welfare.**

The Mammoth Pacific Reclamation Plan requires removal of the power plants and plant infrastructure and restoration of the site to natural conditions as various components of the plant are removed. The project is required to comply with the adopted reclamation plan, which sets forth measures to avoid safety hazards and provide for public health, safety and welfare on the site during and after reclamation.

- D. An approved end use has been identified and the reclamation of the site shall be finally completed as soon as is feasible, considering the particular circumstances of the site to be reclaimed, and the plan provides for concurrent reclamation, where appropriate and feasible.**

The 90 acre site has an end land use of open space and will be restored to natural site conditions. The reclamation timeframes listed in the Reclamation Plan are:

	<i>MP-1</i>	<i>MP-2</i>	<i>M-1</i>	<i>Wells</i>
<i>Reclamation start date</i>	<i>2014 or 2015</i>	<i>2045</i>	<i>2045</i>	<i>2045</i>

The Plan allows for concurrent reclamation and timing based on when the various plants are decommissioned and various infrastructure is removed.

- E. The reclamation plan conforms to minimum verifiable performance standards established Chapter 35 and, in the case of surface mining operations, meets or exceeds the minimum, verifiable statewide reclamation standards adopted by the State Mining and Geology Board, and in the case of geothermal well abandonment, conforms to the requirements and guidelines of the California Division of Oil and Gas on non-federal lands, and the Bureau of Land Management on federal lands.**

The Reclamation Plan conforms to the standards as described in Chapter 35, Reclamation Plan, section 35.050 Reclamation Standards. The following summarizes standards and how the project complies with these applicable standards. Not every standard from section 35.05 is listed as some of these standards apply only to projects subject to Surface Mining and Reclamation Act of 1975 (SMARA).

1. Wildlife Habitat.

Wildlife and wildlife habitat shall be protected in accordance with the following standards:

- Rare, threatened or endangered species or species of special concern, and their respective habitat shall be conserved.
No federal- or state-listed threatened or endangered species are known to occupy or frequent the Project area. (Page 2 of Reclamation Plan)
- Wildlife habitat shall be established on disturbed lands in a condition similar to or better than that which existed before the lands were disturbed.
Wildlife habitat will be established on the reclaimed lands in a condition similar to the undisturbed lands surrounding the sites. (Page 3 of Reclamation Plan)
- Wetland habitat shall be avoided.
No wetland habitat on site will be disturbed. (Page 3 of Reclamation Plan)

2. Backfilling, Regrading, Slope Stability, and Recontouring.

Backfilling, regrading, slope stabilization, and recontouring shall conform to the following standards:

- Where backfilling is required for resource conservation purposes (e.g., agriculture, fish and wildlife habitat, and wild land conservation), fill material shall be backfilled to the standards required for the resource conservation use involved.
Project-affected areas of surface disturbance will be re-contoured as necessary to blend with the surrounding topography. (Page 4 of Reclamation Plan)
- Final reclaimed fill slopes, including permanent piles or dumps of mine waste rock and overburden, shall not exceed 2:1 (horizontal:vertical), except where site-specific geologic and engineering analyses

demonstrate that the proposed final slope will have a minimum slope stability factor of safety that is suitable for the approved end use, and when the proposed final slope can be successfully revegetated.

Final reclaimed fill slopes will not exceed 2:1 (horizontal:vertical), except where site-specific geologic and engineering analyses demonstrate that the proposed final slope will have a minimum slope stability factor of safety that is suitable for the approved end use and when the proposed final slope can be successfully re-vegetated. A site reclamation plan for MP-1 plan is provided on Plates 1a, 1b, and 1c, attached in Appendix A. A site reclamation plan for the MP-2 plant site is provided on Plates 2a and 2b, attached in Appendix A. A site reclamation plan for the M-1 plant site is provided on Plates 3a and 3b, attached in Appendix A. (Page 4 of Reclamation Plan)

- At closure, all fill slopes, including permanent piles or dumps of mine waste and overburden, shall conform to the surrounding topography and/or approved end use.
The reclamation plan requires that project-affected areas of surface disturbance will be re-contoured as necessary to blend with the surrounding topography

3. Revegetation.

Revegetation shall be part of the approved plan, unless it is not consistent with the approved end use.

- A vegetative cover suitable for the approved end use and capable of self-regeneration without continued dependence on irrigation, soil amendments or fertilizer shall be established on disturbed lands. The vegetative density, cover and species-richness of naturally occurring habitats shall be documented in baseline studies carried out prior to the initiation of resource development activities.
At least 3 shrubs and 8 perennial native grasses and/or forbs per 4 square meters would be established on site. Perennial grasses would account for at least 10% of the relative cover. (Page 5 of Reclamation Plan)
- Test plots conducted simultaneously with resource development activities shall be required to determine the most appropriate planting procedures to be followed to ensure successful implementation of the proposed revegetation plan. The County may waive the requirement to conduct test plots when the success of the proposed revegetation plan can be documented from experience with similar species and conditions or by relying on competent professional advice based on experience with the species to be planted.
The reclamation of the MP-1 (Plate 1B) site will serve as the test plot for both the seed mix and success of vegetative cover stated above.
- Where resource development activities result in compaction of the soil, ripping, disking, or other means shall be used in areas to be revegetated to eliminate compaction and to establish a suitable root zone in preparation for planting.
Approved methods in use already include the design and construction of stable slopes, minor re-grading, ripping or sub-soiling to de-compact and loosen compacted soil, topsoiling, surface preparation through fine grading, reseeding and re-vegetation (or natural re-vegetation). (Page 4 of Reclamation Plan)
- Prior to closure, all access roads, haul roads, and other traffic routes to be reclaimed shall be stripped of any remaining road base materials, prepared in accordance with section g below, covered with suitable growth media or topsoil, and revegetated.
Plate B in Appendix A of the Reclamation Plan shows which roads and travel routes will be removed at final reclamation, which will include coverage with suitable growth media and revegetation.
- Indigenous plant species shall be used for revegetation, except when introduced species are necessary to meet the end uses specified in the approved reclamation plan.
The seed mix for revegetation is listed on page 4 of the Mammoth Pacific Reclamation Plan. Preferably, seeds for this project would be collected within the immediate vicinity of the project area. If this is not possible due to poor seed availability, seed from the Eastern Slopes Subsection of the Sierra Nevada Section and Mono Section would be acceptable.
- Planting shall be conducted during the most favorable period of the year for plant establishment.

The Reclamation Plan includes requirements to reseed applicable areas in the fall in order to take advantage of beneficial winter moisture.

- Weeds as defined by the Soil Conservation Service, or the county Agricultural Commissioner, or the California Native Plant Society, shall be managed: 1) when they threaten the success of the proposed revegetation; and 2) to prevent spreading to nearby areas; and 3) to eliminate fire hazard.

The Reclamation Plan includes weed management measures, including a standard that all non-native weed species that are already present in the area would account for no more than 5% total of the relative cover at the end of the 2 year evaluation period.

- Success of revegetation shall be judged based upon the effectiveness of the vegetation for the approved end use, and by comparing the quantified measures of vegetative cover, density, and species-richness of the reclaimed lands to similar parameters of naturally occurring vegetation in the area. Either baseline data or data from nearby reference areas may be used as the standard for comparison. Quantitative standards for success and the location(s) of the reference area(s) shall be set forth in the approved reclamation plan. Comparisons shall be made until performance standards are met provided that, during the last two years, there has been no human intervention, including for example, irrigation, fertilization, or weeding. Standards for success shall be based on expected local recovery rates. Valid sampling techniques for measuring success shall be specified in the approved reclamation plan. Sample sizes must be sufficient to produce at least an 80% confidence level.

At least 3 shrubs and 8 perennial native grasses and/or forbs per 4 square meters would be established on site. Perennial grasses would account for at least 10% of the relative cover. Failure to meet the success standards would require additional planting and/or weed control, as appropriate, until standards are met. (Page 5 of Reclamation Plan)

4. Drainage, Diversion Structures, Waterways, and Erosion Control.

- Reclamation activities shall be conducted to protect on-site and downstream beneficial uses of water.
Surface runoff and drainage will be controlled by silt fencing or a straw wattle until the interim gravel surface for MP-1 has been placed on the pad and/or the new vegetation has been developed to a point of controlling erosion for all sites during final reclamation. There are no perennial streams or other surface waters located within the Project area that will be impacted by operations or reclamation. A “blue line” stream is identified adjacent to the sites along the northerly boundary on the U.S. Geological Survey (USGS) topographic map (“Old Mammoth” quadrangle, 1:24000 series). The blueline stream is an ephemeral/intermittent identified as a stream “riparian conservation area” (RCA) by the USFS under the SNFPA ROD (USDA, Forest Service 2004). Project activities and reclamation avoid impacts to this intermittent stream.
- The quality of water, recharge potential, and storage capacity of groundwater aquifers shall not be diminished, except as allowed in the approved reclamation plan.
*Retention basins have been designed for each site, based on the Lahontan Regional Water Quality Control Board’s Water Quality Plan for the Mammoth Creek Basin to contain the runoff volume generated from a 20 year intensity storm with a one hour duration, which is assumed to be 1 inch (0.83 feet) * Area (square feet) * C (infiltration coefficient). Retention basin sizing calculations are included in Appendix B.*
- Erosion and sedimentation shall be controlled during all phases of construction, operation, reclamation, and closure of an operation to minimize siltation of lakes and watercourses, as required by the Regional Water Quality Control Board, the State Water Resources Control Board, and the Mono County Grading Ordinance.
See above reference to Appendix B and the project is required to comply with the Mono County Grading Ordinance and an approved grading plan.
- Surface runoff and drainage shall be controlled by berms, silt fences, sediment ponds, revegetation, hay bales, or other erosion control measures, to ensure that surrounding land and water resources are protected from erosion, gullyng, sedimentation, and contamination. Erosion control methods shall be designed to handle runoff from not less than the 20-year/1-hour intensity storm event.

See above reference to Appendix B and the project is required to comply with the Mono County Grading Ordinance and an approved grading plan.

5. Prime Agricultural Land Reclamation and Other Agricultural Land

The project site does not contain prime or other agricultural lands.

6. Building, Structure and Equipment Removal.

- All equipment, supplies, and other materials shall be stored in designated areas (as shown in the approved reclamation plan). All waste shall be disposed of in accordance with state and local health and safety ordinances.

Once the MP-1 plant is decommissioned and removed, the MP-1 site will be used for interim storage for ongoing operations at the site. See Plate 1B. Plates 1a, 2a, and 3a in the reclamation plan show the existing sites and identify the various facilities to be removed.

- All buildings, structures, and equipment shall be dismantled and removed prior to final site closure except those buildings, structures, and equipment approved in the reclamation plan as necessary for the end use. *Plates 1a, 2a, and 3a in the reclamation plan show the existing sites and identify the various facilities to be removed.*

7. Stream Protection, Including Surface and Groundwater.

- Surface and groundwater shall be protected from siltation and pollutants that may diminish water quality as required by the Federal Clean Water Act, sections 301 et seq. (33 U.S.C. section 1311), 404 et seq. (33 U.S.C. section 1344), the Porter-Cologne Act, section 13000 et seq., the county Grading Ordinance, the Regional Water Quality Control Board or the State Water Resources Control Board.

Stable topographic surface and drainage conditions will be established to control erosion, prevent sedimentation, blend with the surrounding landscape, and to protect on-site and downstream sites. Plates 1B, 2B, and 3B show interim reclamation site storm water pollution prevention plans. The project is also subject to requirements of a Mono County grading permit.

8. Topsoil Salvage, Maintenance and Redistribution.

When the approved reclamation plan calls for revegetation or cultivation of disturbed lands, the following performance standards shall apply to topsoil salvage, maintenance, and redistribution activities:

- All salvageable topsoil suitable for revegetation shall be removed as a separate layer from areas to be disturbed. Topsoil and vegetation removal shall not precede development activities by more than one year, unless a longer time period is approved by the County.

Topsoil was not stockpiled when MP-1 and MP-2 sites were graded. Therefore, the resulting surficial soils after grading will be analyzed to determine the presence or absence of elements essential for plant growth and to determine those soluble elements that may be toxic to plants, if the soil has been chemically altered or if the growth media consists of other than the native topsoil. Topsoil and suitable amended surficial soils will be planted with a vegetative cover or will be protected by other equally effective measures to prevent water and wind erosion and to discourage weeds. Topsoil will stockpiled for the M-1 site reclamation will be spread over the site in a minimum thickness of 3 inches. One of the exhibits for the M-1 site will be amended to show the topsoil storage area. (Page 7 of the Reclamation Plan)

- Topsoil resources shall be mapped prior to stripping and the location of topsoil stockpiles shall be shown on a map in the reclamation plan. If the amount of topsoil needed to cover all surfaces to be revegetated is not available on-site, other suitable material capable of sustaining vegetation (such as subsoil) shall be removed as a separate layer for use as a suitable growth media. Topsoil and suitable growth media shall be maintained in separate stockpiles. Test plots may be required to determine the suitability of growth media for revegetation purposes.

See discussion directly above.

- Soil salvage operations and phases of reclamation shall be carried out in accordance with the schedule that: 1) is set forth in the approved Reclamation Plan; 2) minimizes the area disturbed; and 3) is designed to achieve maximum revegetation success allowable under the plan.

Soil salvage is limited for the MP-1 and MP-2 sites as stated above. The topsoil stockpile area for the M-1 site will be shown on a map to be included in the reclamation plan. The reclamation timeframes listed in the Reclamation Plan for the various plants are:

	MP-1	MP-2	M-1	Wells
Reclamation start date	2014 or 2015	2045	2045	2045

- Topsoil and suitable growth media shall be used to phase reclamation as soon as can be accommodated by the operations schedule presented in the approved reclamation plan. Topsoil and suitable growth media that cannot be utilized immediately for reclamation shall be stockpiled in an area where it will not be disturbed until needed for reclamation.

Topsoil will stockpiled for the M-1 site reclamation. One of the exhibits for the M-1 site will be amended to show the topsoil storage area.

- Topsoil and suitable growth media shall be redistributed in a manner that results in a stable, uniform thickness consistent with the approved end use, site configuration, and drainage patterns.

Topsoil will stockpiled for the M-1 site reclamation will be spread over the site in a minimum thickness of 3 inches. One of the exhibits for the M-1 site will be amended to show the topsoil storage area.

9. Tailing and Waste Management

There are not Tailings and/or Waste Management standards that are required for this project.

10. Closure of Surface Openings

- All geothermal wells shall be completed or abandoned in accordance with the California Division of Oil and Gas

The Reclamation Plan requires that all geothermal wells scheduled for reclamation be abandoned in accordance with the requirements of the California Division of Oil and Gas.

F. The estimated cost of the reclamation reasonably approximates the probable cost of performing the reclamation work as proposed in the plan and adequate surety (consistent with applicable provisions of SMARA for surface mining operations) will be posted to ensure completion of the required reclamation.

The Reclamation Plan contains cost estimates for all three plants located on the project site. A summary of timing and reclamation costs are:

	MP-1	MP-2	M-1	Wells
Reclamation start date	2014 or 2015	2045	2045	2045
Cost	\$356,224	\$739,513	\$564,949	\$2,210,719

See Appendix C Cost Estimates for additional details. The Reclamation Plan requires that adequate surety be provided.

G. The person or entity responsible for reclamation plan compliance has a public liability insurance policy in force for the duration of the reclamation which provides for personal injury and property protection in an amount adequate to compensate all persons injured or for property damaged as a result of the proposed reclamation activities.

The reclamation plan requires that Ormat provide to Mono County Risk Management or Mono County Economic Development Department the required public liability insurance policy for review and approval.

Exhibit E
Clarifying General Plan Amendment 12-003(b)
Findings and Rationale

A. The proposed change to the text of the Land Development Regulations of the General Plan is consistent with the General Plan and any applicable area plan.

The proposed change to section 15.070 of the Land Development Regulations is merely clarifying of existing regulations and General Plan provisions. Chapter 33 currently provides that a variance may be granted from a Land Development Regulation if specified findings are made. The proposed changes would cross-reference that ability within section 15.070 (itself a Land Development Regulation), which imposes a 500-foot setback from a surface watercourse for geothermal development within the Hot Creek Buffer Zone.

Setback requirements are traditional development standards (i.e., zoning standards) incorporated into the General Plan pursuant to a 1998 opinion of the California Attorney General issued at the request of Mono County. (81 Ops.Cal.Atty.Gen 57.) As with traditional zoning, the General Plan contemplates the need to vary from such development standards and has incorporated a process, consistent with state law, to make adjustments for project-specific circumstances through the variance process. GPA 12-003(b) clarifies the County's current and past practice in implementing its General Plan.

The Energy Resources section of the Conservation and Open Space Element (Goal 1, Objective D, Policy 1, Action 1.13) lists the 500-foot setback imposed by section 15.070 as an "action" to further the General Plan policy of protecting hydrologic resources. That reference is not intended to prohibit the granting of an otherwise authorized variance from section 15.070 setbacks, nor does it "re-impose" the setback requirement. The proposed clarifying language to be added to section 15.070 is not in conflict with the Conservation and Open Space Element either as written, or as proposed to be clarified contemporaneously with the clarification to section 15.070.

EXHIBIT F

Draft Proposed General Plan Amendment

The proposed General Plan clarifying revision would read as follows (new language shown in underline):

Land Use Element
Land Development Regulations
15.070 Development Standards.

The following minimum development standards shall apply to all projects in the Resource Extraction Designation unless a variance is granted in accordance with Chapter 33 or amended through the “Specific Plan” process. Other standards or conditions identified during the use permit process may also apply.

A. Lot Size and District Area.

The minimum lot size and district area shall be 40 acres or a quarter, quarter section, with the exception of patent and/or historical mining claims and "vested operations" which shall be considered on a case by case basis. Minimum lot size and district area may be reduced in conformance to the "Development Plan" or "Specific Plan" process.

B. Setbacks.

1. No processing equipment or facilities shall be located and no resource development shall occur within the following minimum horizontal setbacks:

- a. One hundred (100) feet from any interior public street or highway unless the Public Works Director determines that a lesser distance would be acceptable.
- b. One hundred (100) feet from any exterior property line.
- c. Five hundred (500) feet from any adjacent private dwelling, institution, school, or other building or location used for public assemblage.
- d. No geothermal development located within the Hot Creek Buffer Zone shall occur within 500 feet on either side of a surface watercourse (as indicated by a solid or broken blue line on U.S. Geological Survey 7.5- or 15-minute series topographic maps).

Conservation and Open Space Element
Energy Resources, Objective D, Policy 1

Action 1.13: ~~No geothermal development located within the Hot Creek Buffer Zone shall occur.~~ The County has adopted land development regulations for geothermal development within 500 feet on either side of a surface watercourse (as indicated by a solid or broken blue line on U.S. Geological Survey 7.5- or 15-minute series topographic maps) within the Hot Creek Buffer Zone (See Mono County Land Development Regulations, Chapter 15, section 15.070(B)(1)(d)) which are subject to variance only in accordance with Chapter 33 of the Mono County General Plan.¹

Deleted: Adoption

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¹ Redline indicates Planning Commission's recommended wording.

MONO COUNTY

Planning Division

DRAFT NOTICE OF DECISION USE PERMIT, VARIANCE, & RECLAMATION PLAN

USE PERMIT: 12-004 **APPLICANT:** Mammoth Pacific L.P.
VARIANCE: 12-002
RECLAMATION PLAN: 12-001

ACCESSOR PARCEL NUMBER: 037-050-002 & 037-050-005

PROJECT TITLE: Mammoth Pacific I Replacement Project

PROJECT LOCATION: The project is located at 94 Casa Diablo Cutoff Road, Mammoth Lakes in Mono County, California.

On October 11 2012, a duly advertised and noticed public hearing was held and the necessary findings, pursuant to Chapter 32.010, Chapter 33.010, and Chapter 35.030, Land Development Regulations, of the Mono County General Plan Land Use Element, were made by the Mono County Planning Commission. In accordance with those findings, a Notice of Decision is hereby rendered for Use Permit 12-004, Variance 12-002, Reclamation Plan 12-001 Mammoth Pacific I Replacement Project, subject to the following conditions, at the conclusion of the appeal period and upon the provision of clarification of General Plan provisions related to setbacks from a surface watercourse by the Board of Supervisors (by adoption of GPA 12-003(b), Board interpretation, or otherwise).

CONDITIONS OF APPROVAL/MITIGATION MONITORING & REPORTING PROGRAM

See attached Conditions of Approval & MMRP

ANY AFFECTED PERSON, INCLUDING THE APPLICANT, NOT SATISFIED WITH THE DECISION OF THE COMMISSION, MAY WITHIN TEN (10) DAYS OF THE EFFECTIVE DATE OF THE DECISION, SUBMIT AN APPEAL IN WRITING TO THE MONO COUNTY BOARD OF SUPERVISORS.

THE APPEAL SHALL INCLUDE THE APPELLANT'S INTEREST IN THE SUBJECT PROPERTY, THE DECISION OR ACTION APPEALED, SPECIFIC REASONS WHY THE APPELLANT BELIEVES THE DECISION APPEALED SHOULD NOT BE UPHELD AND SHALL BE ACCOMPANIED BY THE APPROPRIATE FILING FEE.

DATE OF DECISION/PROJECT APPROVAL:
EFFECTIVE DATE OF USE PERMIT:

October 11, 2012

Upon provision of clarification by the Board of Supervisors of General Plan Provisions related to setbacks from a surface watercourse, or a decision on appeal is rendered, whichever occurs later.

This Use Permit shall become null and void in the event of failure to exercise the rights of the permit within one (1) year from the date of approval unless an extension is applied for at least 60 days prior to the expiration date.

Ongoing compliance with the attached conditions and mitigations is mandatory. Failure to comply constitutes grounds for revocation and the institution of proceedings to enjoin the subject use.

DATED: October 11, 2012

cc: X Applicant
X Public Works
X Building
X Compliance

**Draft Conditions of Approval & Mitigation Monitoring
 & Reporting Program
 Mammoth Pacific I Replacement Project
 Use Permit 12-004, Variance 12-002, and Reclamation Plan 12-001**

1. The project shall comply with the approved Reclamation Plan, Use Permit, and Variance.
2. The project shall conform to and meet the requirements set forth in the MP-I Replacement Project Final EIR and the attached Mitigation Monitoring and Reporting Program.

**MAMMOTH PACIFIC I REPLACEMENT PROJECT
MITIGATION IMPLEMENTATION AND MONITORING PROGRAM AND FORM
State Clearinghouse #2011022020**

Project Approval Date: _____ **Project File Number:** _____

The following measures have been adopted by Mono County (MC). As such, these measures represent formal conditions of approval of the Use Permit for the Mammoth Pacific I (MP-I) Replacement Project. Some of the measures were proposed as part of the Project by Mammoth Pacific L.P. (Applicant) and some of the measures were recommended environmental protection and mitigation measures in the Revised Draft EIR prepared for the Project. Unless explicitly stated otherwise, the Applicant and the MP-I Plant Operator shall be responsible for implementing these measures. The County and other identified responsible agencies shall be responsible for monitoring and reporting progress on these measures until all measures are fulfilled in accordance with their original purpose and intent as determined by the Mono County Planning Commission. This monitoring form shall be available for public review and inspection, and the final project clearance shall require that all verifications included in this form have been satisfactorily completed.

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
General Conditions				
1	Applicant shall conform to the Project Description described in the Revised Draft EIR prepared for the Project. Any proposed revisions to the Project Description must be approved by Mono County.	Design, Construction and Operations	MC Department of Public Works, MCEDD and MCCDD Planning Division	Confirm and Document During Design Approval and Monitor Throughout the Project Lifetime
2	The startup operating transition period during which both the proposed M-1 plant power generation facilities and the existing MP-I plant power generation facilities may operate at the same time shall be a maximum of two years from the date that the proposed M-1 plant begins startup operations of any kind.	Construction and Startup Operating Transition Period	MCEDD and MCCDD Planning Division	Confirm and Document During Startup Operating Transition Period

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
3	The rate of geothermal fluid production supplying the Casa Diablo geothermal complex shall not exceed the existing geothermal fluid flow capacity utilized in the complex.	Construction and Startup Operating Transition Period	CDOGGR, MCEDD and MCCDD Planning Division	Confirm and Document During Startup Operating Transition Period
Aesthetics:				
4	<u>Aesthetics Design Feature 1</u> : Power plant lighting shall be projected downward to mitigate nighttime visibility of the facilities.	Design, Construction and Operations	MCCDD	Confirm and Document During Design Approval
5	<u>Aesthetics Design Feature 2</u> : An Outdoor Lighting Plan shall be prepared and implemented for the M-1 plant site in conformance with the Mono County Dark Sky Regulations.	Design	MCCDD	Confirm and Document During Design Approval
6	<u>Aesthetics Design Feature 3</u> : The M-1 facility structures shall be painted in an earth-tone greenish color similar to the existing plants to help blend into the background.	Prior to the End of Construction	MCEDD and MCCDD Planning Division	Confirm and Document Prior to Operations
7	<u>Aesthetics Design Feature 4</u> : The large pine tree in the southwest corner of the M-1 plant shall be saved to provide some visual screening of the plant site.	Design and Construction	MCEDD and MCCDD Planning Division	Confirm and Document During Design Approval and Monitor During Site Construction
8	<u>Aesthetics Design Feature 5</u> : Items to be stored within the equipment storage area constructed on the decommissioned MP-I plant site shall be restricted to a maximum height of 15 feet.	Operations	MCEDD and MCCDD Planning Division	Monitor Throughout the Project Lifetime

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
9	<u>Aesthetics Design Feature 6</u> : The selected interconnection transmission line option(s) from the M-1 plant site to the existing utility distribution line shall be constructed near ground level to minimize the visibility of the interconnection transmission line.	Prior to the End of Construction	MCEDD and MCCDD Planning Division	Confirm and Document Prior to Plant Operations
10	<u>Aesthetics Protection Measure 1</u> : A Landscape Plan shall be prepared to provide visual screening of views of the proposed storage yard to be created in the footprint of the existing MP-I plant site, particularly along the southwestern and southeastern edges of the facility. The Landscape Plan shall be designed to achieve applicable standards set forth in Section 08.010 through 08.060 (Scenic Combining District and State Scenic Highway) of the Mono County General Plan Land Use Element and shall be approved by the County prior to the required decommissioning of the MP-I plant site. Visual screening alternatives could include installing metal slats in the chain link fence; installing and maintaining native vegetation consisting of such species as Jeffery pine, bitterbrush, and sagebrush; or other measures consistent with achieving the applicable County standards.	Prior to the End of Construction	MCEDD and MCCDD Planning Division	Confirm and Document Prior to Plant Operations
Air Quality:				
11	<u>Air Quality Design Feature 1</u> : An Authority to Construct permit for the new power plant shall be obtained from the Great Basin Unified Air Pollution Control District (GBUAPCD).	Prior to Construction	GBUAPCD, MCEDD and MCCDD Planning Division	Confirm and Document Prior to Site Construction
12	<u>Air Quality Design Feature 2</u> : Permits to Operate the diesel-fueled emergency generator and firewater pump generator shall be obtained from the GBUAPCD.	Prior to Construction	GBUAPCD, MCEDD and MCCDD Planning Division	Confirm and Document Prior to Generator Operations
13	<u>Air Quality Design Feature 3</u> : A vapor recovery unit (VRU) shall be used to capture motive fluid that could otherwise be released during plant maintenance.	Design and Operations	GBUAPCD and MC Department of Public Works	Confirm and Document During Design Approval

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
14	<u>Air Quality Design Feature 4:</u> The Applicant shall implement the following measures to reduce fugitive dust emissions from the Project: <ul style="list-style-type: none"> • Restrict surface disturbance to the area within the proposed site grading plan; • Routinely water disturbed surfaces and building materials; • Limit maximum construction vehicle speeds to 15 miles per hour (mph); • Restrict construction activities during periods of high wind (i.e., greater than 25 mph); • Water or cover all materials transported onto or off of the construction site; • Pave the plant maintenance road; and • Cover all unpaved plant site surfaces with gravel after final grading. 	Construction	GBUAPCD, MCEDD and MCCDD Planning Division	Confirm and Document Prior to Site Construction and Monitor During Site Construction
Biological Resources:				
15	<u>Bio Design Feature 1:</u> The M-1 plant site shall drain to a subsurface retention basin. Overflow from this basin shall drain via sheet flow to the surface for percolation.	Design and Construction	MC Public Works Department	Confirm and Document During Design Approval
16	<u>Bio Design Feature 2:</u> Short-term and long-term erosion control and stormwater construction best management practices (BMP) shall be integrated into the interim site reclamation plan for the MP-I plant site.	Prior to MP-I Decommissioning	MC Public Works Department	Confirm and Document During Design Approval
17	<u>Bio Design Feature 3:</u> M-1 plant site construction BMP shall be implemented, including: placement of straw wattles and/or silt fencing along the perimeter of the site, and around topsoil stockpiles; and placement of silt fences in drainage swales at the exit point of the site.	Design and Construction	MC Public Works Department	Confirm and Document During Design Approval

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
18	<u>Bio Design Feature 4</u> : M-1 plant site post-construction BMP shall also be implemented, including: the use of erosion control blankets and hydroseeding of slopes created by grading outside of the plant site; the placement of ¾" rock placed in all areas of the plant site that are not covered by pavement or structural concrete; and rock filled trench drains and retention facilities shall provide desiltation of storm water runoff.	Operations	MC Department of Public Works, MCEDD and MCCDD Planning Division	Confirm and Document During Design Approval and Monitor Throughout the Project Lifetime
19	<u>Bio Design Feature 5</u> : The on-site construction vehicle maximum speed limit shall be limited to 15 miles per hour (mph) to, in part, reduce the potential for vehicle impacts with wildlife during construction activities.	Construction	GBUAPCD, MCEDD and MCCDD Planning Division	Monitor During Site Construction
20	<u>Bio Design Feature 6</u> : All noise creating construction activities shall be limited to daylight hours; noise levels during construction activities shall be kept to a minimum by equipping all on-site equipment with noise attenuation devices; and the M-1 plant site facilities shall operate at lower noise levels than those of the existing MP-I plant to, in part, reduce the impacts from noise on wildlife.	Construction	MCEDD and MCCDD Planning Division	Monitor During Site Construction
21	<u>Bio Design Feature 7</u> : The M-1 plant site shall be designed and constructed to prevent spills from leaving the site 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, shall be instituted and maintained for the M-1 plant site facilities; the proposed M-1 plant site shall be integrated into the existing <i>Geothermal Brine Spill Prevention and Response Plan</i> prepared for the Casa Diablo geothermal complex; and a <i>Spill Prevention, Control and Countermeasure Plan</i> (SPPC Plan) shall be prepared for the plant site and integrated into the existing program for hazardous material management and emergency response at the Casa Diablo geothermal complex to, in part, reduce the potential for adverse offsite effects on biological resources from spills of geothermal fluid, petroleum hydrocarbons, or hazardous substances from the M-1 plant site.	Prior to and During Operations	MC Department of Public Works, Environmental Health, MCEDD and MCCDD Planning Division	Confirm and Document During Design Approval and Monitor Throughout the Project Lifetime

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
22	<u>Bio Design Feature 8</u> : Removal of existing pine trees located off of the M-1 plant site shall be avoided in the placement of the interconnection injection pipeline to minimize impacts on offsite vegetation and wildlife habitat.	Construction	MCEDD and MCCDD Planning Division	Monitor During Site Construction
23	<u>Bio Mitigation Measure 1</u> : The MP-I Project shall be subject to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the Mono County General Plan (Mono County General Plan, Conservation/Open Space Element, Energy Resources, Goal 1, Objectives C and D), including compliance with conditions addressing hydrologic monitoring and remediation contained in the existing Conditional Use Permit for the MP-II Geothermal Power Plant.	Operations	MCEDD, MCCDD Planning Division and the LVHAC	Monitor Throughout the Project Lifetime
24	<u>Bio Protection Measure 2</u> : All above ground pipelines and transmission lines shall be installed using low pressure tracked equipment to minimize impacts on vegetation. Understory vegetation and organic horizon may be trampled during pipeline and transmission line installation but not removed. All Jeffrey pine trees in the installation routes outside of the footprint of the M-1 replacement plant site shall be preserved. All interconnection transmission line and pipeline installation routes outside of the footprint of the M-1 replacement plant site shall be revegetated during the October following the respective pipeline or transmission line installations by seeding with a [seed mix – scrub] approved by the County which emphasizes bitterbrush.	Construction	MCEDD and MCCDD Planning Division	Monitor During Site Construction

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
25	<p><u>Bio Protection Measure 3:</u> A post M-1 plant site construction Revegetation Plan shall be prepared and submitted to the County. The Revegetation Plan shall specify that topsoil at the M-1 pad site, defined as organic litter and mineral soil to a depth of 10 inches, shall be stockpiled at the SCE easement edge. This topsoil shall be spread to enhance the revegetation areas. The revegetation shall include all pad edges, fill slopes, and areas disturbed by equipment, except the very small areas mapped as thermally disturbed (i.e., the pre-project condition is already devegetated). Revegetation areas shall be seeded and the seed immediately raked in during the first October following construction, using [seed mix – scrub]. After seed is broadcast, the revegetation area shall be mulched using shrubs and forest materials retained from the M-1 pad construction area. Once seeding and mulching have been completed, the revegetation areas shall be kept off-limits to vehicles except in emergency. Revegetation goals are: (1) eight native perennial grasses and four native shrubs per 4-square-meter quadrat (average of five quadrats per revegetation area), in all areas except those mapped as thermally disturbed; and (2) no populations of new non-native species (i.e., species that were present at Casa Diablo pre-project are allowed). If after 3 years goal (1) is not met, then new seeding and mulching is required. If at any time a new non-native population occurs, then eradication is required.</p>	Post-Construction	MCEDD and MCCDD Planning Division	Confirm and Document Prior to Plant Operations and Monitor Until Revegetation Goals are Successful
26	<p><u>Bio Protection Measure 4:</u> Patches totaling about 7.2 acres of high quality Wright Buckwheat Dwarf Scrub habitat have been mapped on the private land northeast of the M-1 plant site. The Applicant shall protect this habitat from further development and mechanical disturbance and designate the mapped area for long-term preservation in the Reclamation Plan prepared for the County for the Casa Diablo geothermal development.</p>	Design, Construction and Operations	MCEDD and MCCDD Planning Division	Require Revision of the Reclamation Plan and Monitor Throughout the Project Lifetime

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
27	<u>Bio Protection Measure 5:</u> During the seasonal bird nesting period from February 15 th through September 15 th , a nesting bird survey shall be undertaken by a qualified biologist within the 7-day period prior to commencing (or recommencing if activities stop longer than 7 days) construction activities on the M-1 plant site. If nesting birds are observed on or within 100 feet of the proposed M-1 plant site, then the CDFG shall be notified and surface disturbance within 100 feet of the nesting birds shall be postponed until a qualified biologist advises that fledging has occurred.	Pre-Construction	MCEDD, MCCDD Planning Division and CDFG	Confirm and Document Prior to Site Construction
28	<u>Bio Protection Measure 6:</u> A nesting bird survey shall be undertaken by a qualified biologist within the 7-day period prior to beginning decommissioning of the existing MP-I power generation superstructure. If nesting birds are observed on the existing MP-I power generation superstructure, then the CDFG shall be notified and decommissioning activities shall be postponed until a qualified biologist advises that fledging has occurred.	Pre-Construction	MCEDD, MCCDD Planning Division and CDFG	Confirm and Document Prior to Site Construction
29	<u>Bio Protection Measure 7:</u> The Project shall not erect any linear barriers to movement of deer or other wildlife in the area between the existing MP-I plant site and the replacement M-1 plant site. During M-1 plant site construction, no temporary fencing or pipeline racks shall be erected in this same area during the normal periods of mule deer migration, from April 1 st to May 30 th or from September 15 th through November 15 th .	Design and Construction	MCEDD, MCCDD Planning Division and CDFG	Confirm and Document During Site Construction
30	<u>Bio Protection Measure 8:</u> A new deer crossing shall be constructed over the existing pipeline rack between the existing MP-I plant site and the replacement M-1 plant site to enhance mule deer and other wildlife movement through the Project area. The crossing shall be approximately 30 feet wide and shall be located near the 90 degree turn in the pipeline from east-west to north-south (at about 37.64590°N, -118.91358°W). The crossing shall be earthen filled over the pipeline rack. The new fill slopes, the earthen top, and the adjacent disturbed area shall be revegetated using [seed mix – scrub] and Jeffrey pines on 20-foot centers. The finished crossing shall resemble the existing crossing at the SCE easement located approximately 320 feet east of the 90 degree turn.	Design and Construction	MCEDD, MCCDD Planning Division and CDFG	Confirm and Document During Design Approval and Post-Construction

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
31	<u>Bio Protection Measure 9</u> : The mule deer movement corridor identified on the northeastern side of the existing Casa Diablo geothermal complex shall be maintained free from further development and mechanical disturbance to provide continuing wildlife movement through the Casa Diablo area. This area generally coincides with the patches of Wright Buckwheat Dwarf Scrub community referenced in Bio Protection Measure 4, and the adjacent three acres of Singleleaf Pinyon Woodland, and one acre of Jeffrey Pine Forest. The Applicant shall protect this movement corridor from further development and mechanical disturbance and designate the mapped area for long-term preservation in the Reclamation Plan prepared for the County for the Casa Diablo geothermal development.	Design, Construction and Operations	MCEDD and MCCDD Planning Division	Require Revision of the Reclamation Plan and Monitor Throughout the Project Lifetime
32	<u>Bio Protection Measure 10</u> : All operational waste facilities shall be located within exclusion fences of at least six feet in height to avoid attracting potential predators (i.e., including bears, coyotes, and ravens) to the area. Gates shall be kept closed if a waste facility is present. All waste receptacles shall be fitted with bear-proof lids. The lids shall be kept closed, and waste receptacle lid-closure shall be added to the standard plant operating protocol. Visiting contractors shall be made aware of the importance of proper waste disposal within the Project area.	Operations	MCEDD and MCCDD Planning Division	Monitor Throughout the Project Lifetime
33	<u>Bio Protection Measure 11</u> : Construction lighting shall be shielded away from the area located between the existing MP-I plant site and the replacement M-1 plant site. Operational lighting located along the northern, western, and southern boundaries of the replacement M-1 plant site; and the eastern and southern boundaries of the new MP-I storage yard, shall be shielded and directed downward or inward away from deer movement corridors.	Design and Construction	MC Department of Public Works	Confirm and Document During Design Approval
34	<u>Bio Protection Measure 12</u> : The operational vehicle speed limit in the Project area shall be posted and restricted to a maximum 15 miles per hour to minimize the potential for vehicle impacts on wildlife. Distractions such as using electronic devices, cell phones, etc. shall be prohibited in moving vehicles in the Casa Diablo area. Visiting contractors shall be made aware of the wildlife collision avoidance rules.	Operations	MCEDD and MCCDD Planning Division	Monitor Throughout the Project Lifetime

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
35	<u>Bio Protection Measure 13</u> : To avoid harassment of wildlife or take of special status wildlife species, all dogs brought into the Project area shall be kept on leash unless they are brought into the fenced MP-I plant site or fenced M-1 replacement plant site areas and the gates are closed. Contractors shall be informed of the requirement that dogs be leashed and gates closed.	Operations	MCEDD and MCCDD Planning Division	Monitor Throughout the Project Lifetime
36	<u>Bio Protection Measure 14</u> : All constructed basins in the Project area shall have finished slopes of 1:3 or less for at least 10 percent of the basin perimeter, with no less than one such slope every 100 feet of perimeter to facilitate wildlife escape from the basins. This may be accomplished by constructing ramp-like slopes or by piling dirt inside the basins at the required slope and interval.	Design and Construction	MC Department of Public Works	Confirm and Document During Design Approval
37	<u>Bio Protection Measure 15</u> : A biological survey for amphibians shall be conducted of the existing pond on the MP-I plant within the 7-day period prior to demolition of the pond. The CDFG shall be notified if any amphibian populations are discovered during the survey. The CDFG shall be allowed to determine whether relocation or extermination of the amphibian species is indicated.	Pre-Construction	MCEDD, MCCDD Planning Division and CDFG	Confirm and Document Prior to Pond Demolition
38	<u>Bio Protection Measure 16</u> : All perchable pole tops greater than 20 feet in height located near the southern boundary of the M-1 plant site abutting undisturbed native scrub habitat, shall be fitted with passive raptor and raven perching deterrents (e.g., Nixalite® bird spikes or equivalent). Any accumulations of raptor or raven droppings on M-1 plant site structures would trigger expanding the passive raptor and raven perching deterrents to the affected structure(s). No new potential perches of 20-foot in height or greater shall be authorized in the new MP-I storage yard following decommissioning activities.	Design, Construction and Operations	MCEDD and MCCDD Planning Division	Confirm and Document Prior to Operations and Monitor Throughout the Project Lifetime
Cultural Resources				
39	<u>Cultural Design Feature 1</u> : The Applicant shall implement all environmental protection measures to reduce the adverse effects of the Project on cultural resources that were recommended in the baseline cultural resources survey reports prepared for the Project area.	Construction	MCEDD and MCCDD Planning Division	Confirm and Document During Site Grading

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
40	<u>Cultural Protection Measure 1</u> : In the unlikely event that human remains are encountered during the construction phase of the project, excavation activities shall be stopped and the County Coroner must be contacted. If the County Coroner determines that the remains are those of Native Americans, the Native American Heritage Commission (NAHC) must be contacted within 24 hours and a Most Likely Descendant will be assigned to consult with the County to develop an agreement for the treatment and disposition of the remains.	Construction	MCEDD, MCCDD Planning Division and NAHC	Confirm and Document During Site Grading
Geology and Soils				
41	<u>Geo Design Feature 1</u> : Applicant shall implement those measures recommended in the report of the geotechnical investigation of the site to mitigate impacts due to geotechnical, soils and geologic constraints.	Design and Construction	MC Public Works Department	Confirm and Document During Design Approval
42	<u>Geo Design Feature 2</u> : All buildings and structures shall be constructed to meet applicable earthquake safety codes and the 2010 Uniform Building Code adopted by Mono County.	Design and Construction	MCCDD	Confirm and Document During Design Approval
Hazards and Hazardous Materials				
43	<u>HazMat Design Feature 1</u> : The power plant site shall 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.	Design and Construction	MC Public Works Department, Environmental Health	Confirm and Document Prior to Operations
44	<u>HazMat Design Feature 2</u> : A system of pressure and flow sensing devices and regular inspection of all lines, capable of detecting leaks and spills, shall be instituted and maintained.	Design, Construction and Operations	MCEDD and MCCDD Planning Division	Confirm and Document Prior to Operations and Monitor Throughout the Project Lifetime

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
45	<u>HazMat Design Feature 3</u> : The existing program for hazardous material management and emergency response at the Casa Diablo geothermal complex shall be expanded to include the M-1 plant site and operations, including: (a) the existing Spill Pollution Control and Countermeasure (SPCC) Plan; (b) the California Accidental Release Prevention (CalARP) Program; (c) the EPA Risk Management Plan (RMP); and (d) the OSHA Process Safety Management (PSM) Program to include the new M-1 plant.	Design, Construction and Operations	MCEDD, MCCDD Planning Division and MC Health Department, Environmental Health Division	Confirm and Document Prior to Operations and Monitor Throughout the Project Lifetime
46	<u>HazMat Design Feature 4</u> : The existing program for fire prevention and suppression at the Casa Diablo geothermal complex shall be amended and integrated to include the M-1 replacement plant facilities and operating procedures.	Design, Construction and Operations	Long Valley Fire Protection District (LVFPD)	Confirm and Document Prior to Operations and Monitor Throughout the Project Lifetime
47	<u>HazMat Design Feature 5</u> : No hazardous materials, chemicals, or wastes shall be stored in the new storage yard constructed in the footprint of the decommissioned MP-I plant site.	Operations	MCEDD, Environmental Health and MCCDD Planning Division	Monitor Throughout the Project Lifetime
Hydrology and Water Quality				
48	<u>Hydro Design Feature 1</u> : The M-1 plant site shall drain to a subsurface retention basin. Overflow from this basin shall drain via sheet flow to the surface for percolation.	Design and Construction	MC Public Works Department	Confirm and Document Prior to Operations
49	<u>Hydro Design Feature 1</u> : Short-term and long-term erosion control and stormwater construction best management practices (BMPs) shall be integrated into the interim site reclamation plan for the MP-I plant site.	Construction and Operations	MC Public Works Department and Lahontan RWQCB	Confirm and Document Prior to Construction and Operations, Respectively

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
50	<u>Hydro Design Feature 3</u> : M-1 plant site construction BMPs shall be implemented, including: placement of straw wattles and/or silt fencing along the perimeter of the site, and around topsoil stockpiles; and placement of silt fences in drainage swales at the exit point of the site.	Construction	MC Public Works Department and Lahontan RWQCB	Confirm and Document Prior to Construction
51	<u>Hydro Design Feature 4</u> : M-1 plant site post-construction BMPs shall also be implemented, including: the use of erosion control blankets and hydroseeding of slopes created by grading outside of the plant site; the placement of ¾” rock placed in all areas of the plant site that are not covered by pavement or structural concrete; and rock filled trench drains and retention facilities shall provide desiltation of storm water runoff.	Post-Construction	MC Public Works Department and Lahontan RWQCB	Confirm and Document Prior to Operations
52	<u>Hydro Design Feature 5</u> : The M-1 plant site shall be designed and constructed to prevent spills from leaving the site 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, shall be instituted and maintained for the M-1 plant site facilities; the proposed M-1 plant site shall be integrated into the existing <i>Geothermal Brine Spill Prevention and Response Plan</i> prepared for the Casa Diablo geothermal complex; and a <i>Spill Prevention, Control and Countermeasure Plan</i> (SPPC Plan) shall be prepared for the plant site and integrated into the existing program for hazardous material management and emergency response at the Casa Diablo geothermal complex to, in part, reduce the potential for adverse offsite effects on water resources from spills of geothermal fluid, petroleum hydrocarbons, or hazardous substances from the M-1 plant site.	Design, Construction and Operations	MC Public Works Department, MC Health Department, Environmental Health Division and Lahontan RWQCB	Confirm and Document During Design Approval and then Monitored Throughout the Project Lifetime

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
53	<u>Hydro Design Feature 6</u> : No element of the project construction shall result in the alteration of the blue-line drainage channel, or discharge of fill material into, the blue-line drainage channel that crosses the site between the existing MP-I and proposed M-1 plant sites, adjacent to Old Highway 395. Prior to commencement of construction, the Applicant shall provide to the County the proposed engineering design for the road crossing which demonstrates to the County that no impact to this drainage channel would occur as a result of project construction.	Design and Construction	MC Department of Public Works, MCEDD and MCCDD Planning Division	Confirm and Document During Design Approval and Monitor Through Construction
54	<u>Hydro Mitigation Measure 1</u> : Headwalls and sluice gates constructed on culverts draining the Casa Diablo geothermal complex to provide area-wide emergency spill containment and prevent surface drainage from escaping the area shall be inspected and maintained routinely.	Operations	MC Public Works, Environmental Health Department and Lahontan RWQCB	Confirm and Document During Design Approval and then Monitored Throughout the Project Lifetime
55	<u>Hydro Mitigation Measure 2</u> : All geothermal fluid, petroleum product, and hazardous substance spill containment and emergency response plans proposed for the Project shall be maintained current throughout the life of the Project.	Operations	MCEDD, MCCDD Planning Division and MC Health Department, Environmental Health Division	Monitor Throughout the Project Lifetime
23* [Restated]	<u>Hydro Mitigation Measure 3</u> : The MP-I Project shall be subject to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the Mono County General Plan (Mono County General Plan, Conservation/Open Space Element, Energy Resources, Goal 1, Objectives C and D), including compliance with conditions addressing hydrologic monitoring and remediation contained in the existing Conditional Use Permit for the MP-II Geothermal Power Plant.	Operations	MCEDD, MCCDD Planning Division and the LVHAC	Monitor Throughout the Project Lifetime

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
Noise				
56	<u>Noise Design Feature 1</u> : All noisy construction activities shall be limited to daylight hours.	Construction	MCEDD and MCCDD Planning Division	Monitor During Site Construction
57	<u>Noise Design Feature 2</u> : Noise levels during construction activities shall be kept to a minimum by equipping all on-site equipment with noise attenuation devices.	Construction	MCEDD and MCCDD Planning Division	Monitor During Site Construction
58	<u>Noise Design Feature 3</u> : All project construction activities and normal operations shall comply with applicable County noise requirements.	Construction	MCEDD and MCCDD Planning Division	Monitor During Site Construction
Land Use/Planning				
5** [Restated]	<u>Land Use/Planning Design Feature 1</u> : An Outdoor Lighting Plan shall be prepared and implemented for the M-1 plant site in conformance with the Mono County Dark Sky Regulations.	Design	MC Public Works Department	Confirm and Document During Design Approval
42** (Restated)	<u>Land Use/Planning Design Feature 2</u> : All buildings and structures shall be constructed to meet applicable earthquake safety codes and the 2010 Uniform Building Code adopted by Mono County.	Design and Construction	MCCDD	Confirm and Document During Design Approval
53*** [Restated]	<u>Land Use/Planning Design Feature 3</u> : No element of the project construction shall result in the alteration of the blue-line drainage channel, or discharge of fill material into, the blue-line drainage channel that crosses the site between the existing MP-I and proposed M-1 plant sites, adjacent to Old Highway 395. Prior to commencement of construction, the Applicant shall provide to the County the proposed engineering design for the road crossing which demonstrates to the County that no impact to this drainage channel would occur as a result of project construction.	Design and Construction	MC Department of Public Works, MCEDD and MCCDD Planning Division	Confirm and Document During Design Approval and Monitor Through Construction

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
58** [Restated]	<u>Land Use/Planning Design Feature 4</u> : All project construction activities and normal operations shall comply with applicable County noise requirements.	Construction	MCEDD and MCCDD Planning Division	Monitor During Site Construction
10** [Restated]	<u>Land Use/Planning Protection Measure 1</u> : A Landscape Plan shall be prepared to provide visual screening of views of the proposed storage yard to be created in the footprint of the existing MP-I plant site, particularly along the southwestern and southeastern edges of the facility. The Landscape Plan shall be designed to achieve applicable standards set forth in Section 08.010 through 08.060 (Scenic Combining District and State Scenic Highway) of the Mono County General Plan Land Use Element and shall be approved by the County prior to the required decommissioning of the MP-I plant site. Visual screening alternatives could include installing metal slats in the chain link fence; installing and maintaining native vegetation consisting of such species as Jeffery pine, bitterbrush, and sagebrush; or other measures consistent with achieving the applicable County standards.	Prior to the End of Construction	MCEDD and MCCDD Planning Division	Confirm and Document Prior to Plant Operations

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
Cumulative Effects				
59	<p><u>Cumulative Bio Mitigation Measure 1:</u> Constraints to wildlife movement through the Casa Diablo Hot Springs area shall be evaluated as part of any new development project proposed in the area. Measures shall be included as part of each new development project that would prevent the respective project from becoming a substantial obstacle to wildlife movement through or around the respective proposed development area. Mitigation measures to reduce cumulative impacts should be project specific, but examples of suggested measures to mitigate cumulative impacts include:</p> <ul style="list-style-type: none"> • Conducting baseline deer studies of proposed projects in the Casa Diablo Hot Springs area and monitoring deer use within and near a new proposed project. • Designing pipeline corridors or other potential physical obstacles to allow for deer and other wildlife movement such that dips, piled soil crossings or other proposed constructs to facilitate wildlife travel through identified major movement corridors are adopted as part of a new proposed project. • Requiring that proposed project lighting be shielded away from identified major deer and other wildlife movement corridors. 	Design, Construction and Operations	MCEDD, MCCDD Planning Division and/or the Responsible Federal Agency and CDFG	Review Baseline Surveys and Impacts on Wildlife Movement Prior to Decisions on Project Approval and Confirm and Document During Design Approval
60	<p><u>Cumulative Bio Mitigation Measure 2:</u> Water which may accumulate in geothermal well site basins from precipitation shall be removed to a standing depth of 2 inches from the respective basins on a daily basis or as soon as operationally feasible; and liquids deposited into the basins shall either be removed daily to a standing depth of 2 inches, or the basins shall be made wildlife escapable by creating earthen ramps at slopes of 1:3 or less at intervals of 100 feet apart or less around the perimeter of the standing depth of the liquid stored in the basin. Alternatives for providing equally effective measures which would allow wildlife to escape unharmed from the well site basins may be authorized subject to Mono County and CDFG approval.</p>	Operations	MCEDD, MCCDD Planning Division and/or the Responsible Federal Agency and CDFG	Confirm and Document During Design Approval

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
61	<u>Cumulative Bio Mitigation Measure 3</u> : All existing and future geothermal power plant projects in the Hot Creek buffer zone, or in the vicinity of Casa Diablo Hot Springs, shall be subject to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the Mono County General Plan (Mono County General Plan, Conservation/Open Space Element, Energy Resources, Goal 1, Objectives C and D, as may be amended), including compliance with conditions addressing hydrologic monitoring and remediation contained in the existing Conditional Use Permit for the MP-II Geothermal Power Plant.	Operations	MCEDD, MCCDD Planning Division and/or the Responsible Federal Agency and the LVHAC	Require Monitoring and Remedial Action Program with Decisions on Respective Project Approval and Monitor Throughout the Project Lifetime
61* [Restated]	<u>Cumulative Hydro Mitigation Measure 1</u> : All existing and future geothermal power plant projects in the Hot Creek buffer zone, or in the vicinity of Casa Diablo Hot Springs, shall be subject to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the Mono County General Plan (Mono County General Plan, Conservation/Open Space Element, Energy Resources, Goal 1, Objectives C and D, as may be amended), including compliance with conditions addressing hydrologic monitoring and remediation contained in the existing Conditional Use Permit for the MP-II Geothermal Power Plant.	Operations	MCEDD, MCCDD Planning Division and/or the Responsible Federal Agency and the LVHAC	Require Monitoring and Remedial Action Program with Decisions on Respective Project Approval and Monitor Throughout the Project Lifetime
61* [Restated]	<u>Cumulative Land Use/Planning Mitigation Measure 1</u> : All existing and future geothermal power plant projects in the Hot Creek buffer zone, or in the vicinity of Casa Diablo Hot Springs, shall be subject to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the Mono County General Plan (Mono County General Plan, Conservation/Open Space Element, Energy Resources, Goal 1, Objectives C and D, as may be amended), including compliance with conditions addressing hydrologic monitoring and remediation contained in the existing Conditional Use Permit for the MP-II Geothermal Power Plant.	Operations	MCEDD, MCCDD Planning Division and/or the Responsible Federal Agency and the LVHAC	Require Monitoring and Remedial Action Program with Decisions on Respective Project Approval and Monitor Throughout the Project Lifetime

Number	Mono County Conditions of Approval	Schedule of Compliance	Monitoring Entity*	Verification Date
62	<u>Cumulative Aesthetics Protection Measure 1</u> : Applicable Mono County lighting standards shall apply to all projects in the Casa Diablo geothermal development complex.	Construction and Operations	MCEDD and MCCDD Planning Division	Confirm and Document During Respective Project Design Approval
63	<u>Cumulative Air Quality Protection Measure 1</u> : Vehicle speeds shall be restricted to a maximum speed of 15 miles per hour for project-related travel on all unpaved access roads. Vehicle speed limits shall be posted in conformance with applicable Mono County and/or U.S. Forest Service (USFS) requirements and restrictions.	Construction and Operations	MCEDD, MCCDD Planning Division and/or the BLM, USFS and GBUAPCD	Require with Decisions on Respective Project Approval and Monitor Throughout the Project Lifetime
<p>* The monitoring entities identified by abbreviation in these tabulated Conditions of Approval are as follows:</p> <p>BLM ≡ U.S. Department of Interior, Bureau of Land Management</p> <p>CDFG ≡ California Department of Fish and Game</p> <p>CDOGGR ≡ California Division of Oil, Gas and Geothermal Resources</p> <p>GBUAPCD ≡ Great Basin Unified Air Pollution Control District</p> <p>LVFPD ≡ Long Valley Fire Protection District</p> <p>LVHAC ≡ Long Valley Hydrologic Advisory Committee</p> <p>MCCDD ≡ Mono County Community Development Department</p> <p>MCEDD ≡ Mono County Economic Development Department</p> <p>RWQCB ≡ Lahontan Regional Water Quality Control Board</p> <p>USFS ≡ U.S. Department of Agriculture, Inyo National Forest</p>				

Exhibit I

Comment Letters and Attachments on the

Revised Draft EIR (RDEIR)

Exhibit II

Comment Letters and Attachments on the

Second Revised Draft EIR (RDEIR2)

Exhibit III
Unified Final EIR

FILED

OCT 17 2012

Print Form

LYNDA ROBERTS
MONO COUNTY CLERK

Notice of Determination

MC 12-29 Appendix D

To:

☒ Office of Planning and Research

U.S. Mail:

Street Address:

P.O. Box 3044

1400 Tenth St., Rm 113

Sacramento, CA 95812-3044

Sacramento, CA 95814

☒ County Clerk

County of: Mono

Address: PO Box 237

Bridgeport, CA 93517

From:

Public Agency: Mono County

Address: PO Box 347

Mammoth Lakes, CA 93546

Contact: Courtney Weiche

Phone: 760.924.1803

Lead Agency (If different from above):

Address:

Contact:

Phone:

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): 2011022020

Project Title: Mammoth Pacific I Replacement Project

Project Applicant: Mammoth Pacific L.P.

Project Location (include county): East of State Route 203 and Highway 395. Two miles east of Mammoth Lakes

Project Description:

The proposed project would replace the aging MP-I geothermal power plant with a new, more-modern and -efficient binary power plant (referred to as "M-1") while maintaining the existing geothermal wellfield, pipeline system and ancillary facilities. 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 the applicant would close and dismantle the old MP-I plant and would utilize the former plant location for equipment storage. The transition period during which both the MP-I and M-1 operations would overlap but would not exceed two years from the date the M-1 plant begins startup operations.

This is to advise that the Mono County Planning Commission has approved the above
(☒ Lead Agency or ☐ Responsible Agency)

described project on October 11, 2012 and has made the following determinations regarding the above
(date) *effective upon conclusion of appeal, if any, upholding determination, or upon Board of Supervisors' clarification of General Plan, whichever occurs later.*

1. The project [☐ will ☒ will not] have a significant effect on the environment.
2. ☒ An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA.
☐ A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [☒ were ☐ were not] made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [☒ was ☐ was not] adopted for this project.
5. A statement of Overriding Considerations [☐ was ☒ was not] adopted for this project.
6. Findings [☒ were ☐ were not] made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at:

437 Old Mammoth Road Suite P Mammoth Lakes, CA 93546

Signature (Public Agency):

Title: Associate Planner

Date: October 12, 2012

Date Received for filing at OPR:

Authority cited: Sections 21083, Public Resources Code.
Reference Section 21000-21174, Public Resources Code.

Revised 2011

Posted thru 11-16, 2012
Mono County Clerk-Recorder



State of California—The Resources Agency
DEPARTMENT OF FISH AND GAME
2012 ENVIRONMENTAL FILING FEE CASH RECEIPT

RECEIPT#

427130

STATE CLEARING HOUSE # (If applicable)

2011022020

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY

LEAD AGENCY

DATE

COUNTY/STATE AGENCY OF FILING

DOCUMENT NUMBER

PROJECT TITLE

PROJECT APPLICANT NAME

PHONE NUMBER

PROJECT APPLICANT ADDRESS

CITY

STATE

ZIP CODE

PROJECT APPLICANT (Check appropriate box):

☒ Local Public Agency ☐ School District ☐ Other Special District ☐ State Agency ☐ Private Entity

CHECK APPLICABLE FEES:

<input checked="" type="checkbox"/> Environmental Impact Report (EIR)	\$2,919.00	\$ 2919.00
<input type="checkbox"/> Mitigated/Negative Declaration (ND)(MND)	\$2,101.50	\$
<input type="checkbox"/> Application Fee Water Diversion (State Water Resources Control Board Only)	\$850.00	\$
<input type="checkbox"/> Projects Subject to Certified Regulatory Programs (CRP)	\$992.50	\$
<input checked="" type="checkbox"/> County Administrative Fee	\$50.00	\$ 50.00
<input type="checkbox"/> Project that is exempt from fees		
<input type="checkbox"/> Notice of Exemption		
<input type="checkbox"/> DFG No Effect Determination (Form Attached)		
<input type="checkbox"/> Other		\$

PAYMENT METHOD:

☐ Cash ☐ Credit ☒ Check ☐ Other

TOTAL RECEIVED \$ 2969.00

SIGNATURE

TITLE

X

WHITE - PROJECT APPLICANT

YELLOW - DFG/ASB

PINK - LEAD AGENCY

GOLDEN ROD - COUNTY CLERK

DFG 753.5a (Rev. 11/11)



RESOLUTION R12-__

**A RESOLUTION OF THE MONO COUNTY BOARD OF SUPERVISORS
DENYING APPEAL OF PLANNING COMMISSION APPROVAL OF CUP 12-004, VARIANCE 12-002, RECLAMATION PLAN 12-001, FEIR FINDINGS AND ADOPTION, NOTICE OF DETERMINATION AND GENERAL PLAN AMENDMENT [SIC] FILED BY LABORERS INTERNATIONAL UNION OF NORTH AMERICA, LOCAL 783 (LIUNA); CERTIFYING AND ADOPTING THE FEIR FOR THE PROJECT; AND AFFIRMING THE PLANNING COMMISSION'S APPROVALS**

WHEREAS, the Mammoth Pacific I Replacement Project involves the replacement of the existing MP-1 power plant, located near Casa Diablo Hot Springs, with a new binary power plant to be located on the same site; reclamation and partial reuse of the existing power plant site; and the ultimate reclamation of all operations on the site (the "Project"). The existing geothermal well field and level of geothermal extraction would not be altered by the Project; and

WHEREAS, the Mono County Planning Commission did, on October 11, 2012, hold a properly noticed and advertised public hearing to hear all testimony and consider all evidence relevant to the Project, related approvals, and the Final Environmental Impact Report, consisting of the RDEIR, RDEIR2 and Final EIR (FEIR); and

WHEREAS, following the public hearing, the Planning Commission certified and approved the FEIR and Mitigation, Monitoring and Reporting Program (MMRP), Conditional Use Permit 12-004, Variance 12-002, and Reclamation Plan 12-001, thereby approving the Project, effective upon the conclusion of any appeal or upon clarification by this Board of provisions of the Mono County General Plan clarification by this Board, whichever occurs last; and

WHEREAS, the Planning Commission additionally recommended that the Board of Supervisors adopt General Plan Clarifying Amendment 12-003(b), related to setbacks from mapped watercourses applicable to geothermal development within the Hot Creek Buffer Zone; and

WHEREAS, on October 19, 2012, Laborers International Union of North America, Local 783 (LIUNA) filed an appeal of the Notice of Decision and 10/11/2012 approvals by the Planning Commission, including Use Permit 12-004, Variance 12-002, Reclamation Plan 12-001, CEQA approvals (FEIR, CEQA findings), and General Plan Amendment [sic]; and

WHEREAS, having considered the appeal filed by LIUNA during a duly noticed public hearing held on November 13, 2012, and based on the information provided in the FEIR, public comment received, and information provided by LIUNA, the applicant, the public, and staff, the Board of Supervisors desires to affirm the Notice of Decision and 10/11/2012 approvals by the Planning Commission, including Use Permit 12-004, Variance 12-002, Reclamation Plan 12-001, CEQA approvals (FEIR, CEQA findings), and General Plan Amendment [sic] with those modifications, if any, stated herein or on the record, thereby denying the appeal filed by LIUNA;

NOW, THEREFORE, the Mono County Board of Supervisors hereby **AFFIRMS** the findings of the Mono County Planning Commission for the Project and **FINDS** and **RESOLVES** as follows:

1. A Final Environmental Impact Report (FEIR) has been completed for the Project in compliance with CEQA; and
2. The FEIR has been presented to the Board of Supervisors, which is the decision maker with respect to the appeal; and
3. The Board of Supervisors has reviewed and considered the information contained in the FEIR for the Project; and
4. The FEIR reflects the lead agency's independent judgment and analysis; and
5. The FEIR has identified potentially significant effects of the project which, as the result of changes or alterations incorporated into the Project, have been avoided or reduced to a less-than-significant level, as set forth in Exhibit A to this resolution, which is hereby incorporated by this reference as if fully set forth herein; and
6. Potential alternatives to the proposed Project are either not feasible or do not provide environmental benefit in comparison to the proposed Project, as set forth in Exhibit A; and
7. The Mono County Board of Supervisors does hereby certify and adopt the FEIR and the mitigation monitoring and reporting program for the Mammoth Pacific I Replacement Project, thereby denying the appeal of FEIR approval filed by LIUNA.

BE IT FURTHER RESOLVED THAT the Mono County Board of Supervisors hereby:

1. Affirms and makes each of the findings of the Planning Commission set forth in Exhibit B to this resolution, which is hereby incorporated by reference as if fully set forth herein, related to approval of Variance 12-002; and
2. Affirms the Planning Commission's approval of Variance 12-002, thereby denying the appeal of the variance filed by LIUNA.

BE IT FURTHER RESOLVED THAT the Mono County Board of Supervisors hereby:

1. Affirms and makes each of the findings of the Mono County Planning Commission set forth in Exhibit C to this resolution, which is hereby incorporated by reference as if fully set forth herein, related to approval of Conditional Use Permit 12-004; and
2. Affirms the Planning Commission's approval of Conditional Use Permit 12-004 for the Project, with the modification set forth in paragraph 3 below, including Conditions of Approval, the Mitigation Monitoring, and Reporting Program, and height exception for mechanical appurtenances, thereby denying the appeal of the approval of the CUP filed by LIUNA.

- 1 3. General Condition #3 of the Use Permit Conditions shall be revised to read as follows: “The
2 combined rate of geothermal fluid production utilized by the Project, including during any interim
3 period when the M-1 and MP-1 plants are operating simultaneously, shall not exceed the present rate
4 of geothermal fluid flow utilized in the operation of the MP-1 plant, unless offset by equivalent
reductions at the MPII plant.”

5 **BE IT FURTHER RESOLVED THAT** the Mono County Board of Supervisors hereby:

- 6 1. Affirms and makes each of the findings of the Mono County Planning Commission set forth
7 in Exhibit D to this resolution, which is hereby incorporated by reference as if fully set forth
8 herein, related to approval of Reclamation Plan 12-001; and
9 2. Affirms the Planning Commission’s approval of Reclamation Plan 12-001, thereby denying
10 the appeal the Reclamation Plan approval filed by LIUNA.

11 **BE IT FURTHER RESOLVED THAT** the Mono County Board of Supervisors hereby approves
12 and affirms the Notice of Decision for the Project, with such changes and modifications, if any, as
13 noted herein or stated on the record.

14 **BE IT FURTHER RESOLVED THAT** the Mono County Board of Supervisors hereby denies the
15 appeal of the General Plan Amendment [sic] as premature, because the proposed General Plan
16 Clarifying Amendment recommended by the Planning Commission has not been adopted by this
Board.

17 **PASSED AND ADOPTED** this 13th day of November, 2012, by the following vote of the Board
18 of Supervisors, County of Mono:

19 AYES :

20 NOES :

21 ABSENT :

22 ABSTAIN :

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25 _____
Vikki Magee-Bauer, Chair

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28 ATTEST:

29 APPROVED AS TO FORM:

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Lynda Roberts
Clerk of the Board

Marshall S. Rudolph
County Counsel

EXHIBIT A

DRAFT ENVIRONMENTAL IMPACT FINDINGS PURSUANT TO CEQA GUIDELINE SECTION 15091 MAMMOTH PACIFIC I REPLACEMENT PROJECT FINAL ENVIRONMENTAL IMPACT REPORT

The State of California Public Resources Code Section 21081 and CEQA Guidelines Section 15091 require a public agency, prior to approving a project, to identify significant impacts of the project and make one or more of three allowable findings for each of the significant impacts:

- The first allowable finding is that “[c]hanges or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effect as identified in the Final EIR.” (State CEQA Guidelines Section 15091, subd. (a)(1))
- The second allowable finding is that “[s]uch changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.” (State CEQA Guidelines, Section 15091, subd. (a)(2))
- The third allowable finding is that “[s]pecific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR.” (State CEQA Guidelines, Section 15091 (a)(3))

After reviewing the Final EIR and the public record on the Project, the County hereby makes the findings in Parts I through IV of this document regarding the significant effects of the Mammoth Pacific I Replacement Project (Project) pursuant to Section 15091 of the State CEQA Guidelines.

All effects of the Project on the environment are hereby found to be not significant after mitigation. Cumulative impacts of the Project in conjunction with other related approved, proposed, or projects currently under construction have been addressed where applicable, and would not be significant after mitigation.

PART I: FINDINGS RELATIVE TO POTENTIALLY SIGNIFICANT IMPACTS

Because certain effects of the Project were analyzed in the EIR as *potentially* significant and because project design features, alterations, or mitigation measures have been imposed which avoid or further reduce those effects, the Planning Commission hereby finds as follows:

A. Aesthetics

1. Potentially Significant Effect: The Project could substantially degrade the existing visual character or quality of the site and its surroundings if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features designed to screen the proposed M-1 plant from public view. These features consist of earth-tone painting, pine tree preservation, a restriction on the height of materials stored, and placement of the interconnection transmission line near ground level. In addition, a Landscape Plan has been prepared and must be approved by the

County. The Landscape Plan identifies specific visual screening measures to be implemented at the storage yard to be located in the footprint of the existing MP-I plant, which is to be removed. With implementation of these design features and the protection measure, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could create a new source of substantial light or glare that would adversely affect nighttime views in the area if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features to reduce nighttime visibility caused by lighting of the proposed M-1 plant and associated facilities. These features consist of downward projection of power plant lighting and preparation/implementation of an Outdoor Lighting Plan for the Project in conformance with County Dark Sky Regulations. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

B. Air Quality

1. Potentially Significant Effect: The Project could conflict with or obstruct implementation of the applicable air quality plan if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features designed to eliminate the potential for conflicts with applicable Great Basin Unified Air Pollution Control District (GBUAPCD) plans and policies, including obtaining an Authority to Construct permit for the proposed M-1 plant and permits to operate the diesel fueled emergency generator and firewater pump generator. All permits shall be obtained from the GBUAPCD. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could result in the violation of an air quality standard or contribute substantially to an existing air quality violation if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features to ensure that air pollution emissions from the site are reduced to the maximum extent practicable. These features consist of installing a vapor recovery unit to capture motive fluid that could otherwise be released during plant maintenance and compliance with fugitive dust emission control measures during Project construction activity.

With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

C. Biological Resources

1. Potentially Significant Effect: The Project could have a substantial adverse effect on riparian habitat and/or federally protected wetlands as defined by Section 404 of the Clean Water Act if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features designed to reduce soil erosion and sedimentation impacts associated with runoff from the Project site. These design features include installation of a subsurface retention basin at the proposed M-1 plant site, implementation of erosion control/stormwater construction best management practices (BMPs) in the interim site reclamation plan for the MP-I plant site, and implementation of M-1 plant site construction and post-construction BMPs. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could interfere with the movement of 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 if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features intended to reduce potential interference with fish and wildlife. These design features include (a) implementation of a 15 mile-per-hour speed limit for all on-site construction vehicles; (b) construction and operation noise reduction measures including use of noise attenuation devices on construction equipment; (c) incorporation of erosion/sedimentation and spill control measures into the Project design, including a Spill Prevention, Control and Countermeasure (SPCC) Plan; (d) avoiding removal of existing trees in the placement of the interconnection injection pipeline; (e) prohibition on the installation of linear barriers to movement of deer or other wildlife between the existing plant and the replacement plant; (f) construction of a new deer crossing; (f) maintenance of existing mule deer movement corridor on northeastern side of complex; (g) fencing of waste facilities to avoid attracting potential predators; (h) shielding of lighting; (i) dog leash requirements; (j) slope limitations to prevent wildlife from being trapped in basins; (k) installation of passive raptor deterrents, and (l) revegetation requirements. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

3. Potentially Significant Effect: In the absence of the Project, there could be an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service if not subject to design features, alterations, or mitigation measures.

Statement of Facts: MPLP is currently conducting the hydrologic and biological monitoring prescribed by Mono County General Plan with respect to its existing operations, but existing permit requirements for such monitoring only exist under the MP-II and PLES-I project approvals. Should these two projects be abandoned prior to the abandonment of the MP-I Replacement Project, there would be no permit requirement to continue the prescribed monitoring for what could be an extended MP-I project life. Should the existing geothermal resource production and injection activities from the MP-I Plant result in changes in the temperature, flow rate or quality of the Hot Creek headsprings supporting the critical habitat of the Owens tui chub, then this could be a potentially significant impact under CEQA. Bio Mitigation Measure 1, which subjects the Project to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the County General Plan, would ensure that such monitoring continues.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact from existing operations to a level that is less than significant.

4. Potentially Significant Effect: The Project could have an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service if not subject to design features, alterations, or mitigation measures.

Statement of Facts: As a result of the findings of the baseline biological resources survey, multiple actions were identified which, if implemented, would further reduce the potentially adverse effects of the Project on biological resources. These actions and others identified by this assessment have been compiled into required Bio Protection Measures 2 through 16. With implementation of these protection measures, Project impacts would remain less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

D. Cultural Resources

1. Potentially Significant Effect: The Project could cause a substantial adverse change in the significance of a historical or archaeological resource, may directly or indirectly destroy a unique paleontological resource, and/or may disturb undocumented human remains if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a design feature intended to reduce any potential impact to historical, archaeological, or paleontological resources that may be encountered at the Project site. This design feature requires the implementation of all environmental protection measures to reduce the adverse effects of the Project on cultural resources that were recommended in the baseline cultural resources survey reports prepared for the Project area. In addition, Cultural Protection Measure 1 is required to ensure that any human remains encountered during the construction phase of the Project are properly treated. With implementation of this design feature and protection measure, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

E. Geology and Soils

1. Potentially Significant Effect: The Project could expose structures to potential substantial adverse effects, including the risk of loss involving rupture of a known earthquake fault, strong seismic ground shaking, or seismic-related ground failure if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features intended to reduce any potential adverse effects resulting from seismic activity in the surrounding vicinity. These design features would require the implementation of all measures recommended in the geotechnical site investigation reports to mitigate impacts due to geotechnical, soils, and geologic constraints; as well as require that all Project structures be constructed to meet applicable earthquake safety codes and the 2010 Uniform Building Code adopted by the County. In addition, Cultural Protection Measure 1 is required to ensure that any human remains encountered during the construction phase of the Project are properly treated. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

F. Hazards and Hazardous Materials

1. Potentially Significant Effect: The Project could create a hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a design feature requiring that no hazardous materials, chemicals, or wastes be stored in the new storage yard to be constructed in the footprint of the decommissioned MP-I plant. With implementation of this design feature, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements design features requiring that (a) the power plant site be designed and constructed to prevent fluids from leaving the site and to prevent runoff from being channeled or directed in an unnatural way so as to cause erosion or siltation; (b) install and maintain a system of pressure and flow sensing devices capable of detecting leaks and spills and regular inspection of all lines; (c) include the M-1 plant site and operations within the existing hazardous material management and emergency response program at the Casa Diablo geothermal complex; and (d) include the M-1 plant and operations within the existing fire prevention and suppression program at the Casa Diablo geothermal complex. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

G. Hydrology and Water Quality

1. Potentially Significant Effect: The Project could provide additional sources of polluted runoff if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project shall implement design features designed to reduce soil erosion and sedimentation impacts associated with runoff from the Project site. These design features include installation of a subsurface retention basin at the proposed M-1 plant site, implementation of erosion control/stormwater construction best management practices (BMPs) in the interim site reclamation plan for the MP-I plant site, and implementation of M-1 plant site construction and post-construction BMPs. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could degrade water quality if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a design feature to reduce the potential for pollution to reach surface drainages. This design feature includes incorporation of erosion/sedimentation and spill control measures into the Project design, including a Spill Prevention, Control and Countermeasure (SPCC) Plan. The power plant site must also be designed and constructed to prevent spills from leaving the site and to prevent runoff from being channeled or directed in an

unnatural way so as to cause erosion or siltation. In addition to this design feature, implementation of Hydro Mitigation Measures 1 and 2 is required in order to provide additional spill containment and emergency response planning at the Project site. Hydro Mitigation Measure 3, which would subject the Project to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the County General Plan, (to which the existing MP-1 plant is not currently subject) will further enhance such protections.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

3. Potentially Significant Effect: The Project could violate waste discharge requirements if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a design feature to avoid the alteration of or discharge of material to the existing stream channel crossing the site. No element of the project construction will result in the alteration of, or discharge of fill material to, the blue-line drainage channel that crosses the site between the existing MP-I and proposed M-1 plant sites, adjacent to Old Highway 395. Prior to commencement of construction, the Applicant shall provide to the County the proposed engineering design for the road crossing which demonstrates to the County that no impact to this drainage channel would occur as a result of project construction. With implementation of this design feature, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

H. Noise

1. Potentially Significant Effect: The Project could result in a substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project shall implement design features to reduce noise associated with Project construction activities. These design features limit construction activities to daylight hours, require on-site construction equipment to be equipped with noise attenuation devices, and require all construction activities and normal Project operations to comply with applicable County noise requirements. With implementation of these design features, Project impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

I. Cumulative Effects

1. Potentially Significant Effect: The Project could combine with existing development in the vicinity to create a new source of substantial light or glare

that would adversely affect nighttime views in the area if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a protection measure to reduce nighttime lighting within the Casa Diablo geothermal complex. This protection measure requires that all projects within the Casa Diablo geothermal complex comply with applicable County lighting standards. With implementation of this protection measure, cumulative impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

2. Potentially Significant Effect: The Project could combine with existing development in the vicinity to result in the violation of an air quality standard or contribute substantially to an existing air quality violation if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements a protection measure to ensure that fugitive dust emissions from the site are reduced to the maximum extent practicable. This measure restricts Project-related vehicle speeds on all unpaved access roads to 15 miles per hour. With implementation of this protection measure, cumulative impacts would be less than significant and no mitigation is required.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

3. Potentially Significant Effect: The Project could combine with existing development in the vicinity to interfere with the movement of 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 if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The Project implements Cumulative Bio Mitigation Measure 1 to reduce potential interference with fish and wildlife. This mitigation requires that constraints to wildlife movement through the Casa Diablo Hot Springs area be evaluated as part of any new development project proposed in the area. Measures shall be included as part of each new development project that would prevent the respective project from becoming a substantial obstacle to wildlife movement through or around the respective proposed development area. With implementation of this mitigation measure, cumulative impacts would be reduced to a less than significant level.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

4. Potentially Significant Effect: The Project could combine with existing development in the vicinity to have an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the

California Department of Fish and Game or U.S. Fish and Wildlife Service if not subject to design features, alterations, or mitigation measures.

Statement of Facts: The storage of water in lined wellfield basins would continue to attract wildlife and has the potential for similar cumulative impacts on wildlife as a result of any wellfield expansion associated with new geothermal development that is not a part of the Project. The existing wellfield could be expanded by the addition of new wells and well sites to provide the additional geothermal fluid needed to support the proposed CD-4 power plant. This impact could be cumulatively significant if future lined well site basins are constructed in a manner that prevents wildlife from escaping from the basins. Cumulative Bio Mitigation Measure 2 is therefore required for County approved projects and should be considered as a requirement by federal agencies as a stipulation for approval of geothermal projects on public land in the vicinity of Casa Diablo Hot Springs. With implementation of this mitigation measure, cumulative impacts would be reduced to a less than significant level.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

5. Potentially Significant Effect: The Project could combine with existing development in the vicinity to have an adverse effect, either directly or through habitat modifications, on species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service if not subject to design features, alterations, or mitigation measures.

Statement of Facts: MPLP is currently conducting the hydrologic and biological monitoring prescribed by Mono County General Plan, but existing permit requirements for such monitoring only exist under the MP-II and PLES-I project approvals. Should these two projects be abandoned prior to the abandonment of the MP-I Replacement Project, there would be no permit requirement to continue the prescribed monitoring for what could be an extended MP-I project life. Hydro Mitigation Measure 3, would subject the Project to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the County General Plan, preventing such a lapse from occurring.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

6. Potentially Significant Effect: The Project could combine with existing and/or proposed geothermal development in the vicinity to degrade water quality if not subject to design features, alterations, or mitigation measures.

Statement of Facts: Should the continued geothermal resource production and injection activities from the MP-I Project, in combination with other existing and future geothermal power plant projects in the Hot Creek Buffer Zone, result in changes in the temperature, flow rate or quality of the Hot Creek headsprings used for Hot Creek Fish Hatchery operations, then this could be a potentially significant impact under CEQA. Cumulative Hydro Mitigation Measure 3, which would subject all existing and future geothermal power plant projects in

the Hot Creek Buffer Zone, or in the vicinity of Casa Diablo Hot Springs, to the applicable hydrologic and biologic monitoring and remedial action program requirements set forth in the County General Plan, would reduce this potential impact to a less than significant level.

Finding: Changes or alterations have been required in, or incorporated into the Project which reduces this potential impact to a level that is less than significant.

PART II: FINDINGS RELATIVE TO UNAVOIDABLE SIGNIFICANT ENVIRONMENTAL EFFECTS

No unavoidable significant environmental effects would result from implementation of the Project.

PART III: FINDINGS RELATIVE TO ALTERNATIVES

1. No Project Alternative: If the Project is denied, the existing MP-I power plant would not be replaced by the new technology proposed for the Project, and the more efficient conversion of the available geothermal heat energy to electrical energy afforded by the proposed replacement plant technology and equipment would not be realized. The aging MP-I power plant would be expected to continue to operate as long as repair and restoration of the facility remains economically practical, but the long-term continuing utilization of the MP-I project geothermal resources could be shortened due to eventual equipment failure. The No Project Alternative would not meet most of the basic project objectives. Objectives that would not be met include (a) Applicant's objectives: to *optimize the amount of electrical energy that can be generated from the available geothermal resources*, and to *ensure continuous power generation and maximize utilization of the geothermal resource ...*; and (b) the County goals, policies and objectives: to *permit the productive and beneficial development of alternative energy resources, including geothermal resources*; and to *ensure the orderly and sound economic development of geothermal resources...*

FINDING: The No Project Alternative is infeasible because it is inconsistent with and does not meet project objectives.

2. Alternative Power Plant Location (North Site): The selected North Site Alternative would be on public land administered by the USFS located north of the existing SCE substation and east of the proposed Casa Diablo IV Geothermal Development Project (CD-4) power plant site. It is assumed that the North Site Alternative would be constructed within an approximately 5.7-acre footprint essentially the same as that described for the Project. An approximately 600-foot interconnection transmission line would need to be constructed from the alternative plant site to the existing SCE substation. In addition, new production and injection fluid pipelines would need to be constructed to the North Site Alternative plant site. The new pipelines would be assumed to parallel the pipeline route of the proposed CD-4 Project from the existing MP-I plant site to the North Site Alternative plant site – a distance of about one mile. The construction, MP-I decommissioning, operations, and eventual site reclamation of the North Site Alternative geothermal development would be essentially the same as those activities described for the Project with only minor site-specific adjustments. Approval for development on the North Site Alternative would require NEPA review and approval from federal agencies.

FINDING: The North Site Alternative would result in very similar impacts to those identified for the proposed Project. However, selection of the North Site Alternative plant site would require construction of approximately one mile of new geothermal pipeline corridor resulting in greater impacts on biological resources and more construction related air emissions. The location of the North Site Alternative plant site would be within a Jeffrey Pine forested area and would be susceptible to greater potential wildland fire hazard than the proposed M-1 plant site. This was determined to be a potentially significant impact. The North Site Alternative power plant site would be less visible from major roadways than the proposed Project plant site, but visual impacts were not determined to be significant from either of the plant sites. The proposed Project is considered environmentally superior to the North Site Alternative.

3. Identification of the Environmentally Superior Alternative: The proposed Project, as amended by the conditions and mitigation/protection measures prescribed in the EIR, is the environmentally superior alternative based on the discussion and findings above.

Exhibit B
Variance 12-002
Findings and Rationale

A. Because of special circumstances (other than monetary hardship) applicable to the property, including its size, shape, topography, location, or surroundings, the strict application of the provision of the land use designations or land development regulations deprives such property of privileges (not including the privilege of maintaining a nonconforming use or status) enjoyed by other property in the vicinity and in an identical land use designation.

1. Setbacks. The proposed Project includes a request for a variance from two required setbacks; 100 feet from the south line and 500 feet from a surface watercourse. The proposed locations on the site were specifically chosen, and the requested variances are needed, to avoid the many geological and geotechnical constraints present in the Project parcel area and to minimize lot disturbance. As stated in the letter from Black Eagle Consulting, Inc. (BEC) dated September 7, 2012, (the “BEC Letter”), the proposed location is necessary to minimize risks to the plant, its supporting facilities, and operating personnel. In addition, continued use of the existing plant site for ancillary facilities reduces site disturbance by avoiding the relocation of those uses to another area on the site.

A number of geologic hazards are inherent to the surrounding areas on the parcel. To the north and east of the proposed plant location (away from the south property line) are extremely hot soils as well as active steam vents and associated weak soils. These conditions are hazardous to both personnel and plant equipment. Moving the facilities north would also greatly increase the size of the cut slope and raises the elevation so that they would be more visible from Highway 395. Site disturbance would also increase, as the existing plant location would not be utilized.

Moving the facilities to the south would cause them to be closer to the property line and would place critical structures on highly compressible soils, unsuitable for conventional foundation support or even placement of the necessary fill. Moving the replacement plant to the west would bring it even closer to the intermittent stream as well as to an active, unnamed fault located about 0.1 miles to the west of the western boundary of the proposed site. There are active steam vents associated with this fault that must be avoided.

Other properties within the Hot Creek Buffer Zone are currently developed with geothermal facilities (as described in section 5.1.1 of the EIR, and figure 38) or proposed for future development and thus enjoy the privileges of such use. Because those properties are not subject to the same geological and geophysical constraints, such uses are conforming.

2. Aboveground transmission line. As noted in the EIR and the BEC Letter, much of the Project site consists of geothermal soils having elevated temperatures. Generally, underground transmission lines require properly designed thermal backfill to reduce heat buildup and consequent loss of electrical conductivity or even melting of the conduit. However, such heat buildup in an underground transmission line crossing warm or hot areas in the soil cannot be mitigated with thermal backfill and a variance to place the

transmission line above ground is necessary and does not constitute a special privilege. (See BAC Letter, September 7, 2012).

B. The grant of variance will not constitute a special privilege inconsistent with the limitations upon other properties in the vicinity and in the land use designation in which the property is situated.

1. Setbacks. As illustrated in the BEC letter and in FEIR Drawing 1, development of the Project site is highly constrained as a result of steep slopes, fault zones, and geothermal soils/fumaroles. The site is also bisected by an intermittent surface watercourse. The combination of these conditions is unique to the Project site, and other parcels designated RE and/or within the Hot Creek Buffer Zone are not similarly limited. In fact, several are already developed with geothermal facilities or proposed for such development. (See FEIR Figure 1 and RDEIR sections 5.1.1 and 5.1.2.)

The only other non-federally-owned parcel within the Casa Diablo portion of the Hot Creek Buffer Zone, owned by LADWP, consists of 194 acres. The LADWP parcel has ample area available for geothermal development such as that proposed on the Project site (see FEIR Drawing 1). Accordingly, the grant of a variance for the proposed Project would not constitute a special privilege inconsistent with the limitations on other nearby or similarly-situated properties but instead, would put it on par with such properties. The County's land use regulations do not apply on federal land.

2. Aboveground transmission line. Mono County Land Development Regulations authorize the placement of distribution facilities such as the proposed transmission line underground without discretionary approval by the County. (See Mono County General Plan, Section 11.010(B).) Those regulations provide for aboveground placement pursuant to director review permit or use permit if any one of four findings can be made. (See Mono County General Plan, Section 11.010(D).) Alternatively, a variance may be granted to allow aboveground use where the conditions justifying a variance exist. (See Mono County General Plan Chapter 33). The proposed aboveground line is capable of being approved pursuant to either procedure, as either of the required findings can be made. Specifically, under Section 11.010(D)(1), the pipeline will not significantly disrupt the character of the area (See RDEIR sections 2.1.3 and 4.2.3 concluding that there will not be a significant visual impact associated with the Project or the aboveground pipeline; see also the discussion of the existing environment, indicating the presence of other above ground transmission lines and geothermal infrastructure in the vicinity.) Likewise, the finding for aboveground placement under Section 11.010(D)(2) can be made since aboveground placement would decrease the line's exposure to environmental hazards (e.g., heated soils) thus making it environmentally superior to undergrounding. (See BEC Letter.) Other private properties in the area meeting these (or the other listed) criteria are also eligible to request approval for aboveground utilities pursuant to Section 11.010, if they meet the stated criteria.

Accordingly, the grant of a variance would not constitute a special privilege inconsistent with limitations imposed on other properties.

C. The grant of variance will not be detrimental to the public welfare or injurious to property or improvements in the area in which the property is situated.

1. Setbacks. A number of geologic hazards are inherent to the surrounding area. The proposed location of the M-1 replacement plant (and supporting facilities) would actually

lessen any exposure to hazardous conditions and would minimize risks to both the plant and its operating personnel, in comparison to other locations on the property. (See, e.g., BEC Letter.) Adjoining property consists of thousands of acres of undeveloped land owned by the federal government. The only other nearby development consists of similar geothermal operations. Accordingly, a minor variation from the property line setback would have no impact on improvements or property in the area.

And Project design features and required mitigation measures, including installation of a subsurface retention basin and a sediment trap, implementation of erosion control/stormwater construction best management practices (BMPs), post-construction BMPs, restrictions on the existing plant site during its interim use for storage (e.g., prohibition on cleaning or fueling equipment, limitations on what may be stored, and height limitations) that will reduce and avoid the possibility of hydrologic impacts on the site as discussed in section 4.8.3 of the EIR and the Reclamation Plan, as well as reduce visual impacts as discussed on pages 4-2 through 4-35 of the EIR. Finally, the Project involves no expansion in water use or use of the geothermal resource. As such, there is no impact to water quantity.

2. Aboveground transmission line. The Project includes two proposals for the interconnection transmission line, both of which were analyzed in the EIR. The EIR concludes that there will not be a significant visual impact associated with the Project or the aboveground line. (See sections 2.1.3 and 4.2.3; see also the discussion of the existing environment on page 2 of the EIR, which describes the presence of other above ground transmission lines and geothermal infrastructure in the vicinity.) Because either option would be located near ground level (either within an existing pipe rack or on its own T-bar supports and suspended approximately 2-3 feet above ground level) as opposed to overhead, visual impacts associated with either option would be virtually non-existent. There would be no new overhead transmission line poles associated with either of the interconnection transmission line options. Indeed, placement of the transmission line underground presents a risk to the lines and to operation if such lines fail.

D. The grant of variance will not be in conflict with established map and text of the general and specific plans and policies of the County.

1. Setbacks. As discussed in section 4.10.3 of the EIR, the 500-foot surface watercourse and 100-foot exterior property line setbacks are subject to variance in accordance with Chapter 33 of the General Plan. The Project requires a variance from the 500-foot setback because, while the replacement plant would be further from the same watercourse than the existing plant, it would still be partially within that setback. And the existing plant site (to be used for interim storage) would continue to be within the setback. The granting of such a variance is not inconsistent with the text or maps of the General Plan, including but not limited to, the Energy Resources section of the Conservation and Open Space Element (Goal 1, Objective D, Policy 1, Action 1.13). That section lists the 500-foot setback imposed by the Land Development Regulations as an “action” to further the policy of protecting hydrologic resources. The reference is not intended to prohibit the granting of an otherwise authorized setback variance where no hydrologic impacts would result, and does not “re-impose” the setback requirement already imposed. Setbacks are classic development standards which may be adjusted through variance procedures where necessary due to site-specific constraints, such as those that exist here. Finally, Project design features and mitigation measures imposed as mandatory conditions of approval avoid or minimize potential impacts to hydrologic resources by preventing fluids from

reaching adjacent waterways and limiting geothermal extraction to existing levels, as discussed above and in section 4.8.3 of the EIR. The proposed variance is consistent with the map and text of the General Plan as currently written and as proposed to be clarified by GPA 12-003(b).

The variance from the 100-foot property line setback is also authorized in accordance with Chapter 33 of the General Plan and would not be in conflict with any program, policy, goal, or objective of the General Plan.

2. Aboveground transmission line. See discussion under finding B.2 above, which is incorporated by this reference.

Exhibit C
Use Permit 12-004
Findings and Rationale

I. USE PERMIT

- A. All applicable provisions of the Land Use Designations and Land Development Regulations are complied with, and the site of the proposed use is adequate in size and shape to accommodate the use and to accommodate all yards, walls and fences, parking, loading, landscaping and other required features.**

The existing MP-1 plant site decommissioning activities and the conversion of a portion of the site to a storage area, proposed as part of the Project, would be conducted on private land with a land use designation (LUD) of Resource Management (RM). The RM designation is intended “to recognize and maintain a wide variety of values in the lands outside existing communities,” including “geothermal or mineral resources.” “Mining and geothermal exploratory projects” are explicitly “uses permitted subject to use permit” and other “similar” uses may also be permitted.

The RM designation provides for a minimum parcel size of 40 acres, limits site disturbance to 10% (with a maximum lot coverage of 5%), and provides for maximum population density of 5.02 persons per 40 acres. The RM parcel consists of approximately 40 acres of privately-owned land, of which approximately 2.6 acres is presently disturbed (approximately 6.6%). This level of disturbance is pre-existing and would not be increased by the Project. The ultimate decommissioning, reclamation and restoration of this site required by the Reclamation Plan is consistent with Resource Management intent of the designation to provide for low intensity rural uses that recognize and maintain the resource value of the parcel and would eliminate site disturbance. There would be no residential use of the property.

The proposed new M-1 plant site would be located on the adjacent 50-acre parcel, which is designated as Resource Extraction (RE). The RE designation “is intended to provide for protection of the environment and resource extraction activities . . . and for processing plants utilizing on-site materials or materials found in close proximity to the site.” “Exploring, drilling, and development of geothermal resources” are explicitly “uses permitted subject use permit” and other “similar” uses may also be permitted uses. The M-1 replacement plant site construction and Project operations would be conducted entirely on private land with a LUD of RE.

The RE designation provides for a minimum parcel size of 40 acres, prohibits residential uses (other than for an employee/caretaker) and references the setbacks established by section 15.070 for resource development (100 feet from interior public streets or from a property line, 500 feet from any adjacent private dwelling, institution, school, or other building or location used for public assemblage, and, for geothermal development within the Hot Creek Buffer Zone, 500 feet from a surface watercourse). The Land Use Designations and Land Development Regulations function as the County’s zoning requirements and are subject to variance pursuant to Chapter 33 of the Mono County General Plan and State law.

All project activities would occur more than 100 feet from any internal street and more than 500 feet from adjacent uses for public assemblage. The nearest dwelling, institution, or school is located within the Town of Mammoth Lakes approximately two miles to the west of the project site. A public parking area located just to the east of US 395 and the Mammoth Lakes exit is greater than 500 feet from the project property line (Figure 19, Revised DEIR, February 2012). The project includes a request for a variance which would authorize a portion of the facility to be located within 100 feet of an external property line and within 500 feet of a surface watercourse. Such variances are authorized by Chapter 33 of the Land

Development Regulations and if granted consistent with those requirements, all provisions of the Land Use Designations and Land Development Regulations would be complied with.

As described more fully in section 4.2.2 of the EIR, the Project meets applicable standards of the Land Development Regulations related to visual impacts. An Outdoor Lighting Plan has been provided for the Project site which meets the requirements of Chapter 23 of the General Plan, the County's "Dark Sky Regulations," to mitigate nighttime visibility of the facilities. In addition, a Landscape Plan has been submitted which provides additional visual screening of the Project site. Use Permit conditions require compliance with these plans. All buildings, insulation jacketing, and visible structures would be painted to blend with the existing environment in order to minimize the visual impacts in the area and approximately six-foot-high fences would be constructed around the M-1 plant site and the M-1 plant substation to provide additional screening. Site disturbance is limited and a Reclamation Plan which meets the requirements of Chapter 26 of the General Plan and will reduce and restore site disturbance has been submitted. Compliance with the Reclamation Plan is a condition of project approval. Accordingly, the Project also meets applicable standards set forth in Section 08.010 through 08.060 Scenic Combining District and State Scenic Highway.

Section 4.110 of the Land Development Regulations provides for a maximum building height of 35 feet, but allows for greater heights to be approved through the Director Review process or Use Permit process. The project involves approval, through the Use Permit process, of mechanical appurtenances which exceed 35 feet in height. (See additional discussion below in sections II.A and II.B.)

Chapter 11 of the Land Development Regulations provides for the undergrounding of utilities, unless overhead placement is approved by Director Review permit, Use Permit, or variance. The Conservation and Open Space Element, Visual Resources, Objective C, Policy 3, Actions 3.1 through 3.8 reference these requirements. The project proposes two possible locations for an aboveground interconnection transmission line, and the applicant has applied for a variance to allow for aboveground installation.

The Project is in compliance with all other applicable provisions of the Land Use Designations and the Land Development Regulations of the Mono County General Plan.

Further, the site is adequate in size and shape to accommodate the use, and to accommodate all yards, walls, and fences, parking, loading, landscaping and other required uses. The site consists of 90 acres of privately-owned land bordered on all sides by publicly-owned land managed primarily for open space.

B. The site for the proposed use relates to streets and highways adequate in width and type to carry the quantity and kind of traffic generated by the proposed use.

As described in the EIR (see, e.g., sections 2.1.2, 2.1.6, and 3.3.8) 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 and no long-term impact to the existing roadway circulation system in the area would result.

Short-term construction traffic would increase in the immediate vicinity of the site, although the traffic volumes expected to be associated with Project construction would be light and existing volume-to-capacity ratios at the U.S. Highway 395/SR 203 interchange are sufficient to accommodate this small temporary increase.

The existing entrances to the Casa Diablo geothermal development complex would continue to provide adequate access to the new M-1 plant site. North and south U.S. Highway 395 off ramps onto State Route

203 are located less than one-quarter mile southwest of the Project site. Access to the Project site would be via State Route 203 east to Antelope Springs Road, then north to Cutoff Road, then east to the existing paved access to the replacement plant site off of the Old Highway Road. Substation Road and Old Highway Road would be used as emergency access roads that lead to a locked gate which can be opened by emergency responders and is sufficient to support emergency vehicles, in accordance with the County's Fire Safe Regulations (Chapter 22 of the Land Development Regulations).

A new paved access road would be constructed from the onsite access road to the lower pad on which the M-1 plant would be constructed. Paved access roads would also be constructed along the north, south and west sides of the new M-1 plant site, which are specifically designed in width and type to carry the quantity and kind of traffic associated with the project.

C. The proposed use will not be detrimental to the public welfare or injurious to property or improvements in the area in which the property is located.

The EIR for the Project has identified no significant impacts resulting from the proposed Project. The proposed use is the same as currently exists on the site, with the exception that a new, more modern facility would replace the existing M-1 plant. The new facility includes design features (including, but not limited to a landscaping plan, dark sky compliant lighting, and screening) not currently applicable to the existing facility. Without expanding the use of the geothermal resource or in any way increasing impacts to that resource, the proposed facility would increase the amount of geothermal energy generated on the site and reduce associated impacts. (See EIR Project Description).

The M-1 site is situated in an area where property and improvements are committed to similar compatible uses, including existing operating geothermal plants and well fields, the existing MP-1 plant proposed for decommissioning, and an SCE substation. The proposed use has been sited to minimize visual impacts from the State Scenic Highway, and when the existing plant is decommissioned, will have less of a detrimental visual presence than exists currently. (See EIR section 4.2.3.)

In addition, the proposed Project incorporates design features which will protect the public and property from the risks of fire, contamination, and other hazards. Specifically, the M-1 replacement power plant site would be designed and constructed to prevent fluids from leaving the site and endangering adjacent properties or nearby waterways. Numerous engineering, fire-control and safety measures are integrated as part of the Project to prevent releases of n-pentane, to avert or control fires, and to respond to other emergencies. (See e.g., EIR section 2.1.6.)

A diesel-powered emergency generator would be installed on the M-1 plant site to provide emergency backup power to critical plant functions in the event of a power outage. Similarly, a diesel-powered firewater pump generator would be installed to provide power to the firewater pump during fire emergencies.

In addition, MPLP has developed an integrated program to meet the following requirements, (see EIR section 2.1.6): California Accidental Release Prevention (CalARP) Program; EPA Risk Management Plan (RMP); OSHA Process Safety Management (PSM) Program for all three existing plants. Prior to delivery of n-pentane, MPLP would revise and update this program to reflect the new M-1 plant; Revise its existing Spill Prevention, Control and Countermeasure (SPCC) Plan, in conformance with 40 CFR 112, to include the new M-1 plant; Update its Emergency Response Plan (ERP); Update its Hazardous Materials Business Plan (HMBP); A Permit for Authority to Construct and Permit to Operate would be obtained from the GBUAPCD

There would be at least one employee “on call” at all times familiar with the ERP and would have the authority to commit the resources needed to carry out the contingency plan.

D. The proposed use is consistent with the map and text of this General Plan and any applicable area plan.

For a thorough discussion regarding the Project’s consistency with the General Plan see the analysis contained throughout the EIR, and particularly sections 4.10.2 and 4.10.3. The following summarizes the Project’s consistency with applicable maps, policies, land uses, and programs contained in the General Plan.

The Project is consistent with General Plan maps designating the site for Resource Management (RM) and Resource Extraction (RE). The RE designation (where the replacement plant would be located) “is intended to provide for protection of the environment and resource extraction activities.” “Exploration, drilling, and development of geothermal resources” are explicitly “uses permitted subject to use permit and other “similar uses may also be permitted.” The RM designation (where the existing plant is located) is intended to “recognize and maintain a wide variety of values in the lands outside existing communities,” including “geothermal or mineral resources.” “Mining and geothermal exploratory projects” are explicitly “uses permitted subject to use permit” and other “similar” uses may be permitted.

The Project is consistent with the objectives, policies, general land uses, and programs of the Mono County General Plan. General Plan goals encourage the productive and beneficial development of alternative energy, including geothermal resources, in manner which avoids or minimizes environmental impacts. The EIR concludes that there will be no significant environmental impacts as a result of the proposed Project. General Plan policies allow consideration of national need for alternative energy and require the applicant to demonstrate the economic benefits of the Project. (See Conservation and Open Space Element – Energy Resources.) The economic analysis of the Project describes those benefits.

Objectives C and D of Goal 1 of the Energy Resources portion of the Conservation and Open Space Element establish procedures and direction for addressing biologic and associated hydrologic impact mitigation and monitoring requirements from geothermal exploration and development. Consistent with these policies, a baseline biological resource survey was conducted (Paulus 2011) and is provided as Appendix D of the EIR. The recommended measures and project design features of this report have been incorporated and are a part of the Project.

The EIR concludes that there would be no significant impacts to visual resources as a result of the Project and that current visual impacts associated with the MP-1 facility would be reduced by the Project. Additionally, the Project would be consistent with all applicable General Plan Policies pertaining to Aesthetics/Visual Resources, provided that a variance is granted to allow transmission lines to be placed at ground level as opposed to underground.

- Aboveground utility lines. Objective C, Policy 3, Actions 3.1-3.8 Conservation/Open Space Element (Visual Resources) provides for underground installation of utility lines in conformity with County Requirements. Chapter 11 of the Land Use Regulations provides for underground installation unless approved through Use Permit or Director Review in certain specified circumstances. Actions 3.1-3.8 also allow for aboveground installation pursuant to a variance. The Project is consistent with this policy if the requested variance is granted. Additionally, the transmission lines would be eligible for an exception to the underground requirement pursuant to Chapter 11, as described in Exhibit B, section B.2.

- Mechanical appurtenances/building height. (Land Use Element – Development Standards): The Project proposes to install purge tanks, two-inch diameter vent pipes and one-inch diameter lightning masts on top of the air cooling towers which would extend up to approximately 40 feet above ground level, exceeding the permitted height of 35 feet by up to 5 feet. However, Mono County regulations allow for exceptions to be granted by the Planning Director in the cases of mechanical appurtenances or, for building heights in excess of 35 feet, through the Use Permit process. The purge tank vent pipes and lightning qualify as “mechanical appurtenances” and would thus meet the criteria for exception to be granted by the Planning Director, or by the more stringent Use Permit process. (See sections II.A and B below.)

The Project would be consistent with relevant General Plan Policies in the Conservation/Open Space Element pertaining to Air Quality as discussed on page 30 of the RDEIR2.

The Project would be consistent with relevant General Plan Policies in the Conservation/Open Space Element pertaining to Biological Resources as discussed on pages 30-32 of the RDEIR2 and section 4.4 of the RDEIR, as revised. For example, current biologic and hydrologic monitoring will continue and will also be applied to the M-1 plant; baseline studies have been prepared to document existing conditions on the Project site and mitigation measures and design features are imposed to minimize potential impacts based on those studies and recommendations.

The Project would also be consistent with relevant General Plan Policies (shown in Table 25 of the RDEIR) in the Conservation/Open Space Element pertaining to hydrology and water quality as described on pp. 30 – 36 of the RDEIR2. The Project includes design features and is subject to mitigation measures which avoid or minimize potential impacts to hydrologic resources to a level that is less than significant through, among other things, installation of a subsurface retention basin at the M-1 plant site, implementation of erosion control/stormwater construction best management practices (BMPs) and post-construction BMPs, as discussed in the EIR. (See e.g., section 4.8.3). The Project involves no additional use or extraction of water from the geothermal resource and therefore has no impact to water quality.

- Setbacks from surface watercourse. As discussed previously, Section 15.070(B)(1)(d) of the County’s Land Use Regulations imposes a 500-foot setback from surface watercourses for geothermal development within the Hot Creek Buffer Zone. Chapter 33 of the General Plan authorizes the granting of variances from any Land Development Regulation or LUD if certain conditions exist. The project requires a variance from this setback because, while it would be further from the same watercourse than the existing plant, the replacement plant would still be partially within that setback. The Energy Resources section of the Conservation and Open Space Element (Goal 1, Objective D, Policy 1, Action 1.13) lists the 500-foot setback as an “action” to protect hydrologic resources. That reference is not intended to prohibit the granting of an otherwise authorized variance and does not “re-impose” the setback requirement already imposed. If a variance is granted in accordance with Chapter 33, then the Project is consistent with the General Plan, both as currently written and with the clarifications to the General Plan included proposed by GPA 12-003(b).

The Project would be consistent with relevant General Plan Policies in the Safety Element pertaining to fire hazards as discussed on page 32 of the RDEIR2 and in section 4.7 of the RDEIR. For example, the Project would not create a significant risk from wildland or structural fire; the Project will obtain a will-serve letter from the Long Valley Fire Protection District and will implement Project HazMat Design Feature 4, which would extend the existing fire suppression and response program in place at the Casa

Diablo Geothermal Complex to cover the proposed Project. Appendix A to the RDEIR presents a list of measures that the Project would adopt in order to reduce the risk of wildland and/or structural fire. These measures include compliance with applicable requirements in the Fire Safe Ordinance and Uniform Fire Code; and the Notice of Preparation for the Draft EIR was sent to the Department of Forestry and the Long Valley Fire Protection District was consulted in the preparation of the RDEIR.

The Project would be consistent with relevant General Plan Policies in the Hazardous Waste Management Element pertaining to hazardous materials. The Project includes several design features, presented as HazMat Design Features 1 through 5 in the RDEIR.

For analysis of Project consistency with relevant General Plan Policies in the Noise Element pertaining to noise, see Section 4.9 of the RDEIR. As discussed therein, the Project, including Noise Design Features 1 through 3, would be consistent with all applicable General Plan Policies pertaining to noise.

II. MECHANICAL APPURTENANCES/BUILDING HEIGHT EXCEPTION

A. The project will not result in substantial detrimental effects on the enjoyment and use of surrounding properties.

Several mechanical appurtenances (including eight purge tanks, of about 36 inches in length and 24 inches in diameter, a two-inch diameter pipe, and a one-inch diameter lightning mast/rod) would extend up to approximately 5 feet above the 35-foot building height. These mechanical appurtenances are part of the CUP application and are evaluated on pp 4-2 – 4-35 of the RDEIR. As mechanical appurtenances, these structures could be approved through the Director Review process outlined in Section 4.110 of the General Plan, or pursuant to the more stringent Use Permit process actually undertaken. As described in the EIR, the appurtenances would be nearly completely obscured by vegetation and the super-structure of the main plant and would be colored to blend with the existing background. The analysis shown in the EIR demonstrates the project would preserve scenic vistas and would not have any impact on surrounding properties.

B. The modified height will not exceed the lifesaving equipment capabilities of the fire protection agency having jurisdiction.

The mechanical appurtenances are lightning rods and pipes – and will not be occupied. The Long Valley Fire Department was consulted in the preparation of the EIR and it was determined the height exception does not exceed the lifesaving capabilities of the protection agency. The Project is required to obtain a will-serve letter from the Long Valley Fire Protection District and will also implement Project HazMat Design Feature 4, which would extend the existing fire suppression and response program in place at the Casa Diablo Geothermal Complex to cover the proposed Project.

III. ABOVEGROUND FLUID PIPELINE

The aboveground placement of fluid pipelines is authorized because burial would create unacceptable environmental impacts or the potential to contaminate shallow groundwater resources. The Project includes the relocation of two existing aboveground fluid conveyance pipelines to connect the new plant to existing production and injection locations. As discussed in Exhibit B, the site contains numerous geotechnical and geological constraints, including hot soils, active steam vents, and earthquake faults. Aboveground placement of fluid conveyance

lines minimizes the risk of damage to those lines due to earthquake or other site features, and allows for quick identification and remediation in the unlikely event of damage.

Exhibit D
Reclamation Plan 12-001
Findings and Rationale

A. The reclamation plan complies with the provisions of CEQA.

The Reclamation Plan is a component of the Mammoth Pacific Replacement Project. A Final Environmental Impact Report has been prepared for the Project. (SCH # 2011022020) and certified by the Planning Commission and Board of Supervisors.

B. The reclamation plan is consistent with the objectives and policies set forth in this General Plan and any applicable area or specific plans.

The project is consistent with the objectives and policies of the General Plan. The Land Use Element, Mammoth Vicinity Policies Objective C, Policy 4 & Action 4.1 provides:

Policy 4: Regulate geothermal and mining and reclamation activities in the Mammoth vicinity in a manner that retains the scenic, recreational, and environmental integrity of the Mammoth vicinity.

The Mammoth Pacific Reclamation Plan requires removal of the MP-1 plant, and removal of the MP-2 plant once these facilities are decommissioned. The proposed M-1 plant would also be removed once the plant is decommissioned in 2045. The offices, maintenance yard, warehouse, roads and wells would be removed once these facilities are no longer needed. Some roads and wells may remain to support geothermal production on USFS property for the PLES plant. The PLES plant is on Inyo National Forest lands and not subject to the reclamation plan.

Removal and site reclamation of the above facilities retains the scenic and environmental integrity of the area.

Action 4.1: All geothermal, mining and reclamation activities shall comply with the policies of the county's Conservation/Open Space Element and the county's Reclamation Ordinance.

The Conservation and Open Space Element of the General Plan, Energy Resources, provides that Geothermal exploration and development projects shall be sited, carried out and maintained by the permit holder in a manner that best protects hydrologic resources and water quality and quantity. Pursuant to that policy, permit conditions assure that required reclamation is completed within one year after a project is completed. The Reclamation plan contains provisions that assure the protection of springs, streams, and fumaroles from erosion, sediment transport, and similar adverse effects. Plan provisions also assure that project sites are restored as closely as reasonably possible to natural conditions, as determined by the MCEDD, in consultation with the Visual Review Committee.

Below is a summary of plant removal cost and timeframes listed in the Reclamation Plan:

	MP-1	MP-2	M-1	Wells
<i>Reclamation start date</i>	2014 or 2015	2045	2045	2045
<i>Cost</i>	\$356,224	\$739,513	\$564,949	\$2,210,719

Project conditions require reclamation activities to be completed within one year of plant removal.

The reclamation plan has erosion control and retention basins for each plant site to protect on-site springs, streams, and fumaroles from erosion, and requires that the site be monitored to assure that project sites are restored as closely as reasonably possible to natural conditions.

- C. **Appropriate conditions have been imposed to ensure and verify that the site during and after reclamation will not cause a public hazard, nor be detrimental to the public health, safety, or welfare.**

The Mammoth Pacific Reclamation Plan requires removal of the power plants and plant infrastructure and restoration of the site to natural conditions as various components of the plant are removed. The project is required to comply with the adopted reclamation plan, which sets forth measures to avoid safety hazards and provide for public health, safety and welfare on the site during and after reclamation.

- D. **An approved end use has been identified and the reclamation of the site shall be finally completed as soon as is feasible, considering the particular circumstances of the site to be reclaimed, and the plan provides for concurrent reclamation, where appropriate and feasible.**

The 90 acre site has an end land use of open space and will be restored to natural site conditions. The reclamation timeframes listed in the Reclamation Plan are:

	MP-1	MP-2	M-1	Wells
Reclamation start date	2014 or 2015	2045	2045	2045

The Plan allows for concurrent reclamation and timing based on when the various plants are decommissioned and various infrastructure is removed.

- E. **The reclamation plan conforms to minimum verifiable performance standards established Chapter 35 and, in the case of surface mining operations, meets or exceeds the minimum, verifiable statewide reclamation standards adopted by the State Mining and Geology Board, and in the case of geothermal well abandonment, conforms to the requirements and guidelines of the California Division of Oil and Gas on non-federal lands, and the Bureau of Land Management on federal lands.**

The Reclamation Plan conforms to the standards as described in Chapter 35, Reclamation Plan, section 35.050 Reclamation Standards. The following summarizes standards and how the project complies with these applicable standards. Not every standard from section 35.05 is listed as some of these standards apply only to projects subject to Surface Mining and Reclamation Act of 1975 (SMARA).

1. Wildlife Habitat.

Wildlife and wildlife habitat shall be protected in accordance with the following standards:

- Rare, threatened or endangered species or species of special concern, and their respective habitat shall be conserved.
No federal- or state-listed threatened or endangered species are known to occupy or frequent the Project area. (Page 2 of Reclamation Plan)
- Wildlife habitat shall be established on disturbed lands in a condition similar to or better than that which existed before the lands were disturbed.
Wildlife habitat will be established on the reclaimed lands in a condition similar to the undisturbed lands surrounding the sites. (Page 3 of Reclamation Plan)
- Wetland habitat shall be avoided.
No wetland habitat on site will be disturbed. (Page 3 of Reclamation Plan)

2. Backfilling, Regrading, Slope Stability, and Recontouring.

Backfilling, regrading, slope stabilization, and recontouring shall conform to the following standards:

- Where backfilling is required for resource conservation purposes (e.g., agriculture, fish and wildlife habitat, and wild land conservation), fill material shall be backfilled to the standards required for the resource conservation use involved.
Project-affected areas of surface disturbance will be re-contoured as necessary to blend with the surrounding topography. (Page 4 of Reclamation Plan)
- Final reclaimed fill slopes, including permanent piles or dumps of mine waste rock and overburden, shall not exceed 2:1 (horizontal:vertical), except where site-specific geologic and engineering analyses

demonstrate that the proposed final slope will have a minimum slope stability factor of safety that is suitable for the approved end use, and when the proposed final slope can be successfully revegetated.

Final reclaimed fill slopes will not exceed 2:1 (horizontal:vertical), except where site-specific geologic and engineering analyses demonstrate that the proposed final slope will have a minimum slope stability factor of safety that is suitable for the approved end use and when the proposed final slope can be successfully re-vegetated. A site reclamation plan for MP-1 plan is provided on Plates 1a, 1b, and 1c, attached in Appendix A. A site reclamation plan for the MP-2 plant site is provided on Plates 2a and 2b, attached in Appendix A. A site reclamation plan for the M-1 plant site is provided on Plates 3a and 3b, attached in Appendix A. (Page 4 of Reclamation Plan)

- At closure, all fill slopes, including permanent piles or dumps of mine waste and overburden, shall conform to the surrounding topography and/or approved end use.
The reclamation plan requires that project-affected areas of surface disturbance will be re-contoured as necessary to blend with the surrounding topography

3. Revegetation.

Revegetation shall be part of the approved plan, unless it is not consistent with the approved end use.

- A vegetative cover suitable for the approved end use and capable of self-regeneration without continued dependence on irrigation, soil amendments or fertilizer shall be established on disturbed lands. The vegetative density, cover and species-richness of naturally occurring habitats shall be documented in baseline studies carried out prior to the initiation of resource development activities.
At least 3 shrubs and 8 perennial native grasses and/or forbs per 4 square meters would be established on site. Perennial grasses would account for at least 10% of the relative cover. (Page 5 of Reclamation Plan)
- Test plots conducted simultaneously with resource development activities shall be required to determine the most appropriate planting procedures to be followed to ensure successful implementation of the proposed revegetation plan. The County may waive the requirement to conduct test plots when the success of the proposed revegetation plan can be documented from experience with similar species and conditions or by relying on competent professional advice based on experience with the species to be planted.
The reclamation of the MP-1 (Plate 1B) site will serve as the test plot for both the seed mix and success of vegetative cover stated above.
- Where resource development activities result in compaction of the soil, ripping, disking, or other means shall be used in areas to be revegetated to eliminate compaction and to establish a suitable root zone in preparation for planting.
Approved methods in use already include the design and construction of stable slopes, minor re-grading, ripping or sub-soiling to de-compact and loosen compacted soil, topsoiling, surface preparation through fine grading, reseeding and re-vegetation (or natural re-vegetation). (Page 4 of Reclamation Plan)
- Prior to closure, all access roads, haul roads, and other traffic routes to be reclaimed shall be stripped of any remaining road base materials, prepared in accordance with section g below, covered with suitable growth media or topsoil, and revegetated.
Plate B in Appendix A of the Reclamation Plan shows which roads and travel routes will be removed at final reclamation, which will include coverage with suitable growth media and revegetation.
- Indigenous plant species shall be used for revegetation, except when introduced species are necessary to meet the end uses specified in the approved reclamation plan.
The seed mix for revegetation is listed on page 4 of the Mammoth Pacific Reclamation Plan. Preferably, seeds for this project would be collected within the immediate vicinity of the project area. If this is not possible due to poor seed availability, seed from the Eastern Slopes Subsection of the Sierra Nevada Section and Mono Section would be acceptable.
- Planting shall be conducted during the most favorable period of the year for plant establishment.

The Reclamation Plan includes requirements to reseed applicable areas in the fall in order to take advantage of beneficial winter moisture.

- Weeds as defined by the Soil Conservation Service, or the county Agricultural Commissioner, or the California Native Plant Society, shall be managed: 1) when they threaten the success of the proposed revegetation; and 2) to prevent spreading to nearby areas; and 3) to eliminate fire hazard.

The Reclamation Plan includes weed management measures, including a standard that all non-native weed species that are already present in the area would account for no more than 5% total of the relative cover at the end of the 2 year evaluation period.

- Success of revegetation shall be judged based upon the effectiveness of the vegetation for the approved end use, and by comparing the quantified measures of vegetative cover, density, and species-richness of the reclaimed lands to similar parameters of naturally occurring vegetation in the area. Either baseline data or data from nearby reference areas may be used as the standard for comparison. Quantitative standards for success and the location(s) of the reference area(s) shall be set forth in the approved reclamation plan. Comparisons shall be made until performance standards are met provided that, during the last two years, there has been no human intervention, including for example, irrigation, fertilization, or weeding. Standards for success shall be based on expected local recovery rates. Valid sampling techniques for measuring success shall be specified in the approved reclamation plan. Sample sizes must be sufficient to produce at least an 80% confidence level.

At least 3 shrubs and 8 perennial native grasses and/or forbs per 4 square meters would be established on site. Perennial grasses would account for at least 10% of the relative cover. Failure to meet the success standards would require additional planting and/or weed control, as appropriate, until standards are met. (Page 5 of Reclamation Plan)

4. Drainage, Diversion Structures, Waterways, and Erosion Control.

- Reclamation activities shall be conducted to protect on-site and downstream beneficial uses of water.
Surface runoff and drainage will be controlled by silt fencing or a straw wattle until the interim gravel surface for MP-1 has been placed on the pad and/or the new vegetation has been developed to a point of controlling erosion for all sites during final reclamation. There are no perennial streams or other surface waters located within the Project area that will be impacted by operations or reclamation. A “blue line” stream is identified adjacent to the sites along the northerly boundary on the U.S. Geological Survey (USGS) topographic map (“Old Mammoth” quadrangle, 1:24000 series). The blueline stream is an ephemeral/intermittent identified as a stream “riparian conservation area” (RCA) by the USFS under the SNFPA ROD (USDA, Forest Service 2004). Project activities and reclamation avoid impacts to this intermittent stream.
- The quality of water, recharge potential, and storage capacity of groundwater aquifers shall not be diminished, except as allowed in the approved reclamation plan.
*Retention basins have been designed for each site, based on the Lahontan Regional Water Quality Control Board’s Water Quality Plan for the Mammoth Creek Basin to contain the runoff volume generated from a 20 year intensity storm with a one hour duration, which is assumed to be 1 inch (0.83 feet) * Area (square feet) * C (infiltration coefficient). Retention basin sizing calculations are included in Appendix B.*
- Erosion and sedimentation shall be controlled during all phases of construction, operation, reclamation, and closure of an operation to minimize siltation of lakes and watercourses, as required by the Regional Water Quality Control Board, the State Water Resources Control Board, and the Mono County Grading Ordinance.
See above reference to Appendix B and the project is required to comply with the Mono County Grading Ordinance and an approved grading plan.
- Surface runoff and drainage shall be controlled by berms, silt fences, sediment ponds, revegetation, hay bales, or other erosion control measures, to ensure that surrounding land and water resources are protected from erosion, gullyng, sedimentation, and contamination. Erosion control methods shall be designed to handle runoff from not less than the 20-year/1-hour intensity storm event.

See above reference to Appendix B and the project is required to comply with the Mono County Grading Ordinance and an approved grading plan.

5. Prime Agricultural Land Reclamation and Other Agricultural Land

The project site does not contain prime or other agricultural lands.

6. Building, Structure and Equipment Removal.

- All equipment, supplies, and other materials shall be stored in designated areas (as shown in the approved reclamation plan). All waste shall be disposed of in accordance with state and local health and safety ordinances.

Once the MP-1 plant is decommissioned and removed, the MP-1 site will be used for interim storage for ongoing operations at the site. See Plate 1B. Plates 1a, 2a, and 3a in the reclamation plan show the existing sites and identify the various facilities to be removed.

- All buildings, structures, and equipment shall be dismantled and removed prior to final site closure except those buildings, structures, and equipment approved in the reclamation plan as necessary for the end use.

Plates 1a, 2a, and 3a in the reclamation plan show the existing sites and identify the various facilities to be removed.

7. Stream Protection, Including Surface and Groundwater.

- Surface and groundwater shall be protected from siltation and pollutants that may diminish water quality as required by the Federal Clean Water Act, sections 301 et seq. (33 U.S.C. section 1311), 404 et seq. (33 U.S.C. section 1344), the Porter-Cologne Act, section 13000 et seq., the county Grading Ordinance, the Regional Water Quality Control Board or the State Water Resources Control Board.

Stable topographic surface and drainage conditions will be established to control erosion, prevent sedimentation, blend with the surrounding landscape, and to protect on-site and downstream sites. Plates 1B, 2B, and 3B show interim reclamation site storm water pollution prevention plans. The project is also subject to requirements of a Mono County grading permit.

8. Topsoil Salvage, Maintenance and Redistribution.

When the approved reclamation plan calls for revegetation or cultivation of disturbed lands, the following performance standards shall apply to topsoil salvage, maintenance, and redistribution activities:

- All salvageable topsoil suitable for revegetation shall be removed as a separate layer from areas to be disturbed. Topsoil and vegetation removal shall not precede development activities by more than one year, unless a longer time period is approved by the County.

Topsoil was not stockpiled when MP-1 and MP-2 sites were graded. Therefore, the resulting surficial soils after grading will be analyzed to determine the presence or absence of elements essential for plant growth and to determine those soluble elements that may be toxic to plants, if the soil has been chemically altered or if the growth media consists of other than the native topsoil. Topsoil and suitable amended surficial soils will be planted with a vegetative cover or will be protected by other equally effective measures to prevent water and wind erosion and to discourage weeds. Topsoil will stockpiled for the M-1 site reclamation will be spread over the site in a minimum thickness of 3 inches. One of the exhibits for the M-1 site will be amended to show the topsoil storage area. (Page 7 of the Reclamation Plan)

- Topsoil resources shall be mapped prior to stripping and the location of topsoil stockpiles shall be shown on a map in the reclamation plan. If the amount of topsoil needed to cover all surfaces to be revegetated is not available on-site, other suitable material capable of sustaining vegetation (such as subsoil) shall be removed as a separate layer for use as a suitable growth media. Topsoil and suitable growth media shall be maintained in separate stockpiles. Test plots may be required to determine the suitability of growth media for revegetation purposes.

See discussion directly above.

- Soil salvage operations and phases of reclamation shall be carried out in accordance with the schedule that: 1) is set forth in the approved Reclamation Plan; 2) minimizes the area disturbed; and 3) is designed to achieve maximum revegetation success allowable under the plan.

Soil salvage is limited for the MP-1 and MP-2 sites as stated above. The topsoil stockpile area for the M-1 site will be shown on a map to be included in the reclamation plan. The reclamation timeframes listed in the Reclamation Plan for the various plants are:

	MP-1	MP-2	M-1	Wells
Reclamation start date	2014 or 2015	2045	2045	2045

- Topsoil and suitable growth media shall be used to phase reclamation as soon as can be accommodated by the operations schedule presented in the approved reclamation plan. Topsoil and suitable growth media that cannot be utilized immediately for reclamation shall be stockpiled in an area where it will not be disturbed until needed for reclamation.

Topsoil will stockpiled for the M-1 site reclamation. One of the exhibits for the M-1 site will be amended to show the topsoil storage area.

- Topsoil and suitable growth media shall be redistributed in a manner that results in a stable, uniform thickness consistent with the approved end use, site configuration, and drainage patterns.

Topsoil will stockpiled for the M-1 site reclamation will be spread over the site in a minimum thickness of 3 inches. One of the exhibits for the M-1 site will be amended to show the topsoil storage area.

9. Tailing and Waste Management

There are not Tailings and/or Waste Management standards that are required for this project.

10. Closure of Surface Openings

- All geothermal wells shall be completed or abandoned in accordance with the California Division of Oil and Gas

The Reclamation Plan requires that all geothermal wells scheduled for reclamation be abandoned in accordance with the requirements of the California Division of Oil and Gas.

- F. The estimated cost of the reclamation reasonably approximates the probable cost of performing the reclamation work as proposed in the plan and adequate surety (consistent with applicable provisions of SMARA for surface mining operations) will be posted to ensure completion of the required reclamation.**

The Reclamation Plan contains cost estimates for all three plants located on the project site. A summary of timing and reclamation costs are:

	MP-1	MP-2	M-1	Wells
Reclamation start date	2014 or 2015	2045	2045	2045
Cost	\$356,224	\$739,513	\$564,949	\$2,210,719

See Appendix C Cost Estimates for additional details. The Reclamation Plan requires that adequate surety be provided.

- G. The person or entity responsible for reclamation plan compliance has a public liability insurance policy in force for the duration of the reclamation which provides for personal injury and property protection in an amount adequate to compensate all persons injured or for property damaged as a result of the proposed reclamation activities.**

The reclamation plan requires that Ormat provide to Mono County Risk Management or Mono County Economic Development Department the required public liability insurance policy for review and approval.



OFFICE OF THE CLERK
OF THE BOARD OF SUPERVISORS

REGULAR AGENDA REQUEST

Print

MEETING DATE	November 13, 2012	DEPARTMENT	Community Development - Planning Division
ADDITIONAL DEPARTMENTS			
TIME REQUIRED	30 minutes	PERSONS APPEARING BEFORE THE BOARD	Courtney Weiche
SUBJECT	Geothermal Setback - General Plan Clarifying Amendment 12-003(b)		

AGENDA DESCRIPTION:

(A brief general description of what the Board will hear, discuss, consider, or act upon)

Proposed Resolution adopting General Plan Amendment 12-003 (b) to clarify the County's intent and interpretation of General Plan Chapter 15, section 15.070(B)(1)(d) and a provision within the Conservation and Open Space Element pertaining to setbacks from a mapped blue line or dotted blue line water course within the Hot Creek Buffer Zone for geothermal development.

RECOMMENDED ACTION:

Adopt proposed Resolution. Provide any desired direction to staff.

FISCAL IMPACT:

None are anticipated.

CONTACT NAME: Courtney Weiche

PHONE/EMAIL: 760.924.1803 / cweiche@mono.ca.gov

SUBMIT THE ORIGINAL DOCUMENT WITH
ATTACHMENTS TO THE OFFICE OF
THE COUNTY ADMINISTRATOR
PRIOR TO 5:00 P.M. ON THE FRIDAY
32 DAYS PRECEDING THE BOARD MEETING

SEND COPIES TO:

MINUTE ORDER REQUESTED:

☐ YES ☒ NO

ATTACHMENTS:

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[Staff Report](#)

 [Resolution](#)

 [Resolution](#)

History

Time	Who	Approval
11/7/2012 11:08 AM	County Administrative Office	Yes
11/8/2012 8:36 AM	County Counsel	Yes
11/7/2012 4:13 PM	Finance	Yes

Mono County Community Development Department

PO Box 347
Mammoth Lakes, CA 93546
(760) 924-1800, fax 924-1801
communitydev@mono.ca.gov

Planning Division

PO Box 8
Bridgeport, CA 93517
(760) 932-5420, fax 932-5431
www.mono-county.ca.gov

November 13, 2012

To: Mono County Board of Supervisors

From: Courtney Weiche, Associate Planner
Gerry LeFrancois, Principal Planner
Stacey Simon, Assistant County Counsel

Re: General Plan Clarifying Amendment 12-003(b)

I. RECOMMENDATION

1. Conduct public hearing.
2. Adopt Resolution R12-__ “A Resolution of the Mono County Board of Supervisors adopting General Plan Amendment 12-003(b) Clarifying and Stating Provisions of the Mono County General Plan Related to Setbacks from Surface Water Courses for Geothermal Development Applicable within the Hot Creek Buffer Zone.”

II. PLANNING COMMISSION ACTIONS

Following a public hearing held October 11, 2012 the Planning Commission made the required findings and recommended that the Board of Supervisors approve Clarifying General Plan Amendment 12-003 (b) (the “proposed action”).

III. BACKGROUND AND PROPOSED ACTION

Section 15.070(B)(1)(d) of the Land Use Element of the Mono County General Plan contains a Land Development Regulation establishing a 500-foot setback from any surface water course shown as a blue, or dotted blue-line stream on a USGS topographical map, for geothermal development occurring within the Hot Creek Buffer Zone.

Chapter 33 of the Mono County General Plan authorizes the Planning Commission to grant variances from any Land Development Regulation upon the making of specified findings. Objective D, Policy 1, Action 1.13 of the Energy Resources section of the Mono County General Plan Conservation and Open Space Element restates the setback established by section 15.070(B)(1)(d) as an action taken by the County to further the General Plan policy of protecting hydrologic resources and water quality and quantity in the siting and operation of geothermal projects within the Hot Creek Buffer Zone.

In the course of processing the application for CUP, Variance, and Reclamation Plan for the Mammoth Pacific Replacement Project, the County received input from a commenting organization indicating that the language of Action 1.13 was being interpreted by the commenter as re-imposing the 500-foot setback established by Section 15.070(B)(1)(d) as an independent requirement of the Conservation and Open Space Element. It was asserted that no variance may be granted to the setback, since doing so would then be “in conflict” with the Conservation and Open Space Element.

This interpretation is inconsistent with the County’s historical interpretation of its General Plan, and reflects neither the intent nor purpose of the County in including Action 1.13 in the Conservation and Open Space Element. The proposed clarifying General Plan Amendment would make clear the County’s interpretation of its own General Plan and address the concerns expressed by the commenter.

IV. ENVIRONMENTAL REVIEW

The FEIR for the Mammoth Pacific Replacement Project, which analyzes the impacts of the proposed clarifying amendment, was certified and adopted by the Planning Commission following a duly noticed public hearing held on October 11, 2012. That approval was appealed to your Board. If the Board, following the appeal hearing, has upheld the Planning Commission's actions and certified the FEIR, then that document will provide the environmental review for the proposed action as required by CEQA.

The proposed General Plan Clarifying Amendment would not result in any significant impact to the environment. As discussed in the FEIR, pursuant to General Plan Chapter 33, a variance from the setback established by Section 15.070(B)(1)(d) may not be granted unless it is found, based on substantial evidence in the record, that to do so would not be detrimental to the public welfare or injurious to property or improvements in the area in which the property is situated (among other findings). In addition, the Mono County General Plan prohibits outright geothermal development within the Casa Diablo portion of the Hot Creek Buffer zone if such development would have a significant impact on the environment. Accordingly, no variance may be granted to the setback established by Section 15.070(B)(1)(d) unless there would be no significant environmental impacts (within the Casa Diablo area) or injury to property (applicable throughout the Hot Creek Buffer Zone). Therefore, any project for which a variance is sought could only be approved by the County if potential impacts to hydrologic resources and water quality and quantity are mitigated to less than significant levels. Finally, there is in fact only one additional private parcel within the Hot Creek Buffer Zone which is not within the Casa Diablo area (where significant impacts are prohibited) and that property contains sufficient size and area (and lacks unique geologic, topographic, or other conditions which would warrant the granting of a variance) to accommodate geothermal development without need (or justification) for a variance.

The Planning Commission conditionally approved a variance from this setback requirement for the Mammoth Pacific Replacement Project (i.e., on the one property within the area where the criteria for a variance exist). As mentioned, the FEIR addressed the impacts of that variance and determined that no significant impacts would result, due to design features of the proposed M-1 Plant which would protect hydrologic features and water quality and quantity. In addition, the M-1 Plant would be located further from the mapped blue-line stream than the existing MP-1 Plant which would be decommissioned by the Project.

The variance approval issued by the Planning Commission will take effect only upon the Board clarifying the questioned provisions of the General Plan (i.e., the meaning and intent of Action 1.13 of the Conservation and Open Space Element). The Board could do this through simple minute motion providing clarification, but the Planning Commission has recommended that a clarifying General Plan Amendment be adopted to finally resolve the issue.

V. ENCLOSURES

1. Proposed Resolution adopting GPA 12-003(b) (including Exhibit A)
2. A copy of the Resolution adopted by the Planning Commission and recommending GPA 12-003(b) is included in your packet in conjunction with the appeals of the Planning Commission's action.
3. The FEIR for the Mammoth Pacific Replacement Project (including the RDEIR, the RDEIR2, and the FEIR) was previously provided.



RESOLUTION R12-__

**A RESOLUTION OF THE MONO COUNTY BOARD OF SUPERVISORS
ADOPTING GENERAL PLAN AMENDMENT 12-003(b)
CLARIFYING AND STATING PROVISIONS OF THE MONO COUNTY GENERAL
PLAN RELATED TO SETBACKS FROM SURFACE WATER COURSES
APPLICABLE TO GEOTHERMAL DEVELOPMENT WITHIN THE
HOT CREEK BUFFER ZONE**

WHEREAS, Section 15.070(B)(1)(d) of the Land Use Element of the Mono County General Plan establishes a 500-foot setback from any surface water course shown as a blue, or dotted blue-line stream on a USGS topographical map, for geothermal development occurring within the Hot Creek Buffer Zone; and

WHEREAS, Chapter 33 of the Mono County General Plan authorizes the Planning Commission to grant variances from any Land Development Regulation within the Land Use Element, upon the making of specified findings; and

WHEREAS, Objective D, Policy 1, Action 1.13 of the Energy Resources section of the Mono County General Plan Conservation and Open Space Element recites the setback established by section 15.070(B)(1)(d) as an action taken by the County to further the General Plan policy of protecting hydrologic resources and water quality and quantity in the siting and operation of geothermal projects; and

WHEREAS, the County has received input that the language of Action 1.13 is being interpreted as re-imposing the 500-foot setback imposed by Section 15.070(B)(1)(d) as a "requirement" of the Conservation and Open Space Element, ineligible for variance under Chapter 33; and

WHEREAS, such interpretation is inconsistent with the County's historical interpretation of its General Plan, and reflects neither the intent nor purpose of the County in including Action 1.13 in the Conservation and Open Space Element; and

WHEREAS, accordingly, the Board of Supervisors wishes to clarify the language of Action 1.13 (and Section 15.070(B)(1)(d)) through the adoption of General Plan Amendment (GPA) 12-003(b) (the "proposed action"); and

WHEREAS, Mono County has caused to be prepared a Final Environmental Impact Report (FEIR), consisting of the RDEIR, the RDEIR2 and the Final EIR, analyzing the potential impacts of the proposed action pursuant to the California Environmental Quality Act (CEQA) (SCH# 2011022020); and

WHEREAS, the Mono County Planning Commission did, on October 11, 2012, hold a properly noticed and advertised public hearing to hear all testimony relevant to the proposed action and recommended that the Board of Supervisors approve GPA 12-003(b); and

NOW, THEREFORE, Mono County Board of Supervisors hereby **FINDS** and **RESOLVES** that:

1. An FEIR was completed for the proposed action in compliance with CEQA; and
2. The FEIR was presented to the Board of Supervisors, which is the decision maker with respect to the appeal; and
3. The Board of Supervisors reviewed and considered the information contained in the FEIR, which reflects the lead agency's independent judgment and analysis; and
4. The analysis in FEIR demonstrates that no significant impact to the environment would result from the proposed action; and
5. The Mono County Board of Supervisors did previously certify and adopt the FEIR.

BE IT FURTHER RESOLVED THAT, the Mono County Board of Supervisors hereby approves GPA 12-003(b) in the form recommended by the Planning Commission and as set forth in Exhibit A to this resolution, which is attached hereto and incorporated by this reference, clarifying and stating provisions of the Mono County General Plan related to setbacks from a surface watercourse applicable to geothermal development within the Hot Creek Buffer Zone.

PASSED AND ADOPTED this 13th day of November, 2012, by the following vote of the Board of Supervisors, County of Mono:

AYES :

NOES :

ABSENT :

ABSTAIN :

Vikki Magee-Bauer, Chair

ATTEST:

APPROVED AS TO FORM:

Lynda Roberts
Clerk of the Board

Marshall S. Rudolph
County Counsel

EXHIBIT A

General Plan Amendment 12-003(b)

New language shown in underline, language to be deleted is shown in strikethrough, and the Planning Commission's recommended modifications are shown in redline:

Land Use Element

Land Development Regulations

15.070 Development Standards.

The following minimum development standards shall apply to all projects in the Resource Extraction Designation unless a variance is granted in accordance with Chapter 33 or amended through the "Specific Plan" process. Other standards or conditions identified during the use permit process may also apply.

A. Lot Size and District Area.

The minimum lot size and district area shall be 40 acres or a quarter, quarter section, with the exception of patent and/or historical mining claims and "vested operations" which shall be considered on a case by case basis. Minimum lot size and district area may be reduced in conformance to the "Development Plan" or "Specific Plan" process.

B. Setbacks.

1. No processing equipment or facilities shall be located and no resource development shall occur within the following minimum horizontal setbacks:
 - a. One hundred (100) feet from any interior public street or highway unless the Public Works Director determines that a lesser distance would be acceptable.
 - b. One hundred (100) feet from any exterior property line.
 - c. Five hundred (500) feet from any adjacent private dwelling, institution, school, or other building or location used for public assemblage.
 - d. No geothermal development located within the Hot Creek Buffer Zone shall occur within 500 feet on either side of a surface watercourse (as indicated by a solid or broken blue line on U.S. Geological Survey 7.5- or 15-minute series topographic maps).

Conservation and Open Space Element

Energy Resources, Objective D, Policy 1

Action 1.13: ~~No geothermal development located within the Hot Creek Buffer Zone shall occur.~~ The County has adopted land development regulations for geothermal development within 500 feet on either side of a surface watercourse (as indicated by a solid or broken blue line on U.S. Geological Survey 7.5- or 15-minute series topographic maps) within the Hot Creek Buffer Zone (See Mono County Land Development Regulations, Chapter 15, section 15.070(B)(1)(d) ,) which are subject to variance only in accordance with Chapter 33 of the Mono County General Plan.



OFFICE OF THE CLERK
OF THE BOARD OF SUPERVISORS

REGULAR AGENDA REQUEST

Print

MEETING DATE	November 13, 2012	DEPARTMENT	County Counsel
ADDITIONAL DEPARTMENTS	Community Development Department		
TIME REQUIRED	5 minutes	PERSONS APPEARING BEFORE THE BOARD	Stacey Simon
SUBJECT	Foster - Deed Restriction and Agreement		

AGENDA DESCRIPTION:

(A brief general description of what the Board will hear, discuss, consider, or act upon)

Proposed Deed Restriction and Agreement with Robert Foster, pertaining to owner-initiated deed restriction on Parcel Number 016-176-007 in June Lake. This is a related item to the proposed General Plan Amendment which would change the land use designation for this parcel to Commercial Lodging-High.

RECOMMENDED ACTION:

Approve County entry into proposed Deed Restriction and Agreement and authorize Chair to execute, and the Clerk to record, said Agreement on behalf of the County. Provide any desired direction to staff.

FISCAL IMPACT:

None.

CONTACT NAME: Stacey Simon

PHONE/EMAIL: 760.924.1704 / ssimon@mono.ca.gov

SUBMIT THE ORIGINAL DOCUMENT WITH
ATTACHMENTS TO THE OFFICE OF
THE COUNTY ADMINISTRATOR
PRIOR TO 5:00 P.M. ON THE FRIDAY
32 DAYS PRECEDING THE BOARD MEETING

SEND COPIES TO:

MINUTE ORDER REQUESTED:

☐ YES ☒ NO

ATTACHMENTS:

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[Staff Report](#)

[Proposed Deed Restriction and Agreement](#)

History

Time	Who	Approval
11/7/2012 11:06 AM	County Administrative Office	Yes
11/7/2012 3:38 PM	County Counsel	Yes
11/7/2012 4:11 PM	Finance	Yes

County Counsel
Marshall Rudolph

Assistant County Counsel
Stacey Simon

Deputy County Counsels
Tara McKenzie
John-Carl Vallejo

**OFFICE OF THE
COUNTY COUNSEL**

Mono County
South County Offices
P.O. BOX 2415
MAMMOTH LAKES, CALIFORNIA 93546

Telephone
760-924-1700

Facsimile
760-924-1701

Legal Assistant
Michelle Robinson

To: Board of Supervisors

From: Stacey Simon

Date: November 13, 2012

Re: Deed Restriction and Agreement/Foster

Recommendation

Approve and authorize the Chair to sign and the Clerk to Record, a Deed Restriction, Covenant, and Agreement between Mono County and the property owner restricting the use of APN 016-186-007, located at 4835 Highway 395 in the Down Canyon area of June Lake to residential and transient rental uses.

Fiscal Impact

None.

Discussion

The property owner desires to restrict his property as described in the Deed Restriction, Covenant, and Agreement provided in the Board's packet. He has signed and had notarized a copy of the Agreement, including a legal description of the property, which will be available at your meeting.

If you have any questions regarding this item prior to your meeting, please call me at 924-1704.

Attachment A

**RECORDING REQUESTED BY AND
WHEN RECORDED RETURN TO:**

Stacey Simon
Office of the Mono County Counsel
P.O. Box 2415
Mammoth Lakes, CA 93546

APN # 016-186-007

DEED RESTRICTION, COVENANT, AND AGREEMENT

THIS DEED RESTRICTION, COVENANT, AND AGREEMENT is made this _____ day of _____, 2012, by Robert Foster having an address at 4835 Highway 158, in June Lake, CA 93529 (AProperty Owner@), in favor of the County of Mono, a political subdivision of the State of California (ACounty@).

WITNESSETH

WHEREAS, Property Owner is the sole owner in fee simple of certain real property consisting of a home located at 4835 Highway 158, in June Lake, Mono County, California, APN 016-186-007, more particularly described in Exhibit A, attached hereto and incorporated by this reference (the AProperty@); and

WHEREAS, the Property having heretofore been designated Single Family Residential pursuant to the Land Use Element of the Mono County General Plan ("General Plan"); and

WHEREAS, Property Owner has applied to County for an amendment to the General Plan to change the Property=s land use designation to ACommercial Lodging-High,@ so that the Property can be operated as a transient rental; and

WHEREAS, County Planning Commission has issued a conditional use permit (ACUP@) to Property Owner for the purpose of approving of the use of the Property as a transient rental, effective only upon the Property being designated as Commercial Lodging-High pursuant to Mono County General Plan; and

WHEREAS, Property Owner desires, provided that the Property is designated by County as Commercial Lodging-High, to restrict the Property so that it may be used only as a transient rental, unless Property Owner or its successor applies for and is duly approved by County for other or additional uses on the Property; and

WHEREAS, County is in agreement with the Property being restricted as set forth above and agrees to accept conveyance of the rights hereby granted and to honor the intentions of Property Owner as stated herein;

NOW, THEREFORE, in consideration of the above and the mutual covenants, terms, conditions, covenants, and restrictions contained herein, Property Owner hereby grants and conveys to County a deed restriction and covenant over the Property, of the nature and character and to the extent hereinafter set forth (ARestriction@).

- 1) Purpose. It is the purpose of this Restriction to assure that the Property will be used only as a single family residence, or as a transient rental subject to the applicable CUP, and to prevent any use of the Property that is inconsistent therewith. It is further intended that the Restriction made herein be considered a covenant and an enforceable equitable servitude upon the Property, which shall be binding on all parties having or acquiring an interest in the Property, and their successors and assigns.
- 2) Rights of County. To accomplish the purpose of this Restriction the County shall have the right to prevent any activity on or use of the Property that is inconsistent with the purpose of this Restriction.
- 3) Reserved Rights. Property Owner reserves to itself and its personal representatives, heirs, successors, lessees, and assigns, all rights accruing from its ownership of the Property, including the right to engage in or permit or invite others to engage in all uses of the Property that are not expressly prohibited herein and are not inconsistent with the purpose of the Restriction.
- 4) County=s Remedy. If County determines that Property Owner is in violation of the terms of this Restriction or that a violation is threatened, County shall give written notice to Property Owner of such violation and demand corrective action sufficient to cure the violation. If Property Owner fails to cure the violation within 30 days after the receipt of notice thereof from County, County may bring an action at law or in equity in a court of competent jurisdiction to enforce the terms of this Restriction or otherwise enforce this agreement as provided by law.
- 5) Costs of Enforcement. Any costs incurred by County in enforcing the terms of this Restriction against the Property Owner, including, without limitation, costs of suit and attorneys= fees, shall be borne by Property Owner.
- 6) Access. No right of access by the general public to any portion of the Property is conveyed by this Restriction.
- 7) Costs and Liabilities. Property Owner retains all responsibilities and shall bear all costs and liabilities of any kind related to the ownership, operation, upkeep, and maintenance of the Property.

8) Extinguishment. If circumstances arise in the future such as render the purpose of this Restriction impossible to accomplish, Property Owner may apply to County to have this Restriction extinguished. Property Owner understands and agrees that any such extinguishment may be granted in the discretion of the County and must be processed in compliance with the California Environmental Quality Act ("CEQA"). Alternatively, Property Owner may seek to have the Property re-designated as Residential. This Restriction will become eliminated and extinguished upon Property Owner applying and becoming duly approved by County, in accordance with applicable County standards in place at that time and in accordance with CEQA, to make uses at the Property which are further and/or other than those contemplated by this agreement.

11) Notices. Any notice, demand, request, consent, approval, or communication that either party desires or is required to give to the other shall be in writing and be either served personally or sent by first class mail, postage prepaid, addressed as follows: To Property Owner: Robert Foster, PO Box 594, June Lake CA 93259. To County: Mono County Community Development Director, P.O. Box 347, Mammoth Lakes, CA 93546; or to such other address as either party from time to time shall designate by written notice to the other.

12) Recordation. County shall record this instrument in a timely fashion in the official records of Mono County, California and may re-record it any time as may be required to preserve its right in this Restriction and Covenant.

13) General Provisions.

(a) Controlling Law. The interpretation and performance of this Restriction shall be governed by the laws of the State of California.

(b) Liberal Construction. If any provision in this instrument is found to be ambiguous, an interpretation consistent with the purpose of this Restriction that would render the provision valid shall be favored over any interpretation that would render it invalid.

(c) Severability. If any provision of this Restriction, or the application thereof to any person or circumstance, is found to be invalid, the remainder of the provisions of this Restriction, or the application of such provision to persons or circumstances other than those as to which it is found to be invalid, as the case may be, shall not be affected thereby.

(d) Entire Agreement. This instrument sets forth the entire agreement of the parties with respect to the Restriction and supersedes all prior discussions, negotiation, understandings, or agreements relating to the Restriction, all of which are merged herein.

(e) No Forfeiture. Nothing contained herein will result in a forfeiture or reversion of Property Owner=s title in any respect.

(f) Successors. The covenants, terms, conditions and restrictions of this Restriction shall be binding upon and inure to the benefit of, the parties hereto and their respective personal representative, heirs, successors, and assigns and shall continue as a servitude running with the Property.

(g) Counterparts. The parties may execute this instrument in two or more counterparts, which shall, in the aggregate be signed by both parties; each counterpart shall be deemed an original instrument as against any party who has signed it. In the event of any disparity between the counterparts produced, the recorded counterpart shall be controlling.

14) Effective Only Upon Designation as Commercial Lodging-High. This agreement shall only become effective upon County=s approval of an amendment to the general plan to designate the Property ACommercial Lodging-High.@

IN WITNESS WHEREOF, Property Owner and County have set their hands on the day and year first above written.

Robert Foster, Dated _____, Property Owner,

By: _____, Property Owner.

County of Mono, County:

By: _____

Its: _____.

Schedule of Exhibits: A - Legal Description of Property Subject to Restriction.



OFFICE OF THE CLERK
OF THE BOARD OF SUPERVISORS

REGULAR AGENDA REQUEST

Print

MEETING DATE	November 13, 2012	DEPARTMENT	Community Development - Planning Division
ADDITIONAL DEPARTMENTS			
TIME REQUIRED	30 minutes	PERSONS APPEARING BEFORE THE BOARD	Courtney Weiche
SUBJECT	Foster - General Plan Amendment 12-003 (a)		

AGENDA DESCRIPTION:

(A brief general description of what the Board will hear, discuss, consider, or act upon)

Public hearing regarding General Plan Amendment 12-003 (a) to change land use designation of APN 015-060-047 from Single Family Residential to Commercial Lodging- High, subject to restrictions contained in Conditional Use Permit 12-003.

RECOMMENDED ACTION:

Adopt proposed resolution #R12-_____, approving GPA 12-003(a). Provide any desired direction to staff.

FISCAL IMPACT:

None.

CONTACT NAME: Courtney Weiche

PHONE/EMAIL: 760.924.1803 / cweiche@mono.ca.gov

SUBMIT THE ORIGINAL DOCUMENT WITH
ATTACHMENTS TO THE OFFICE OF
THE COUNTY ADMINISTRATOR
PRIOR TO 5:00 P.M. ON THE FRIDAY
32 DAYS PRECEDING THE BOARD MEETING

SEND COPIES TO:

MINUTE ORDER REQUESTED:

☒ YES ☐ NO

ATTACHMENTS:

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[Staff Report](#)

[Resolution](#)

History

Time	Who	Approval
11/7/2012 11:07 AM	County Administrative Office	Yes
11/7/2012 3:43 PM	County Counsel	Yes
11/7/2012 4:11 PM	Finance	Yes

Mono County Community Development Department

P.O. Box 347
Mammoth Lakes, CA 93546
(760) 924-1800, fax 924-1801
commdev@mono.ca.gov

Planning Division

P.O. Box 8
Bridgeport, CA 93517
(760) 932-5420, fax 932-5431
www.monocounty.ca.gov

Date: November 13, 2012
To: Mono County Board of Supervisors
From: Courtney Weiche, Associate Planner
Re: General Plan Amendment 12-003(a), subject to Use Permit Application 12-003/Foster

RECOMMENDATION

It is recommended the Board of Supervisors take the following actions:

1. Find that the project is exempt from the California Environmental Quality Act (CEQA) as a Categorical Exemption under CEQA guidelines 15301 & 15303 and direct staff to file a Categorical Exemption; and
2. Adopt Resolution 12-__, approving General Plan Amendment 12-003(a).

PROJECT

The proposal is to allow use of a single-family residence at 4835 Highway 158 in June Lake (APN 016-186-007) for transient rentals, as defined in a voluntary deed restriction applicable to the property. The project includes a General Plan Amendment (GPA) to change the land use designation from Single-Family Residential (SFR) to Commercial Lodging, High (CL-H), subject to restrictions set forth in the Conditional Use Permit (CUP) to allow operation of a transient rental. The CUP includes requirements for future permitted land uses, and is conditioned upon approval of the GPA to change the property's designation from SFR to CL-H by the Board of Supervisors. Transient rentals are allowed in CL-H, with a use permit but are not allowed within SFR. Any increase in intensity of use, beyond the approved CUP 12-003, under the CL-H designation would require further planning review and permitting. Furthermore, the applicant is voluntarily deed restricting the property so that it may be used only as single family residence or as a transient rental (see attachment A).

PROJECT SETTING

The project parcel is located adjacent to similar commercial lodging uses and the Down Canyon commercial area of June Lake (See Figure 1). The areas to the north and east of the project parcel have a land use designation of Single Family Residential, and to the west and north-west of the project, the parcels have land use designations of Commercial and Commercial Lodging, High. It is directly adjacent parcels with land use designations such as Commercial (C) and Commercial Lodging-High (CL-H) that are all intended to promote commercial uses, including transient rentals. Along Highway 158, to the west, is the Four Seasons, Carson Peak Inn and the Hideaway Condos.

Figure 1



BACKGROUND

The applicant has voluntarily prepared and will record a deed restriction limiting the use of the property so that it may be used only as a transient rental. The deed restriction ensures that the property will not be used for additional commercial purposes or higher density uses, unless the property owner or its successor applies for and is duly approved by County for other or additional uses on the Property.

GENERAL PLAN CONSISTENCY

The following discusses major components of the proposal, reviews their conformity with Mono County's General Plan and Planning Commission requirements, and recommends options for the Commissions consideration.

The following excerpts are various sections of the Mono County General Plan defining and outlining compliance with the permitting of a transient rental (rentals for fewer than 30 consecutive days):

Development Standards:

Subject to the General Plan Amendment approval for the land use designation change to Commercial Lodging, High a transient rental is allowed in this designation subject to a director review or conditional use permit.

Commercial Lodging, Moderate (CL-M) and High (CL-H)

INTENT: The "CL-M" designation is intended to provide commercial lodging units for short-term occupation in or near residential uses.

The "CL-H" designation is intended to provide short-term commercial lodging units in close proximity to commercial/recreational centers.

PERMITTED USES

- Single-family dwelling (mobile homes are not permitted)
- Duplexes and triplexes
- Accessory buildings and uses¹
- Animals and pets (see Animal Standards Section 04.270)
- Home occupations (see Home Occupation regulations, Section 04.290)

USES PERMITTED SUBJECT TO DIRECTOR REVIEW (Director Review Processing, Ch. 31)

- Transient rentals (rentals for fewer than 30 consecutive days) of up to three dwelling units

USES PERMITTED SUBJECT TO USE PERMIT (Use Permit Processing, Ch. 32)

- Mobile-home parks (see Dev. Standards -Mobile-home and RV Parks, Ch. 17)
- Recreational-vehicle parks (see Ch. 17)
- Condominiums, cooperatives, townhomes, cluster developments, apartments containing four or more units
- Hotels, motels, lodges, bed-and-breakfast establishments, cabins and other uses found to be similar by the Commission. Ancillary uses such as limited dining, lounges and convenience retail, provided the ancillary use does not occupy more than 25 percent of the project's habitable space

- Transient rentals (fewer than 30 consecutive days) of four or more dwelling units
- Conversion of five or more apartment units into transient rentals
- Conversion of existing habitable space into ancillary uses
- Parking lots and parking structures other than required off-street parking
- Construction of an accessory building prior to construction of the main building

DEVELOPMENT STANDARDS

Minimum Lot Area:

Hotels, motels, lodges, bed-and-breakfast establishments, rental cabins and other similar uses – 20,000 sf

Condominiums, cooperatives, townhouses, cluster developments and similar uses (excluding apartments) – 20,000 sf

All other uses – 10,000 sf

Land uses on lots measuring less than 10,000 sq. ft. shall be limited to single-family residences, duplexes and triplexes (mobile homes are not permitted)

The parcel's lot size is 32,670 square feet, which is above the minimum required lot area of 20,000 square feet for the proposed use within this land use designation.

Chapter 06 – Parking Development Standards

Table 06.010 of the General Plan illustrates the required parking spaces needed for a single family residence in June Lake is 3 parking spaces. The residence has a two car attached garage and a large enough driveway to park four additional vehicles tandem in front, for a total possibility of six vehicles. However, the applicant has indicated that the lessee agreement with each renter will only permit a maximum of three vehicles.

Snow Storage Requirements:

Section II, page 214, **04.300** states:

“Snow-storage areas shall be provided for all future commercial and multi-family (three or more units) development, including condominiums. Snow-storage area(s) shall be equal to a required percentage of the area from which the snow is to be removed (i.e., parking and access/roads areas).”

The project does not include any additional impervious surfaces that require snow removal and therefore would not require additional snow storage than what currently exists. Furthermore, there is ample snow storage available for any necessary snow removal on the property.

LAND DEVELOPMENT TECHNICAL ADVISORY COMMITTEE

The LDTAC met on June 4, 2012 and September 17, 2012 to review and provide input on the project proposal. LDTAC comments are incorporated and reflected in the project description and conditions of approval for this use permit.

ENVIRONMENTAL REVIEW

This project has been found to be categorically exempt from CEQA; a Class 1 Categorical Exemption under CEQA Guideline 15301 and Class 3 15303 Categorical Exemption under CEQA Guideline has been issued:

CEQA Guidelines 15301. Existing Facilities Class 1 consists of the operation, repair, maintenance permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination. The key consideration is whether the project involves negligible or no expansion of an existing use.

CEQA Guidelines 15303. New Construction or Conversion of Small Structures Class 3 consists of construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure. The numbers of structures described in this section are the maximum allowable on any legal parcel.



RESOLUTION NO. R12-__

**A RESOLUTION OF THE MONO COUNTY BOARD OF SUPERVISORS ADOPTING
GENERAL PLAN AMENDMENT 12-003(a), CHANGING THE CURRENT
LAND USE DESIGNATION FOR ASSESSOR PARCEL #016-186-007 FROM
SINGLE-FAMILY RESIDENTIAL TO COMMERCIAL LODGING-HIGH.**

WHEREAS, in connection with a Use Permit application for a transient rental, the property owner has applied for a General Plan Map Amendment and initiation of such amendment is warranted; and

WHEREAS, the proposed General Plan Amendment 12-003(a) and Use Permit 12-003 address the redesignation of Assessor's Parcel # (APN) 016-186-007 from Single-Family Residential (SFR) to Commercial Lodging-High (CL-H); and

WHEREAS, pursuant to the California Environmental Quality Act (CEQA) this Board has determined that the proposed GPA qualifies for a Categorical Exemption and would not have a significant effect upon the environment and a Categorical Exemption under CEQA guidelines 15301 Class 1 and 15303 Class 3 has been prepared; and

WHEREAS, in consideration of evidence and testimony presented at the public hearing and in accordance with Chapter 48 of the Land Use Element of the General Plan, the Planning Commission adopted the required findings with respect to the proposed GPA; and

WHEREAS, the Board of Supervisors did on November 13, 2012 hold a noticed and advertised public hearing to hear all testimony relevant to the General Plan Amendment;

NOW, THEREFORE, BE IT RESOLVED THAT, having taken into consideration the recommendations and findings of the Planning Commission, and all other evidence and testimony before it, the Mono County Board of Supervisors, in conformance to the Mono County General Plan, Chapter 48, Section 48.020, hereby: instructs staff to file a Notice of Exemption; finds that the proposed changes are consistent with the General Plan, including the June Lake Area Plan; and approves General Plan Amendment 12-003(a) redesignating APN 016-186-007 from Single-Family Residential (SFR) to Commercial Lodging-High (CL-H).

PASSED AND ADOPTED this 13th day of November, 2012, by the following vote of the Board of Supervisors, County of Mono:

AYES :
NOES :
ABSENT :
ABSTAIN :

DRAFT

Viki Bauer, Chair
Mono County Board Of Supervisors

ATTEST:

APPROVED AS TO FORM:

Lynda Roberts, Clerk of the Board

Marshall Rudolph, County Counsel



OFFICE OF THE CLERK
OF THE BOARD OF SUPERVISORS

REGULAR AGENDA REQUEST

Print

MEETING DATE	November 13, 2012	DEPARTMENT	Community Development - Building Division
ADDITIONAL DEPARTMENTS			
TIME REQUIRED	20 Minutes	PERSONS APPEARING BEFORE THE BOARD	Tom Perry, Brent Calloway
SUBJECT	Limited Density Owner Built Rural Dwellings		

AGENDA DESCRIPTION:

(A brief general description of what the Board will hear, discuss, consider, or act upon)

Proposed ordinance adopting chapter 15.50 of the Mono County Code pertaining to Limited Density Owner-Built Rural Dwellings.

RECOMMENDED ACTION:

Introduce, read title, and waive further reading of proposed ordinance. Provide any desired direction to staff.

FISCAL IMPACT:

None.

CONTACT NAME: Brent Calloway

PHONE/EMAIL: 924-1823 / bcalloway@mono.ca.gov

SUBMIT THE ORIGINAL DOCUMENT WITH
ATTACHMENTS TO THE OFFICE OF
THE COUNTY ADMINISTRATOR
PRIOR TO 5:00 P.M. ON THE FRIDAY
32 DAYS PRECEDING THE BOARD MEETING

SEND COPIES TO:

MINUTE ORDER REQUESTED:

☒ YES ☐ NO

ATTACHMENTS:

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[Draft Staff Report](#)

[LDOBRD](#)

History

Time	Who	Approval
10/31/2012 11:32 AM	County Administrative Office	Yes
11/6/2012 4:11 PM	County Counsel	Yes
11/7/2012 4:08 PM	Finance	Yes

Mono County

Community Development Department

PO Box 347
Mammoth Lakes, CA 93546
760.924.1800, fax 924.1801
commdev@mono.ca.gov

PO Box 8
Bridgeport, CA 93517
760.932.5420, fax 932.5431
www.monocounty.ca.gov

Date: November 13, 2012

To: Honorable Chair and Members of the Board of Supervisors

From: Tom Perry, Building Official
Brent Calloway, Community Development Analyst

Subject: Limited Density Owner Built Rural Dwelling Ordinance

Recommended Action:

Receive staff report and adopt Limited Density Owner Built Rural Dwelling (LDOBRD) Ordinance.

Fiscal Impact:

None

Discussion:

At the April 3, 2012 meeting of the BOS, a second workshop was conducted regarding the concept of a potential Limited Density Owner Built Rural Dwelling ordinance in Mono County. At the conclusion of the second workshop, Board members had mixed opinions about directing staff to move forward with the project, direction was received as 3 members in favor, 2 members not in favor of additional staff resources devoted to the project. At the request of Supervisor Johnston, a draft ordinance implementing Limited Density regulations has been developed and brought for consideration of the Board.

The concept of Limited Density is to allow some flexibility for remote, isolated pieces of land, allowing owners to construct small habitable structures that do not meet strict compliance with the California Building Code. Examples of deviations from the building code that would be allowed on such parcels include no residential fire sprinkler requirements, no heating or energy code requirements, and no requirements to install electricity.

The draft ordinance defines a Limited Density parcel as a “single parcel in-holding of at least 10 acres, completely surrounded by federally owned lands, with no portion of the parcel within 1 air mile of a paved road.” There are approximately 100 parcels that meet this description within the county.

As some Board members have expressed concern about unintended consequences of allowing such development, the regulations will be considered a pilot program and include a sunset clause. If approved, the regulations will remain in place for 2 years or until 5 building permit applications intending to utilize the regulations have been received.

Attachments: Draft Ordinance

ORDINANCE NO. ORD12-____
AN ORDINANCE OF THE MONO COUNTY BOARD OF
SUPERVISORS ADOPTING CHAPTER 15.50 OF
THE MONO COUNTY CODE PERTAINING TO
LIMITED DENSITY OWNER-BUILT RURAL DWELLINGS

WHEREAS, there are certain privately owned properties within the county that are remote, isolated and difficult to access; and

WHEREAS, the development of these properties with single family residences in full compliance with the California Building Standards Code may not be desirable; and

WHEREAS, the California Building Standards Code allows for the development of county specific regulations known as "Limited Density Owner-Built Rural Dwellings;" and

WHEREAS, several other counties have implemented such regulations with few complications; and

WHEREAS, because there is some concern regarding unintended consequences of such regulations in Mono County, an automatic expiration (sunset) clause is built into the code language;

NOW, THEREFORE, THE BOARD OF SUPERVISORS OF THE COUNTY OF MONO ORDAINS as follows:

SECTION ONE: Chapter 15.50 is hereby added to the Mono County Code and shall read as follows:

"Chapter 15.50

LIMITED DENSITY OWNER-BUILT RURAL DWELLINGS

Sections:

15.50.010	Purpose.
15.50.020	Intent and application.
15.50.030	Definitions.
15.50.040	Building standards; building official authority.
15.50.050	Recorded covenants.
15.50.060	Permits.
15.50.070	Application for permit.
15.50.080	Plans.
15.50.090	Permit issuance.
15.50.100	Inspections.
15.50.110	Certificate of Occupancy.
15.50.120	Fees.
15.50.130	Construction requirements.
15.50.140	Fire safety regulations.
15.50.150	General plan compliance.
15.50.160	Chapter expiration.

15.50.010 Purpose.

The purpose of this chapter is to make Article 8 (commencing with Section 74) of Subchapter 1 of Chapter 1 of Division 1 of Title 25 of the California Code of Regulations, as modified herein, operative on Limited Density Owner-Built Rural Dwellings in Mono County, and to provide minimum requirements for the protection of life, limb, health, property, safety, and welfare of the general public and the owners and occupants of such dwellings.

15.50.020 Intent and application.

The provisions in this chapter shall apply to the lawful construction, enlargement, conversion, alteration, repair, use, maintenance, and occupancy of limited density owner built rural dwellings and detached structures. It is the intent of this chapter that the requirements contained herein shall apply to seasonally or permanently occupied dwellings located in rural areas and solely occupied as the residence of the owner or the owner's family. Such dwellings shall be considered single family dwellings.

15.50.030 Definitions.

As used in this Chapter:

- A. "Owner-Built" shall mean constructed by any person or family who acts as the general contractor for or the provider of, part or all of the labor necessary to build housing to be occupied as the principal residence of that person or family, and not intended for sale, lease, rental, or employee occupancy. The sale, lease, renting, or employee occupancy of owner-built structures within two (2) years of the issuance of a certificate of occupancy shall be presumptive evidence that the structure was erected for the purpose of sale, lease, rental, or employee occupancy. Any ambiguity regarding the meaning of "owner built" shall be resolved by reference to state law regarding owner-builders. It is not the intention of the County to narrow or expand state law regarding owner-builders who are eligible to build Limited Density Owner-Built Rural Dwellings.
- B. "Limited Density Owner-Built Rural Dwelling parcel" means a single parcel in-holding that is completely surrounded by federally owned lands, is at no point nearer than one (1) air mile from a paved road, and is at least ten (10) acres in size.
- C. "Substandard building" shall be defined as a structure or a portion of a structure in which there exists any condition that endangers the life, health, property, safety, or welfare of the public or the occupants thereof. Except as

amended by the provisions of this Chapter, the California Health and Safety Code, section 17920.3, shall be the determining criteria for compliance with the standards of this Chapter and the defining of a substandard building. (Note: Any structure or portion thereof which are determined by the enforcing agency to constitute a substandard building may be declared to a public nuisance and may be abated by repair, rehabilitation, or removal in accordance with California Health and Safety Code sections 17980 through 17995.)

15.50.040 Building standards; building official authority.

A. When constructing a residential structure on a Limited Density Owner- Built Rural Dwelling parcel, dwellings constructed pursuant to this section need not necessarily conform with the construction requirements prescribed by the latest applicable edition of the California Residential, Building, Plumbing, Mechanical, Electrical, Energy, Fire or Green Building Standards Codes, or other applicable technical codes; nevertheless, such dwellings shall conform with nationally-accepted technical and scientific principles relating to design, materials, methods of construction, and structural requirements for the erection and construction of dwellings that are contained in the California Building Standards Codes. Such codes shall be a basis for approval.

B. The construction of a dwelling under this chapter is a privilege, not a right. The Building Official has full authority in the interpretation and application of the provisions of this chapter, including but not limited to determining eligibility of a dwelling proposed to be constructed under this chapter and applicable building standards for any such proposed dwelling.

15.50.050 Recorded covenants.

As a condition of being permitted to construct a dwelling under this Chapter, a declaration of covenants, conditions, and restrictions shall be recorded disclosing the nature of the dwelling and restrictions on its use, in a form acceptable to County Counsel, which shall run with the land and be enforceable by the County as an equitable servitude. The declaration shall state that the structure constructed on this property has been permitted under the special regulations codified in Chapter 15 of the Mono County Code applicable to limited density owner built rural dwellings adopted under the authorization of California Health and Safety Code section 17958.2; that the structure(s) is not in full compliance with the provisions of the technical codes; and that occupancy is limited to the owner and the owner's family.

15.50.060 Permits.

Permits shall be required for the construction of limited density owner-built rural dwellings. The application, plans, and other data filed by an applicant for

such permit shall be reviewed by the Mono County Building Division and other County Departments to verify compliance with the provisions of this Chapter. When the Building Official determines that the permit application and other data indicate that the structure will comply with the provisions of this article, the Building Official may issue a permit therefore to the applicant, as provided for in this Chapter.

15.50.070 Application for permit.

To obtain a permit, the applicant shall first file an application therefore with the Mono County Building Division. Permit applications shall contain the following information:

- (1) Scope of work
- (2) Name and address of the applicant
- (3) Address and location of the proposed work
- (4) Use and occupancy for which the proposed work is intended
- (5) Be accompanied by plans and construction documents
- (6) Indicate square feet or valuation of proposed new work
- (7) Initial, sign, and date the owner-builder disclosure form
- (8) Be signed by the applicant or applicant's authorized agent
- (9) Give such other data and information as required by the Building Official.

15.50.080 Plans.

Plans shall consist of a general description of the structure(s), including all necessary information and details to facilitate a reasonable judgment of conformance by the Mono County Building Division. Due to Mono County having climatic conditions that produce snow loads, and that all of Mono County is known to be in a high seismically active region of the state, buildings shall be designed in accordance with accepted engineering practice.

15.50.090 Permit issuance.

The issuance of a permit shall be contingent upon the approval of the submitted plans and construction documents by the Mono County Community Development Department. Additionally, the Mono County Environmental Health Department shall provide approval for private sewage disposal systems and potable water that will serve the proposed structure(s) prior to the issuance of a permit.

15.50.100 Inspections.

All construction or work for which a permit is required pursuant to this Chapter shall be subject to inspection by the Building Official or his/her agent. It shall be the responsibility of the applicant or his or her agent to notify the Mono County Building Division to have such work inspected.

15.50.110 Certificate of Occupancy.

After the structure(s) is completed for occupancy any inspections which have been conducted, and work approved, the Building Official shall issue a Certificate of Occupancy for such dwelling(s) and appurtenant structure(s) which comply with the provisions of this Chapter. The Certificate of Occupancy shall indicate that the structure(s) that it is issued for have been constructed and approved pursuant to the provisions of this chapter.

15.50.120 Fees.

Fees shall be required and collected by the Mono County Building Division to provide for the cost of administering the provisions of this Chapter, in an amount to be duly established and adopted by resolution of the Board of Supervisors.

15.50.130 Construction requirements.

- A. The dwelling unit shall have a room or space of not less than 220 square feet of floor area. An additional 100 square feet of floor area shall be provided for each occupant in excess of two. The unit shall also be provided with a kitchen sink with a clear working space of thirty (30) inches in front. A separate bathroom containing a water closet, lavatory and bathtub or shower shall be provided. The maximum size of dwelling units and detached structures shall be 640 square feet.
- B. Fireplaces, heating and cooking appliances, and gas piping installed in buildings constructed pursuant to the Chapter shall be installed and vented in accordance with the requirements contained in the California Mechanical Code.
- C. A heating facility or appliance shall be installed in each dwelling subject to the provisions of this chapter; however, there shall be no specified requirement for heating capacity or temperature maintenance. The use of solid fuel or solar heating devices shall be deemed as complying with the requirements of this chapter.
- D. No dwelling or appurtenant structure constructed pursuant to this chapter shall be required to be connected to a source of electrical power, or wired, or otherwise fitted for electrification. Where electrical wiring or appliances are installed, the installation shall be in accordance with the applicable requirements contained in the California Electrical Code.
- E. Plumbing equipment and installation shall be in accordance with the applicable requirements contained in the California Plumbing Code.

- F. Potable water shall be available to the dwelling site, although such water need not be pressurized. Where water is not piped from a well, spring, cistern, or other approved source, there shall be a minimum reserve of fifty (50) gallons of potable water available. Hot water need not be provided to serve any structure(s). The Mono County Environmental Health Department shall be the Health Authority Having Jurisdiction to provide the approval of potable water.
- G. Sanitary facilities shall be connected to an approved private sewage disposal system or an alternate waste disposal system subject to the inspection and approval of the Mono County Environmental Health Department.
- H. All egress systems, including emergency escape rescue exits in any room(s) that could reasonably be used as sleeping room(s), shall be in conformance with the California Residential Code.
- I. Smoke detectors shall be installed in accordance with the California Residential Code. For dwellings that do not have electrical power, battery operated smoke detectors shall be acceptable.

15.50.140 Fire safety regulations.

A Limited Density Owner-Built Rural Dwelling permit application shall be reviewed by CalFire for compliance with Public Resources Code sections 4290 and 4291, as well as for any other requirements CalFire may have regarding defensible space. For purposes of this chapter, residential fire sprinklers shall not be required in Limited Density Owner Built Rural Dwellings.

15.50.150 General plan compliance.

Limited Density Owner-Built Rural Dwelling structures shall comply with all applicable development regulations of the Mono County General Plan.

15.50.160 Chapter expiration.

This chapter is a pilot program. This Chapter will expire and be of no further force and effect after December 31, 2014, or after five (5) applications for permits under this Chapter have been accepted by the County, whichever occurs first. Notwithstanding the foregoing, applications that have been submitted prior to said expiration date may be processed, including but not limited permit issuance, completion of construction, final inspection of said construction, and issuance of a Certificate of Occupancy."

SECTION TWO: This ordinance shall become effective 30 days from the date of its adoption and final passage, which appears immediately below. The Clerk of the Board of Supervisors shall post this ordinance and also publish the ordinance or a summary thereof in the manner prescribed by Government Code section 25124 no later

than 15 days after the date of this ordinance's adoption and final passage. If the Clerk fails to so publish this ordinance or a summary thereof within said 15 day-period, then the ordinance shall not take effect until 30 days after the date of publication.

PASSED, APPROVED and ADOPTED this__day of_____, 2012, by the following vote, to wit:

AYES:
NOES:
ABSENT:
ABSTAIN:

Vikki Bauer, Chair
Mono County Board of Supervisors

ATTEST:

APPROVED AS TO FORM:

Clerk of the Board

COUNTY COUNSEL