

## ENVIRONMENTAL ASSESSMENT, FONSI AND DECISION RECORD

**BLM, Bishop Field Office  
351 Pacu, Suite 100  
Bishop, CA 93514**

**EA Number:** DOI-BLM-CA-070-2008-43-EA

**Lease/Serial/Case File No.:** CACA050136

**Proposed Action Title/Type:** Paleoearthquake Investigation

**Location of Proposed Action:** Antelope Valley, Mono County, California; Bishop RMP Coleville Management Area; T. 9 N., R. 22 E., SE ¼ Section 26, MDM&B.

**Applicant (if any):** Steven G. Wesnousky, University of Nevada, Reno

### **Plan Conformance:**

This proposed action is subject to the Bishop Resource Management Plan (RMP), approved March 25, 1993. While neither specifically prescribed nor prohibited, the proposed action conforms to RMP guidance, including General Policy 4 which states: "Public lands will be managed in a manner that will protect the quality of scientific, scenic, historical, ecological, environmental, air and atmospheric, water resource, and archaeological values... food and habitat for fish and wildlife... outdoor recreation and human occupancy and use." It is also consistent with Area Manager's Guidelines, Valid Existing Management, Standard Operating Procedures, Decisions and Support Needs prescribed in the Bishop RMP.

### **Purpose and Need for Proposed Action:**

The purpose of the proposed action is to conduct a scientific study of recent earthquakes as they relate to a range bounding fault escarpment at the base of the Sierra Nevada along the west side of Antelope Valley in Mono County, California. The proposed study would provide valuable scientific information related to the size and frequency of earthquakes along this fault. Earthquake recurrence data is an important component in the development of seismic hazard models that are used to protect the public against earthquake hazards. The proposed action would increase the body of scientific knowledge related to earthquake predictions and awareness, and benefit public safety.

The need for the proposed action is established by the Bureau of Land Management's responsibility under the Federal Land Policy and Management Act (FLPMA) to respond to the applicant's request for a Temporary Use Permit

(43CFR 2920) to use the public lands for scientific research purposes by an educational institution. FLPMA contains the Bureau of Land Management authority over the public lands and establishes scientific research by inference as one of the principle uses of those lands (43 U.S.C. 1701 (a)(8)).

### **Description of the Proposed Action:**

The proposed action is to construct a trench to conduct a scientific study of recent earthquakes as they relate to a range bounding fault escarpment at the base of the Sierra Nevada along the west side of Antelope Valley in Mono County, California. The trench would be a maximum of 25 meters (82 feet) long, 4.5 meters (15 feet) wide, and 4.5 meters (15 feet) deep and excavated perpendicular to the fault. The trench would be stepped to the north with 1.25 meter (4 foot) lifts to meet OSHA requirements. The south side of the trench would be the solid wall that is mapped and investigated. The trench would be excavated in one day and investigated and mapped for a maximum of 2 weeks. The trench would be fenced with standard orange plastic construction fencing attached to metal t-posts spaced at 2 meter (6.5 feet) feet intervals during the investigation period. The trench would be backfilled, contoured and reseeded following investigation and mapping. Access would be via existing dirt roads and off-road vehicle travel would be limited to the immediate project vicinity.

Five potential trench sites were visited, reviewed and discussed with the applicant on May 9, 2008. This included two sites originally submitted by the applicant for consideration and three additional sites identified by Field Office staff and the applicant during the field visit. Based on resource issues identified during the field visit and subsequent discussions with the applicant, the site identified as Site 2 (WPNT 45) in the applicant's original proposal was determined to be best suited for the proposed action. The proposed research site is located at Latitude 38.59298, Longitude -119.52706 (WGS84), within the bounds of recent wildfires in the Walker-Coleville area.

The proposed action would authorize the project proponent to conduct the proposed trench construction and associated scientific study at Site 2. The applicant would be issued a Temporary Use Permit in accordance with 43CFR 2920 to conduct his scientific research, subject to the following design features which would be included as permit stipulations. Additional mitigation measures or requirements may be required based on this environmental assessment.

The project proponent is responsible for securing permission to cross private land to access the proposed project site.

The project proponent is responsible for all suppression cost for any fires resulting from their operations and practices. No smoking or fire use is permitted.

The project proponent is responsible for disposing of all debris in accordance with state and federal regulations.

Except where the trench is sited, removal of vegetation within and/or adjacent to the ingress/egress route is prohibited.

All equipment and machinery shall be equipped with spark arrestors and mufflers.

All soil moving equipment shall be pre-washed with a high powered water spray device to remove any weed seed prior to site access.

No toxic materials or fluids shall be used or disposed at the site.

During periods of non-operation or when the site is not occupied, the trench area will be blocked with a high-visibility orange or bright color temporary barrier fence.

Pit rehabilitation shall consist of the following requirements: All material removed from the pit will be placed back in the excavation. The pit area will be sloped to blend with existing contours. Weed control may be required in spring of 2009 using mechanical methods (weed whip, or hoe) depending on weed infestation following project implementation.

The access route will be raked and camouflaged using existing plant material that has been displaced during trenching operations.

During trenching any late discoveries of archaeological remains within or near the trench locations will require an immediate cessation of trenching at the location. The Bishop Field Office Manager and archaeologist will be contacted to field check the location prior to resumption of work.

The proponent has been advised to avoid any disturbance to isolated find 1 (IS-1), a rock cairn in the general vicinity of the proposed project site (see Cultural Resources, below).

**No Action Alternative:**

The No Action alternative would maintain the proposed project site in its present condition. No trench would be constructed. The proponent would need to look elsewhere for a research site.

## **Environmental Analysis:**

### AIR QUALITY

#### Affected Environment

The proposed project site is not within any federal non-attainment/maintenance area under jurisdiction of the Great Basin Unified Air Pollution Control District (GBUAPCD). Federal actions are not subject to conformity determinations under 40 CFR 93.

#### Environmental Consequences

##### Impacts of the Proposed Action

Fugitive dust emissions would occur due to soil disturbance associated with both trench excavation and the subsequent backfilling and re-contouring of the project site following the investigation and mapping effort. Support vehicles would also emit various precursor emissions for ozone. Emission amounts from the proposed action would be negligible. The proposed action would not result in the emission of PM<sub>10</sub>. The proposed action would not measurably affect air quality.

##### Impacts of No Action

No fugitive dust emissions or precursor emissions for ozone would be emitted as the result of the proposed project. The no action alternative would have no impact on air quality.

### AREA OF CRITICAL ENVIRONMENTAL CONCERN (ACEC)

#### Affected Environment

The proposed project site is located within the Slinkard Valley Area of Critical Environmental Concern (ACEC). The goals of the ACEC as identified in the Bishop Resource Management Plan (RMP) are to protect wildlife and scenic values and to enhance recreation opportunities.

#### Environmental Consequences

##### Impacts of the Proposed Action

Implementation of the proposed action would have no measureable effect on the resource values the Slinkard Valley ACEC was designed to protect. Refer to the Wildlife, Recreation and Visual Resource Management (VRM) analyses for the discussion of impacts specific to these resources.

## Impacts of No Action

The no action alternative would have no impact on the resource values the Slinkard Valley ACEC was designed to protect.

## CULTURAL RESOURCES

### Affected Environment

A Class III cultural resource survey of all five potential trench sites was completed during the field review on May 9, 2008. A 10 meter buffer was surveyed around each of the five potential trench locations. Roughly one acre was evaluated. At the potential trench site identified as Site 1 in the applicant's original proposal, one previously recorded archaeological site occurs and one new site was recorded during the field review. Site 1 was subsequently removed from consideration due to cultural resource concerns. No sites were found within the area of potential effect (APE) of the four remaining potential trench locations. An isolated feature (IS-1) was found in the vicinity of the proposed project site, but is outside of the area of potential effect (APE).

### Environmental Consequences

#### Impacts of the Proposed Action

The Class III cultural resource survey of the proposed project site identified no cultural resources within the area of potential effect. The proposed project would have no effect on cultural resources. For more detail and full documentation of the cultural resource evaluations refer to Cultural Resources Inventory Report: CA-170-08-31.

#### Impacts of No Action

The no action alternative would have no impact on cultural resources.

## ENVIRONMENTAL JUSTICE

The proposed action and no action alternatives would have no disproportionate impact, either negative or positive, on any low-income minority because the proposed project site is located in an area of vacant public land and there are no low-income or minority populations living in the vicinity of, or dependent upon, the proposed project site.

## ESSENTIAL FISH HABITAT

The proposed action and no action alternatives would have no effect on essential fish habitat because the proposed project site is not located within or adjacent to any designated essential fish habitats.

## FARMLANDS, PRIME OR UNIQUE

The proposed action and no action alternatives would have no effect on any farmlands, prime or unique, because the proposed project site is not located within or adjacent to any farmlands, prime or unique.

## FLOOD PLAINS

The proposed action and no action alternatives would have no effect on flood plains because the proposed project site is not located within or adjacent to any flood plains.

## GLOBAL CLIMATE CHANGE

### Affected Environment

United States Department of Interior, Order Number 3226, signed January 19, 2001, Evaluating Climate Change Impacts in Management Planning, is an order to ensure that climate change impacts are taken into account in connection with planning and decision making. Climate change refers to any significant change in measures of climate (e.g. temperature or precipitation) lasting for an extended period of time (decades or longer). Climate change may result from natural processes, such as changes in the sun's intensity; natural processes within the climate system (e.g. changes in ocean circulation); human activities that change the atmosphere's composition (e.g. burning fossil fuels) and the land surface (e.g. urbanization) (IPCC, 2007).

“There is broad scientific consensus that humans are changing the chemical composition of our atmosphere” (Jones & Stokes, August 2007). Changes in the atmosphere have likely influenced temperature, precipitation, storms, and sea level (IPCC, 2007). Rising greenhouse gas (GHG) levels are likely contributing to global climate change.

### Impacts of the Proposed Action

The proposed action would result in some contribution of greenhouse gas (GHG) emissions associated with the operation of vehicles and heavy equipment required for project implementation. These contributions would not have a noticeable or measurable effect, independently or cumulatively, on a

phenomenon occurring at the global scale and believed to be due to more than a century of human activities.

#### Impacts of No Action

The no action alternative would not contribute to GHG emissions and would have no impact on climate change at either the local or global scale.

### INVASIVE, NON-NATIVE SPECIES

#### Affected Environment

Two species of non-native invasive weeds were documented at the proposed project site during the field visit conducted on May 9, 2008: *Bromus tectorum* (cheat grass) and *Sysimbrium altissimum* (tansy mustard). Ocular assessment of cheat grass and tansy mustard cover at the proposed project site ranged from 15-25% and 5-15% respectively.

#### Environmental Consequences

##### Impacts of the Proposed Action

The proposed action would temporarily remove cheat grass and tansy mustard from the project site but it is anticipated that extant seed banks of these species would result in re-colonization following project completion. The rate of re-colonization would depend on precipitation levels in 2010 and 2011. Weed control in spring of 2010 (early April) using mechanical methods would be necessary to assist native plant recovery.

##### Impacts of No Action

The no action alternative would have no impact on invasive, non-native species. Weed recruitment would fluctuate based on current and future climatic conditions.

### MINERALS

The proposed action and no action alternatives would have no effect on mineral exploration or extraction activities because the proposed project site is not located within or adjacent to any existing mineral leases or mining claims.

## NATIVE AMERICAN CULTURAL VALUES

### Affected Environment

There are 11 Native American communities within, or in close proximity to, the eastern Sierra region administered by the Bishop Field Office. None of these communities are living on, or adjacent to, the proposed project site. No treaty rights (hunting, fishing, etc.) are associated with any of the communities or with the proposed project site.

Some members of these communities hunt and some do subsistence collecting of materials such as basket weaving materials and medicinal plants on public lands. However, this is general use and no specific "traditional use areas" have been identified by any of the tribes at this time. Any other traditional uses or use areas have not been divulged to this office.

### Environmental Consequences

#### Impacts of the Proposed Action

The proposed action is not expected to have any negative impacts on Native American cultural values or concerns described above because there would be no measureable effect on the natural environment upon which Native American cultural values depend.

#### Impacts of No Action

The no action alternative would have no effect on any Native American cultural values or concerns described above.

## RANGELANDS-LIVESTOCK MANAGEMENT

The proposed action and no action alternatives would have no effect on rangelands or livestock management because the proposed project site is not located within or adjacent to any permitted grazing allotment.

## RECREATION

### Affected Environment

Recreation use associated with the proposed project site and surrounding vicinity is characterized by light, infrequent dispersed use including exploration of semi-primitive backcountry roads and trails, hiking, and wildlife viewing. The proposed project site is not located within or adjacent to any developed recreational facilities. No intensive recreation use or activity occurs at or near the proposed project location.

## Environmental Consequences

### Impacts of the Proposed Action

There would be no measureable impact to recreational opportunities because the proposed project site is not located within or adjacent to any developed recreational facilities and no intensive recreation use or activity occurs at or near the proposed project site. The temporary nature of the proposed action would also preclude any long-term or measureable impact to dispersed recreation opportunities available at the proposed project site.

### Impacts of No Action

The no action alternative would have no effect on recreation opportunities.

## SOCIAL AND ECONOMIC VALUES

### Affected Environment

No social or economic values are currently associated with the proposed project site.

## Environmental Consequences

### Impacts of the Proposed Action

The proposed action would potentially have a positive effect on social and economic values by enhancing public safety, to the extent that it contributes to research that increases understanding of seismic activity and improves the ability to predict earthquakes.

### Impacts of No Action

The no action alternative would have no effect on social and economic values.

## SOILS

### Affected Environment

The dominant landforms in the proposed project area are alluvial fans and fan terraces with soil parent materials comprised of pre-Cretaceous metasediments and Mesozoic granitics. Dominant soil Families are Rodriguez, Centennial and Ginser. Surface soils are covered with 3-8% boulders and stones. Subsurface soils are loamy coarse sand and stony loamy coarse sand. Soils are well drained with high permeability and low water holding capacity.

## Environmental Consequences

### Impacts of the Proposed Action

The proposed excavation would involve temporary soil removal and permanent displacement of the soil stratigraphy within the 25 meters (82 feet) long by 4.5 meters (15 feet) wide footprint of the trench site. Because soil removal will be temporary and soil salvage and re-contouring techniques are incorporated into the proposed project design no short-term or long-term soil loss is anticipated.

### Impacts of No Action

The no action alternative would have no impact on existing soil conditions.

## VEGETATION, including THREATENED AND ENDANGERED

### Affected Environment

The upper Walker River encompasses a portion of the boundary between the Intermountain and Sierra Nevada floristic regions, and hence displays much floristic diversity within a relatively small area. Located along the east slope of the Sierra Nevada and passing eastward into the Intermountain Region through other ranges including the Sweetwater Mountains, the Bodie Hills and the Wassuk Range, the Walker River drainage has much elevational variation. As a result, there is much overlapping of the two floristic regions. Additionally, the easternmost exposures of the Sierra granodiorites occur within the Walker River basin and may enhance the eastward migration of Sierran plants (Lavin 1983).

Recent fires (2001-2007) have severely impacted vegetation conditions in the majority of the general Walker-Coleville area surrounding the proposed project site. These fires have affected both the compositional and seral status of three vegetation community types: pinyon pine, bitterbrush and sagebrush steppe. The proposed project area burned in 1996 as part of the Marine 1 Fire. Recovery of the native vegetation since then has been positive with regard to lower invasive weed cover values and high cover values of native shrub and forb species compared to similar sites that have burned more recently in the Walker-Coleville area. Key native species that comprise the site include, but are not limited to, sagebrush (*Artemisia tridentata* ssp. *tridentata*), Mormon tea (*Ephedra nevadensis* and *E. viridis*), desert needlegrass (*Achnatherum speciosum*), needle-and-thread (*Hespirostipa comota*) and tall buckwheat (*Eriogonum elatum*).

## Environmental Consequences

### Impacts of the Proposed Action

The proposed action would permanently remove existing vegetation from the proposed project site including approximately 10-15 native shrubs (sagebrush, desert peach, rabbitbrush, and mormon tea) and 5-10 individuals of two native grass species, desert needlegrass (*Achnatherum speciosum*) and needle-and thread-grass (*Hespirostipa comota*). Natural revegetation is likely to occur because the extant stands of native vegetation that surround the site would provide viable seed sources. No additional re-seeding would be required.

### Impacts of No Action

The no action alternative would have no impact on the existing vegetation.

### *Threatened, Endangered, and Sensitive Plant Species*

No threatened, endangered, or special status plant species are known or likely to occur within or adjacent to the proposed project site, based on historical records, field monitoring, and habitat suitability; and none were encountered during the field visit conducted on May 9, 2008. The proposed action and no action alternatives would have no effect on any federally listed threatened or endangered plant species or designated critical habitat, or any special status plant species or habitats, because none are present within or adjacent to the proposed project site.

## VISUAL RESOURCES

### Affected Environment

The proposed project site is located within a Visual Resource Management (VRM) Class I area. The objective of VRM Class I as defined in the Bishop RMP is "to preserve the existing character of the landscape. This class provides for natural ecological changes; however, it does not preclude very limited management activity. The level of change to the characteristic landscape should be very low and must not attract attention." The existing character of proposed project site and surrounding vicinity is defined by early seral vegetation conditions as the result of several recent fires.

## Environmental Consequences

### Impacts of the Proposed Action

The visual impact of the proposed project would be confined to a very small area and would be of short duration, with heavy equipment, trench, and orange

construction fencing present for a maximum of two weeks. Following backfilling and re-contouring, the level of change to the characteristic landscape would be very low and would not attract attention, as post project vegetation conditions would be in an early seral class with essentially the same or very similar character as the existing conditions imposed by the recent fires.

#### Impacts of No Action

The no action alternative would have no impact on existing visual quality.

### WASTE, HAZARDOUS OR SOLID

#### Affected Environment

The proposed project site is not within or adjacent to an existing hazardous materials site.

#### Environmental Consequences

#### Impacts of the Proposed Action

The proposed action does not involve the use or storage of hazardous materials. No hazardous materials would be brought on site or produced during the trenching operations. The proposed action would not generate any hazardous or solid waste at the proposed project site.

#### Impacts of No Action

The no action alternative would have no impact to hazardous materials.

### WATER QUALITY, DRINKING-GROUND

The proposed action and no action alternatives would have no effect on water quality, either drinking or ground, because the proposed project site is not located within or adjacent to any to any spring, stream, pond, lake or any other water body or ground water source.

### WETLANDS/RIPARIAN ZONES

The proposed action and no action alternatives would have no effect on wetlands or riparian zones because the proposed project site is not located within or adjacent to any to any wetland or riparian habitats.

## WILD AND SCENIC RIVERS

The proposed action and no action alternatives would have no effect on wild and scenic rivers because the proposed project site is not located within or adjacent to any designated wild and scenic river corridor or eligible wild and scenic river study segment corridor.

## WILDERNESS

The proposed action and no action alternatives would have no effect on wilderness because the proposed project site is not located within any designated wilderness area or designated wilderness study area.

## WILDLIFE, including THREATENED AND ENDANGERED

### *Upland Wildlife Habitat and Associated Species*

#### Affected Environment

The proposed project site is located along the west side of Antelope Valley in an area that provides some value to mule deer during their winter occupation of the valley. Mule deer are typically present in Antelope Valley from early November through mid-May and use much of the area west of Highway 395 for foraging and thermal cover depending on the availability and quality of the native shrub community. Mule deer do not remain in any one location for an extended time, but move along the lower and upper slope of the valley's west side, taking advantage of the remaining shrub community for food (principally bitterbrush) and hiding cover where the native vegetation is intact or has sufficiently recovered from recent wildfires.

Other than physical evidence verifying the presence of mule deer, there is very little indication of the importance of the proposed project site to other wildlife species. On the date of field visit, observations of 1 small mammal, 3 songbird species and 1 reptile species were the only indications of habitat value for other species. A search in the general vicinity did not find any evidence of other species such as rodents, rabbits or carnivores (fox, coyote, badger, weasel, etc.). This is very likely explained by the recent wildfire activity which has completely eliminated the native vegetation. The native vegetation community in the vicinity of the proposed project site is in various stages of recovery, and upland habitat quality is negatively affected by the presence of exotic weed species, primarily cheat grass, and provides neither the structural nor food resources necessary to support a diverse fauna. The eventual recovery of native vegetation should provide an environment capable of supporting native wildlife species in an abundance and diversity characteristic of other previously burned sagebrush-bitterbrush habitats in the area.

## Environmental Consequences

### Impacts of the Proposed Action

The proposed project would have no measureable impact on the current or long-term availability of habitat for any animal species known or likely to occur in vicinity of the proposed project site, or on the ability of the native vegetation to reestablish over the long term. There may be some short-term displacement of wildlife from the immediate project vicinity as the result of noise and activity associated with project implementation.

### Impacts of No Action

The no action alternative would have no impact on existing wildlife habitat conditions and associated wildlife species within the project area.

### *Threatened, Endangered and Sensitive Wildlife Species*

No threatened, endangered, or sensitive wildlife species are known or likely to occur within or adjacent to the proposed project site, based on historical records, field monitoring, and habitat suitability; and none were encountered during the field visit conducted on May 9, 2008. The proposed action and no action alternatives would have no effect on any federally-listed threatened or endangered wildlife species or designated critical habitat, nor on any California BLM designated sensitive wildlife species or habitats, because none are present within or adjacent to the proposed project site.

### **Cumulative Effects:**

Cumulative effects are defined as the “impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions” (40 CFR § 1508.7). A description of current conditions inherently includes the effects of past actions and serves as a more accurate and useful starting point for a cumulative effects analysis than attempting to discern the effects of individual past actions. “Generally, agencies can conduct an adequate cumulative effects analysis by focusing on the current aggregate effects of past actions without delving into the historical details of individual past actions.” (CEQ Memorandum ‘Guidance on the Consideration of Past Actions in Cumulative Effects Analysis’ June 24, 2005.) By comparing the no action alternative (current condition) to the proposed action alternative, we can discern the cumulative impact resulting from adding the incremental impact of the proposed action to the current environmental conditions and trends.

The proposed action consists of one trench to be constructed within the Antelope Valley escarpment on public lands administered by the Bishop Field Office. A total of about 2000 square feet of physical disturbance would occur over the

short-term (the 1230 square foot area of the trench itself, plus estimated maximum disturbance due to equipment access). Existing vegetation would be lost during construction. Reclamation requirements would facilitate vegetation reestablishment once the project is completed. Longer-term impacts would be limited to slightly delayed rehabilitation of burned vegetation as the result of the mechanical disturbance. There are no identified incremental or long-term negative impacts associated with implementation of the proposed action that would contribute to cumulative impacts in the larger project vicinity. The addition of the proposed action to existing and future regional activities and impacts would not add to, or cross a threshold of, impact that would result in a significant impact on the human environment.

The proposed project would advance scientific research and the cumulative knowledge of Pacific–North American plate motion and ultimately improve public notification of natural hazards such as earthquakes. The proposed action’s relationship to past and present research projects would improve scientific knowledge and public safety with little to no individual or cumulative negative impacts to other resources. The proposed action’s cumulative effects anticipated over the next decade within the context of past and present actions would not cause a significant environmental impact throughout the eastern Sierra region on lands administered by the BLM.

**Implementation Monitoring:**

The project proponent must notify the Bishop Field Office Geologist at least 48 hours prior to project implementation. The Bishop Field Office Geologist will verify that the action has been completed as described, including safety measures and rehabilitation.

**Effectiveness Monitoring:**

Post treatment weed monitoring will be required and will consist of two days of assessment and potential treatment.

The proponent is required to submit to this office a copy of his peer reviewed paper that discusses the results of his investigation. A public power point presentation of the results is optional but would be greatly appreciated.

Monitoring report(s) will be attached to the original copy of this document.

**Persons/Agencies Consulted:**

Steve G. Wesnousky, project proponent

**Preparer(s):**

Anne Halford	BLM, Botanist
Greg Haverstock	BLM, Archeologist
Kirk Halford	BLM, Archeologist
Terry Russi	BLM, Supervisory Wildlife Biologist
Joy Fatooh	BLM, Wildlife Biologist (Editor)
Cheryl Seath	BLM, Geologist
Diana Pietrasanta	BLM, Outdoor Recreation Planner

**Date:** April 9, 2009

**Reviewed By:**

\_\_\_\_\_ **Date:** \_\_\_\_\_  
**Environmental Coordinator**

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**FINDING OF NO SIGNIFICANT IMPACT/DECISION RECORD**

I have reviewed environmental assessment DOI-BLM-CA-070-2008-43-EA including the explanation and resolution of any potential environmental impacts for the proposed project. I have determined that the proposed action will not have any significant impacts on the human environment and that an EIS is not required.

There will be no effect on threatened, endangered or sensitive species as a result of the action.

The project will have the following benefits: The project is a part of scientific research expected to advance knowledge of Pacific–North American plate motion, and may ultimately improve public safety by enhancing the ability to predict earthquakes.

I have determined that the proposed project is in conformance with the Bishop Resource Management Plan, which was approved March 25, 1993. This plan has been reviewed, and the proposed action conforms to the land use plan terms and conditions as required by 43 CFR 1610.5.

It is my decision to implement the proposed action at the proposed site location.

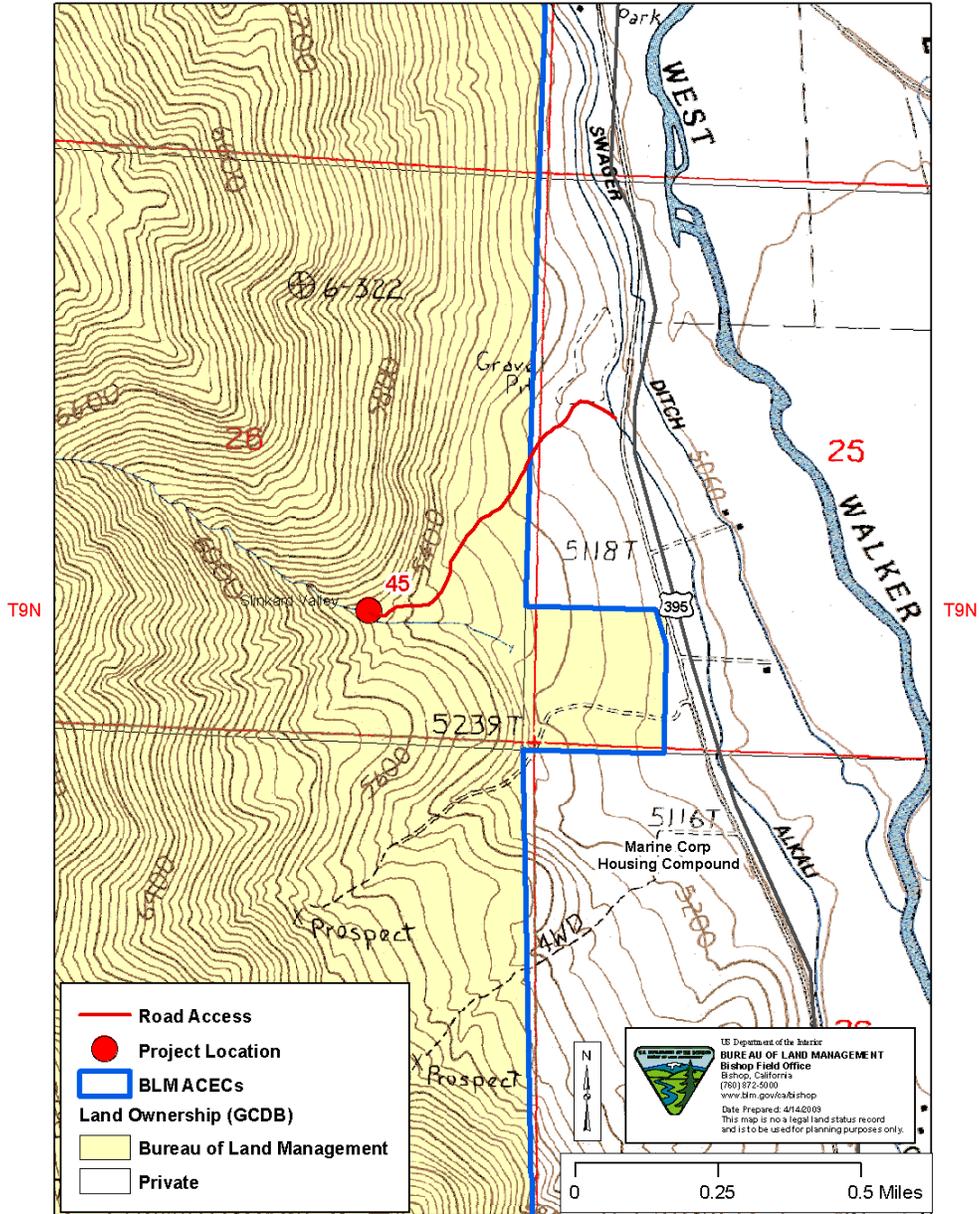
**Authorized Official:**

\_\_\_\_\_  
Field Office Manager

**Date:** \_\_\_\_\_

# Paleoearthquake Investigation Site CACA050136

R22E



R22E