



United States Department of the Interior



BUREAU OF LAND MANAGEMENT

Mother Lode Field Office
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El Dorado Hills, CA 95762
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EA Number: CA-180-09-36

Proposed Action: UC Davis archaeology field school (summer 2009)

Location: MDM, T 4 S, R 16 E
T 3 S, R 15 E
T 4 S, R 18 E
Mariposa, CA

1.0 Purpose of and Need for Action

The Bureau of Land Management (BLM) encourages appropriate scientific use of cultural resources on BLM-administered lands and authorizes such use, consistent with the controlling laws and regulations and the established objectives for the cultural resources' long-term management.

Dr. Jelmer Eerkens of the University of California at Davis (UC Davis) and his students propose limited archaeological excavation at selected prehistoric sites paired with survey and test excavation. This proposed work would occur on BLM-administered lands in the Merced River watershed. The goals of their proposed research project are two-fold. First, they aim to improve our knowledge of prehistoric subsistence-settlement patterns within the foothills and place them in a broader regional context (central California, Sierra Nevada). Particular emphasis would be given to patterns during the early and middle Holocene, for which little is known even at larger spatial scales across the Sierra Nevada. Second, they aim to improve our knowledge of prehistoric steatite use. They would focus on steatite extraction, artifact production, and exchange. UC Davis envisions a multi-year project. Their proposal (attached) outlines the field, lab, and report-writing work they would accomplish during the first year of this project. If successful and promising, they hope that future years of archaeological work can be dedicated to similarly-structured research, but they would submit separate proposals to address those needs and are not covered in the present EA.

UC Davis's proposal to use cultural resources on BLM-administered land for scientific purposes is appropriate given that little archaeological (especially excavation) research has been undertaken within the foothills portion of the Merced River watershed and this area's prehistory is poorly understood. The proposed excavations would destroy a small portion of cultural resources; however, the excavations are clearly prudent in the effects they cause and generous in the public benefits they contribute. Little is known about the area's prehistory. It has not received much attention by archaeologists. The proposed archaeological research also has implications for cultural resource planning decisions and protection priorities. Currently, BLM does not know what the scientific research potential is of each of the sites selected for excavation. BLM does not have a basis for investing in protecting these sites and others like them on BLM-administered land in the area. The proposed archaeological research is important to the public.

Therefore, BLM is considering whether to allow UC Davis to conduct archaeological investigations, as laid out in their proposal (attached). The present EA analyzes the potential environmental impacts of authorizing UC Davis to proceed with their plans.

1.2 Conformance with Applicable Land Use Plans

The proposed action is consistent with the Sierra Resource Management Plan (Sierra RMP) Record of Decision (ROD), approved in February 2008. On page 17 of the ROD it states that BLM will “identify, preserve, and protect significant cultural resources and *ensure they are available for appropriate uses by present and future generations*” (emphasis added). On page 18 of the ROD it states that BLM will “plan for appropriate uses of cultural resources.”

2.0 Proposed Action and Alternatives

2.1 Proposed Action

Under the proposed action, BLM would issue UC Davis a permit, pursuant to the Archaeological Resources Protection Act (ARPA), and a fieldwork authorization. Combined, these authorizations would allow UC Davis to conduct archaeological investigations—including excavations/collection of archaeological materials at prehistoric sites—on BLM-administered land in the Merced River watershed during summer 2009. UC Davis would conduct the investigations in accordance with their proposal (attached). Many of the proposed activities would not impact the environment (i.e., pedestrian survey, note taking in the field, lab work, report preparation, etc.) and are not analyzed in the present EA. Proposed activities that could impact the environment (i.e., archaeological excavations, motor vehicle use to transport field crews and equipment, creating a temporary field camp, etc.) are described and analyzed in detail below.

The field investigation would be conducted by the UC Davis archaeology field school. The class is limited to 24 students though typically between 16 and 20 enroll. The class is taught by a handful of graduate students and professors, including Dr. Eerkens. Staff, students, and equipment would be transported to the excavation/survey locales, via existing dirt roads, in two-to-three 9-person passenger vans and one-to-two smaller trucks. Prior to the start of the field school, roads, camp, and other work areas would be cleared of tall grasses and shrubs with hand tools to prevent wildfire ignition. UC Davis is aware that vehicle access to the sites selected for archaeological excavation is controlled by private landowners and they would get permission from these landowners before crossing their property.

Excavations could cause up to 4 cubic meters of ground disturbance at each of the sites selected for investigation by the UC Davis field school. There may be negligible short-term impacts to soils and vegetation in these areas due to trampling, parking vehicles, piling of back dirt from the excavations, and placing of screens, shovels, and other field school equipment. In their proposal, UC Davis has discussed conducting more than 4 cubic meters of ground disturbance. BLM is discouraging this amount of excavation, but may allow it if it is justified. All excavated areas would be filled in using the back dirt and returned to their pre-field school appearance at the close of fieldwork. Datums and other small markers may be left in place to help relocate the excavated areas in the future.

The field school would camp in the vicinity of the areas (typically within a 30-minute drive of survey/excavation locales). Camping adjacent to the prehistoric sites on BLM-administered land is possible, but is not definite. If developed camping facilities on or off BLM-administered land are available, this would be preferable. If facilities are not available and the field school needs to camp on BLM-administered land, UC Davis would strictly follow a “leave no trace” ethic. A port-a-potty would be brought in. BLM would designate areas for camping, the port-a-potty, and other portable facilities.

Staff and students would camp in temporary tent structures. Shade structures may also be erected. All gear, trash, and other items would be cleaned up and packed out. The field school would follow all BLM instructions with respect to wildfire prevention. Campfires may not be allowed. Care would be taken to prevent the spread of noxious invasive weeds. Vehicles and equipment would be thoroughly cleaned.

2.2 Project Design Features

General: the BLM Mother Lode Field Office archaeologist would monitor all activities to ensure that UC Davis observes agreed-upon conditions of the authorized cultural resource use. The following conditions would be attached as stipulations to the fieldwork authorization issued by the Mother Lode Field Office.

Noxious invasive weeds: Care would be taken to prevent the spread of noxious invasive weeds like yellow starthistle. UC Davis would thoroughly clean vehicles, clothing, and equipment that has passed through weed infested areas. This will help prevent the spread of weeds to new areas.

Wildfire: UC Davis staff would use hand tools to clear grasses so that the vehicles used to transport personnel and equipment would not spark a wildfire. The field school will follow all BLM instructions with respect to wildfire prevention. Campfires may not be allowed.

Temporary Field Camp: If the field school decides to camp on BLM-administered land, UC Davis would follow a “leave no trace” ethic. A port-a-potty would be brought in. All gear, trash, and other items would be removed, with the exception of datums and other small markers which may be left in place on the sites to help relocate the excavated areas in the future.

Cultural: If human remains are discovered during fieldwork, all work in the area/unit of the discovery would stop and the human remains would be left in situ and treated with respect. The BLM Mother Lode Field Office archaeologist would be contacted immediately. BLM will comply with applicable State law, NAGPRA (as outlined in 43 CFR 10), and ARPA (at 43 CFR 7).

All archaeological materials removed from BLM-administered lands by UC Davis will be properly housed in approved curatorial facilities and maintained to Federal standards as U.S. property.

2.3 No Action

Under the no action alternative, BLM would not allow UC Davis to conduct archaeological investigations on BLM-administered land, as laid out in their proposal. BLM would be taking an action that is inconsistent with its national policies and the Sierra Resource Management Plan. (Both BLM’s policy and the RMP encourage the Mother Lode Field Office to allow appropriate scientific use of cultural resources on BLM-administered land.) UC Davis’s proposes an appropriate use of BLM-administered cultural resources. The proposed use serves both public scientific and educational needs. Under the no action alternative, BLM and the public would miss an opportunity to learn more about the prehistory of Merced River watershed. The prehistory of the area selected for investigation is poorly understood. Additionally, students at UC Davis may miss an opportunity to receive training in archaeological field and lab methods.

2.4 Alternatives Considered but Eliminated from Detailed Analysis

There are no alternatives considered but eliminated from detailed analysis.

3.0 Affected Environment

Four of the sites that UC Davis has selected for archaeological excavation are located in the foothills portion of the Merced River watershed in the west-central Sierra Nevada. The selected sites vary widely in elevation. Vegetation and wildlife varies according to elevation, exposure, soils, etc. The lowest elevation area is located at 840 ft on a named tributary of the Merced River (now on the edges of Lake McClure). The vegetation here is an oak-gray pine woodland with dense understory species. The actual site selected for excavations has been impacted by lake fluctuation. The second lowest elevation site is located at 1550 ft in a blue oak savannah near the community of Hornitos. The third site is at 2500 ft in elevation on a named tributary of the Merced River. The vegetation here is a mixed oak-gray pine-ponderosa pine woodland with sparse understory species. The fourth and highest elevation area is located at 3050 ft in elevation near Feliciano Mountain. The vegetation is similar to the third site.

The prehistory of the area is known mainly from archaeological studies conducted in Yosemite National Park, along the upper reaches of the Merced River. These studies indicate that hunter-gatherers groups inhabited Yosemite for thousands of years prior to historic contact in the 1800s, and that by late prehistory (1500 to historic contact about 150 years ago) these groups had a lifestyle typical for Californian hunter-gatherers of the western Sierra. Acorns, deer, and salmon were of primary importance to them. The upper reaches of the Merced River watershed were just one portion of a much larger area used by prehistoric people as they went about procuring these and other resources.

Less is known about the prehistoric land-use in the BLM-administered portions of the Merced River watershed between 3000 and 1000 ft in elevation. Bedrock milling stations and camp sites have been found on BLM-administered land in the watershed within this elevation range, and it seems certain that prehistoric people hunted, gathered, fished, and sought other resources within this part of the watershed, at least on a temporary basis, as part of their seasonal rounds (annual migration into the high country). More substantial settlement appears to have been focused on the river's tributaries on the canyon rim. At the time that Euro-Americans and other outsiders arrived in droves during the mid-1800s, the Miwok – thought to be the descendents of the area's prehistoric people – were living in the Merced River watershed.

The UC Davis's archaeological research would make a valuable contribution to cultural resource knowledge. Little is known about the area's prehistory. It has not received much previous attention by archaeologists. The proposed archaeological research also has implications for BLM's cultural resource planning decisions and protection priorities. Currently, BLM does not know what the scientific research potential is of each of the sites selected for excavation. BLM does not have a basis for investing in protecting these sites and others like them on BLM-administered land in the area. The proposed archaeological research is therefore potentially important to BLM and the public.

The level of recreational use is considered low in the four sites selected by the UC Davis field school for excavations. The areas are all outside of BLM's Merced River Special Recreation Management Area/Merced Wild and Scenic River corridor, which receive heavy recreational use. In some cases, the level of recreational use has been low because the public access is through private property and is not straightforward. The area on Lake McClure probably receives the most recreational use. There is evidence of target shooting in the area and unauthorized cross-country off-highway vehicle use right on the site. The other areas may see occasional hunting use.

None of the sites selected for excavation have outstanding visual resources. Under the Sierra RMP, these areas are to be managed by BLM in accordance with class III visual resource management