

**BUREAU OF LAND MANAGEMENT
ELKO FIELD OFFICE
BURNED AREA EMERGENCY REHABILITATION TEAM**

ELKO 13 FIRE COMPLEX

CULTURAL RESOURCE ASSESSMENT

I. ISSUES

- Occurrence of prehistoric and historic archaeological resources, historic structures, and historic landscapes within the burned area and fire suppression area;
- Potential for impacts to cultural properties consequent to the wildfire, fire suppression and rehabilitation activities;
- Assessment of fire and fire suppression effects on previously documented cultural resources as well as those identified during the ground disturbance inventories associated with the 2000 Elko Fire Complex;
- Recommendation of appropriate evaluation, monitoring, or preservation treatments for cultural resources affected by fire, suppression, or rehabilitation activities; and
- Avoidance or mitigation of adverse effects to cultural resources from suppression and rehabilitation activities.

II. BACKGROUND INFORMATION

“Prehistory” and “history” as we understand are the cumulative records of the human experience of perhaps thousands of people for over 12,000 thousand years, as represented by their material remains upon the landscape. Hence, for our purposes, a summary “history” is essentially impossible. In areas such as the Great Basin, as represented by the Eastern Nevada landscape, with its dry climate, excellent preservation and very low development of the land, preservation of material culture tends to be much higher than other parts of the country. As a result the complexity of human interaction with the landscape and natural environment as represented by material remains tends to be greater than many areas. This complexity makes it all the more difficult to comprehensively represent a summary of prehistoric and historic material culture. The majority of this section is drawn from the 1999 BAER plan but is tailored to the present situation.

The following information is intended to be a cursory overview of present knowledge, and is not represented as a comprehensive summary. The purpose of this background information is to provide a framework within which the fire, suppression activity, post-suppression inventory, and recommended cultural resource prescriptions may be considered in context.

The 2000 Elko Fire Complex occurred within an area known to archaeologists as the Central Great Basin, characterized by long, north-south trending mountain ranges and valleys known to have been inhabited for approximately 12,000 years. Valley floors are over 5,000 feet in elevation, and mountains tend to be as much as 10,000 above sea level. These valleys were immense lakes during the Pleistocene, at their deepest levels between 20,000 and 12,500 years ago, shrinking to lower levels by 12,600 to 10,600 years ago during a postulated dry period when temperatures were higher than the present and the lakes began to dry up, and the late Pleistocene megafauna were propelled to extinction. From that time until approximately 8,000 years ago, the trend continued; temperatures climbed and peaked at approximately 4,000 years ago, when the climate became cooler and moister much like it is today.

The Central Great Basin was occupied by Western Shoshone peoples at the time that Euro-American contact was first established by Jedediah Smith in 1827-30 and Peter Ogden who traveled through the northern Great Basin Region (1829 -1830) and extended these contacts. The Humboldt River Valley may have been first traveled by non-Indians in 1830-31, by the Bonneville-Walker party. Incidental contact between trappers, mountain men and settlers by the late 1840's, and miners began settling in the area in 1948 following the discovery of gold in California, and accelerated with the discovery of the Comstock in 1857.

Cultural history and sequences, prior to mans contact with non-Indians, is documented according to oral tradition, linguistics, and archaeological research. What is known is that the Western Great Basin has been occupied in excess of 10,000 years, with a subsistence style and lifeway that has been maintained until recent times. For the purposes of this assessment, it is sufficient to say that while arguments concerning linguistics, ethnicity and demography are of significant interest and a source of potential research in the area, the objectives of this assessment are not served by documenting these debates. Suffice that the mandate of this assessment is to ensure that resources damaged by the suppression of fires, or the related rehabilitation efforts must be identified and evaluated.

The operating principal of heritage protection is that the very rare survival of intact elements of the human record upon this erosive landscape is an event to be celebrated. With the added toll of agricultural and industrial land development, each prehistoric and historic archaeological site surviving assumes increasing importance to science, culture and education.

As noted above, Euro-American forays into the fire area began with Euro-American contact initiated by Jedediah Smith's expedition in 1827-30 and Peter Ogden who traveled through the northern Great Basin from 1829 -1830. The Humboldt River Valley may have been first traveled by non-Indians in 1830-31 by the Bonneville-Walker party. The incidental contact by trappers and mountain men accelerated to occupation by settlers by the late 1840's and forays by miners beginning in 1948 with the discovery of gold in California, with the greatest influx of non-native people beginning in 1857 with the discovery of the Comstock Lode. From that time on, the decline of native populations continued with each onslaught of infectious disease, expanded use of the range by cattle, agricultural use of native natural resources and industrial development of roads, railroads, ranches, mines and town sites.

Table CR. 1 2000 Elko Fire Complex Cultural Resource Advisors

Name	Home Office	Work Period
Eric Dillingham	Elko Field Office	throughout fire season
Tim Murphy	Elko Field Office	throughout fire season
Cristina Weinberg	Elko Field Office	throughout fire season
Bryan Hockett	Elko Field Office	throughout fire season

III. RECONNAISSANCE METHODOLOGY

Protection of human life and property from wildfire takes precedence over the protection of historic and prehistoric cultural properties. However, the diminishing numbers of archaeological sites (including historic period sites) representing millennia of human life must be provided protection whenever possible, as well as cultural property. Section 106 of the National Historic Preservation Act mandates that the Federal Government will account for cultural resources in its projects and undertakings. Fire suppression and subsequent rehabilitation efforts are subject to Section 106. Legal requirements are expanded upon below.

The protection of cultural resources did not appear to be a priority during suppression of the 12 individual fires which occurred during the complex. Starting with the lightning ignition of the Hogan Fire on June 18, to containment of the Beowawe Fire on July 23, the number of acres and fires burning in the area emphasized suppression efforts which were prioritized according to protection of structures and containment from further spread. Input from cultural resource specialists was minimal, usually no more than a phone call, until an archaeologist was assigned to the Beowawe fire suppression, and two other archaeologists made a follow-up visit after the fire was out.

Although the initial attack efforts were conducted without any strong emphasis on the protection of cultural resources, attempts were made after suppression efforts were initiated to monitor suppression activities and protect potential cultural properties from inadvertent damage. However, the vast scale of the Eastern Nevada landscape, and the sheer size of the fires involved (up to 63,693 acres), in reality, prevented any effective intervention by the limited cultural heritage resources available to the effort. Informal inventories/damage assessments were subsequently undertaken for selected tractor rehabilitation. Cultural resource protection was a high priority during BAER activities and tasks.

Table CR.2, considered together with the list of issues used to introduce this section of the BAER Plan, represent the primary goals for conducting this cultural resources assessment. The actions taken to meet these goals are also summarized. Secondary goals reflected in the assessment process included (1) adherence to BLM/SHPO protocols concerning approaches to and treatment of cultural resources, (2) full recording or updating of documentation on all cultural resources affected by the fire complex, and (3) protection for or mitigation of adverse effects to cultural properties affected by suppression or post-suppression activity.

**Table CR.2 2000 Elko Fire Complex
Cultural Resource Assessment Objectives and Activities**

Date	Resource Protection	Disturbance Area Inventory	Damage Assessment	Rehabilitation Prescription & Treatment
06/23 thru 07/28	Life and property primarily, avoidance and protection of sites, if possible and if known.	Beowawe dozer lines inspected damage to cultural resources	Beowawe dozer lines impacted low density "background" scatters in quarry area and some higher density areas.	Continue inspection of fire suppression activities for further planning efforts.

7/26-8/04	Elko BLM archaeologists assist writing BAER plan	Office records reviewed for potential damage in fire areas	lists created for further inspection	recording and/or damage assessment of impacted sites with appropriate follow-up prescription, site-by-site; use of GPS/GIS as appropriate for thorough recording
8/18 - on	Long-term Evaluation and Enhancements	Suppression disturbance areas and rehabilitation areas		Site evaluation for NR-eligibility status, production of written reports,

Cultural resources located in the field by BAER personnel are discussed in detail in the findings section found later in this text. None of the identified historic or prehistoric sites or locales was formally recorded; the principal reason being the inadequate site identification and definition, which would have required a more comprehensive inventory and evaluation than the effort allowed. What is provided are (1) descriptions of resources observed and identification of defining elements, (2) gross numbers of archaeological sites and cultural properties within the burn perimeters, (3) descriptions of the nature and extent of fire effects or fire suppression-related damages, if any, (4) assessments of the risks to cultural resources derived from increased erosion threats or other watershed-related fire effects, and (5) recommendations for actions or treatments for resource stabilization or rehabilitation, including watershed treatments, if applicable.

A guiding principle as well as legal requirement of burned area rehabilitation is to regard archaeological sites and other materially fragile cultural resources as watershed elements; if post-fire conditions indicate erosion threats or other actual or potential watershed problems then cultural resources must receive special attention to ensure that their unique and irreplaceable values are given full consideration.

Incident-related damages to cultural resources fall in two broad categories: fire-related and suppression-related. Fire-related impacts include thermal fracture of obsidian, basalt, chert, granite and other stone artifacts, destruction of structures and features, destruction of organic elements in an occupational or midden deposit, destabilization of soils within a site or landscape with resultant increased erosion, wind deflation of loosened sediments, and increased susceptibility to looting and surface collection due to greater visibility. Suppression related impacts come from disturbance or destruction from dozer or hand line construction, use of sites for fire camp or equipment staging, rehabilitation activities, including restoration of dozer and hand lines, silt basin construction, restoration of range and forest land, and replacement of infrastructure. Effects to sites may be indirect, such as suppression-caused erosion or loss of setting to a site National Register-eligible under categories A, B or C.

IV. FINDINGS

The Elko 13 Fire Complex cultural resource assessment addresses 13 fires, encompassing approximately 64,693 acres, the perimeters of which contain a minimum of 630 previously recorded historic and prehistoric archaeological sites. These sites range from gold mines of the historic era to American Indian camp and quarry sites to food-procurement sites of prehistory. Since many of these activities occur within the same land form, the prehistoric and historic cultural elements of the rehabilitation can be quite complex.

In addition to the huge size of the effort required in support of this cultural resource inventory, related specifically to the rehabilitation effort, problems with the cultural resource data base at the

field office level significantly hindered the assembly of a list of recorded historic and prehistoric properties which may have been affected by the fires. At the heart of this problem is the fact that two former BLM Resource Areas, with widely-different cultural resource record systems were recently merged into one field office. Elko's system employed a traditional atlas utilizing 7.5' USGS quadrangles marked with specific site locations. The other system marked archaeological inventory information on the quadrangles, referencing the reader to the field reports filed separately. Hence, rapid retrieval by BAER personnel of specific site location data was impossible for approximately one-half of the Elko Field Office area. While Elko Field Office archaeologists are seeking computerized database and geographic information systems for their record-keeping systems, there has not been significant progress in the time period from 1999 to 2000.

Table CR.2 summarizes numbers of recorded cultural resource localities associated with the fires and relevant to the assessment process, reasonably foreseeable rehabilitation actions, or both. It was not possible to assess each site individually. Site assessments must await cultural resource inventory, performed under contract, in advance of the variety of rehabilitation projects recommended in the cultural resource prescriptions.

Table CR.3 Cultural Resources Associated with the 2000 Elko Fire Complex

Fire Name	Acres Burned	Recorded Sites in Perimeter	Notes
Alazon	200	none affected	near Wells; mostly private; no mechanical disturbance during suppression; no rehabilitation effort planned
Basin	3,668	1 site; more isolates	Edge of Sadler Fire; 1-1997(p) recorded prehistoric sites and historic sheep camps in the area.
Beowawe	13,948	41	Mostly widespread lithic quarry/procurement sites of varying density; some historic scatters and possibly mining sites; need to demarcate "site" from "background scatter" consistently. The burned sites have high artifact density and are very susceptible to illegal artifact collection.
Big Springs	1,620	1	1,633 acres to be seeded; possibility of Hastings Cutoff passing through the fire area
Hogan	1,870	unknown	Pequop Range; site density probably greater below 6,200'; or on benches, ridges and saddles above 6,200; no survey coverage on either the Flowery Lake or Ninemile Canyon quadrangles.
Kelly Creek	37,717	unknown	This area has not been well inventoried for cultural resources. However, the potential for locating cultural resources is medium to high, especially near springs and creeks. Dozer line and puffed roads are to be inventoried, along with areas planned for mechanical seeding.
Linka	3,397	Eight sites	Dozer line, road maintenance, and seedings require inventory.
Marys	58		No treatment planned.

Morris	79		No treatment planned.
Omni	440	No previously recorded sites	Area not well inventoried. Seeding is planned, so cultural resource inventory is required. Dozer line has been constructed, so cultural resource inventory is required to assess damage. New fences construction is planned, so cultural resource inventory is required.
Railroad Pass	827		No treatment known at this time. If change, plan can be amended.
Rodriguez	269		No treatments planned.
Squaw Valley	600		Non-priority fire without dozer lines or other disturbances. No treatment planned.
Total	64,693		

V. RECOMMENDATIONS

A. Management (Specification Related)

Four specifications were prepared to address known and potential effects to cultural resources. One is addressed to a specific sites and two, to generic inventories for dozer line and seeding rehabilitation efforts. It is recommended that each of these 4 specifications be accomplished by contract. Contracts must either address specific rehabilitation needs for properties damaged by the fires, or be written to initiate a large-scale effort to inventory previously-uninventoried areas for potential cultural resources disturbed by previous, or in advance of further ground-disturbing activity.

After inventory, each inventoried cultural property must be evaluated for potential eligibility to the National Register of Historic Places. Only properties eligible to the National Register may be considered as significant, and thus eligible for treatment.

a. C-1a BLM 98-148 III. K Archaeological Resource Damage Assessment

General Description: Suppression and rehabilitation efforts of linear projects at 13 fires during the period of June 23 through August 6 have damaged or may result in damages to cultural resources. Linear projects include bulldozer lines, road maintenance activities and new fence construction. Although the projects are dissimilar, the cultural resource inventory effort for each is similar and disparate projects may be put together in one contract. Therefore for the purposes of this plan they are treated together.

Construction of approximately 78 miles of bulldozer line, safety zones, staging areas and helispots have potentially damaged many cultural resources. Secondary impacts to cultural resources from construction of bulldozer lines may result because these lines have opened areas to the public that were previously not accessible by road.

Many roads were damaged by fire fighting equipment either from repeated use by heavy vehicles or due widening of the roads or two-track trails so they could serve as firelines. The original fire fighting activities may have impacted cultural resources. Planned post-fire road maintenance could add to the damage. Cultural resource inventories are needed to assess the impacts and to prevent new impacts.

New fences are planned to protect seedings or burn areas. These fences will be inventoried for cultural resources and rerouted as necessary to avoid eligible sites.

This prescription will focus on the inventory of disturbed areas or areas which will be disturbed, and the evaluation of historic properties located for potential eligibility to the National Register of Historic Places. All dozer line, damaged roads and proposed new fences will receive survey coverage. Actual field experience may require modification of this assumption. Management recommendations will be developed for eligible historic properties in a manner responsive to the damage and the information potential of the site.

b. C-1b BLM 98-148 III. K Archaeological Resource Damage Assessment

General Description: Areas designated for mechanized seeding for the control of undesirable species and erosion will be inventoried for potential cultural resources. This prescription will focus entirely upon the inventory of disturbed areas and avoidance of cultural resources as specified in Appendix F, Section J (pp 42-43) of the State Protocol Agreement Between the BLM, Nevada and the Nevada SHPO. Inventory standards will vary depending on the type of planned treatment and cultural resource sensitivity. The following are minimal standards. Fire rehabilitation activities that involve mechanized surface disturbance less than 10cm depth will generally have transect spacing of 100 meters. More intense inventory will be used for highly sensitive areas. If surface disturbance is greater than 10cm then 30 meter transect intervals will be used. The BLM, through informal discussions, can agree to modify the inventory approach for individual rehabilitation undertakings.

All cultural resources discovered or relocated will be plotted on maps and at a minimum will be recorded on the Nevada IMACS short form. Resources except those previously determined not eligible, by BLM and SHPO, or that have been fully mitigated, will be flagged for avoidance and avoided during rehabilitation activities. Flagging will be placed to minimize the potential for looting and vandalism and removed as soon as possible after re-seeding is completed. Sites will be hand seeded for camouflage as appropriate.

c. C-2a BLM 98-148 III. K Historic Structure Damage Assessment

General Description: The fires have removed the vegetative cover over many areas having high potential for containing significant cultural resources. Removal of vegetation exposes sites to erosion and to illegal artifact collection. In areas where there are standing dead trees, vehicle damage to cultural resources is highly likely as wood cutters create numerous new roads and trails as they gather firewood.

Most of the burned areas have not been inventoried for cultural resources. Therefore, it is necessary to inventory the sensitive areas to determine the number and type of sites present so that measures can be taken to protect important cultural resources.

d. C-2b BLM 98-148 III. K Historic Structure Damage Assessment

General Description: Archaeological site CRNV-12-3445 was damaged by bulldozer fire line construction. The site was initially recorded on 9/16/1983 by Stanley Jaynes for the Buckhorn Mine Plan of Operations (Cominco American). The site form described this site as an extensive lithic scatter and quarry area. Various colors of cryptocrystalline quartz are available as float material and at bedrock outcrops in the site. During a visit to the site on August 1, 2000, Elko Field Office Archaeologists discovered that high quality basalt cobbles also occur at the site. This site is part of a larger prehistoric quarry complex near the Buckhorn Mine. The complex covers several square miles and apparently was an important aboriginal toolstone source. It is one of the few Great Basin quarries that contain prehistoric quarry pits.

Damage occurred when roughly 400 meters of existing road within the site was widened approximately a meter. In addition to the direct physical damage, the fire has removed the vegetative cover on part of the site, exposing the artifacts to collectors. The only effective way to prevent further damage is to intensively record the site and collect stone tools visible on the surface.

e. P-3 BLM 98-148 III. K Law Enforcement Protection

Patrol selected historic and prehistoric archaeological sites and localities to monitor illegal artifact collection, vandalism and deter looters. Take action against looters on public land. Make contact with looters on private lands as appropriate.

B. Management (non-specification related)

Two levels of recommendations are relevant: the immediate post-fire treatment and rehabilitation of cultural resources, and the subsequent opportunities for inventory, evaluation and mitigation of selected sites through documentation or oral history as well as the preservation of these few remaining prehistoric and historic cultural properties.

Most all of the small number of necessary and useful stabilization and rehabilitation treatments required for the preservation of cultural resources affected by the fire complex, primarily the inventory of rehabilitated dozer lines, range land seeding and erosion control measures are by necessity to be completed through post-incident activities using suppression or contracted resources. However, the fires also resulted in high-intensity impacts of longer duration, principally the destruction of historic cultural properties, including the loss of features, baking of most metal artifacts, melting some, and shattering of nearly all glass objects.

Some prehistoric sites are known to have received direct impacts from dozer line construction. At the present, this damage appears to be restricted to the damage to and displacement of stone tools. At one site, however, it may extend to the disturbance of cultural deposits. Stabilization recommendations must necessarily await professional evaluation as well as permission by private property owners. Resources are located on federal and private lands. If permission is not granted by the property owner(s), no cultural resource inventory or stabilization work will be done.

In addition to the immediate physical effects of the fire, significant post-fire damage to sites will certainly accrue from sheet erosion and gullying resulting from accelerated runoff, particularly due to thunderstorms. The effects of these post-fire impacts will have long-term adverse consequences for many of these sites, primarily from accelerated erosion, but also from post-fire stabilization activities including supplemental erosion control, greater access and visibility, revegetation and reforestation.

In particular, post-suppression rehabilitation through rangeland seeding by drill, plow or chain may potentially effect historic and prehistoric cultural properties. Any rehabilitation work within these areas must be carefully coordinated with the archaeologist assigned to the project. Mitigation options range from complete avoidance to data recovery, in consultation with SHPO.

All equipment operations on private and public lands contribute to potential adverse effects which, although perhaps individually minor, will be significant in the long term. All post-fire rehabilitation measures, whether done force-account or through contract, should have specific site protective measures applied to the work. As opposed to a fire emergency, these operations are not related to the immediate protection of life and property. As a consequence, inadvertent damage to cultural resources must be prevented. Accordingly, the following non-specification related recommendations are pertinent:

1. Rehabilitation contracting should be guided by specific language in contract specifications which address the requirement to protect identified cultural resources. The sites must be flagged, and GIS mapping of the site locations is available. The map should be included as supplemental provisions of

the contract. The contractor and his crew should be briefed as to site locations and identifying flagging, and of the requirement to follow specific site treatment recommendations. Archaeological monitors should be in direct contact with the COR and BLM representative to ensure compliance with the cultural resource protection requirements.

2. A post-project inspection should be undertaken, and compliance with the site protection requirements should be a specific evaluation item in the final inspection and compliance report.

3. A number of sites have been reported on private and public land within the area which may be or have been rehabilitated, or which may have erosion control and other post-fire mitigation projects. These sites and features should be mapped by GPS and comprehensively evaluated once they have been mapped.

4. Finally, the necessity of a complete reorganization of the Field Office's cultural resource inventory should be seriously pursued. The GIS capability of the Elko Field Office should be utilized to its full extent in compiling a comprehensive data base of recorded and known cultural properties, which can then be available for future incidents. At present, it is impossible for researchers and resource advisors to access site location information without spending literally days digging through files and reports, when the information is needed immediately for fire and other natural emergencies.

VI. CONSULTATIONS

Table CR.3 Consultations Concerning the Eastern Nevada Fire Complex

Consultant	Dates	Subjects and Results of Consultation
Cristina Weinberg, Archaeologist, Bureau of Land Management, Elko Field Office	8/9-8/23	Examination of BLM cultural resource inventory maps for the presence of known or previously recorded sites within the burn and vicinity. Field orientation and assistance. Assistance with development of specifications and assessment.
Eric Dillingham, Archaeologist, Bureau of Land Management, Elko Field Office	8/9-8/23	Field and library assistance.
Tim Murphy, Archaeologist, Bureau of Land Management, Elko Field Office	8/9-8/23	Library, map and verbal assistance
Bryan Hockett, Archaeologist, Bureau of Land Management, Elko Field Office	8/9-8/23	Library, map and verbal assistance
Pat Barker, Archaeologist, BLM State Office, Nevada	8/17	Memorandum concerning cultural resource compliance, contracting, results of consultation with SHPO concerning fire rehab project work, American Indian consultation.

VII. REFERENCES

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