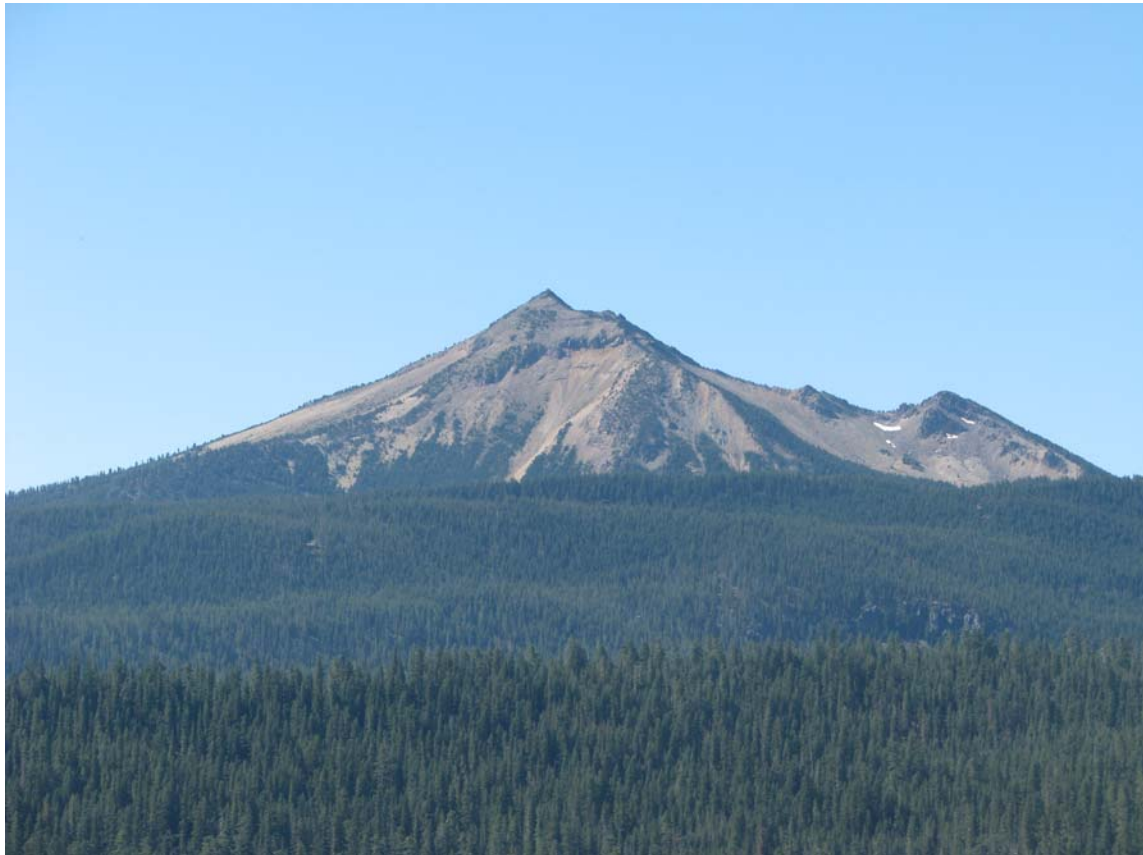


Cultural Resources Survey of Fuel Treatment Areas at Crater Lake National Park



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June 2010

FINDINGS SUMMARY BOX

Findings (+ or -)

County: Klamath

Township/Range/Section: Township 29 S, Range 6 E; T 30 S, Range 6 East;
Township 32 South, Range 7 ½ East

USGS Quad(s)/Date: Crater Lake East, OR (1985); Pumice Desert East, OR (1985); Maklaks Crater, OR (1985); Welch Butte, OR (1967); Pothole Butte, OR (1985)

Project Type: Pedestrian Reconnaissance, Archeological Inventory

Project Acres: 4,691 Acres

Acres Surveyed: 4,824 Acres

New Site 10 Isolate 39

Archaeological Permit No

Field Notes Location: Whiskeytown National Recreation Area, Redding, CA

Curation Location: Crater Lake National Park, OR

Accession Number:

CONFIDENTIALITY STATEMENT

Information pertaining to the nature and location of archeological resources is confidential and exempt from public disclosure under the Freedom of Information Act (FOIA), Exemption 3 (information exempted from disclosure by another statute). The locations of archeological sites are sensitive and public access to such information is restricted by law (Section 304 of the National Historic Preservation Act and Section 9(a) of the Archeological Resources Protection Act).

MANAGEMENT SUMMARY

TYPE OF PROJECT: Archeological Reconnaissance Survey.

PROJECT PERSONNEL: Katherine McCullough, Field Director and Project Researcher, University of Nevada, Reno. Dr. Donald Hardesty, Principal Investigator, University of Nevada, Reno. Joe Svinarich, Fire Archeologist, National Park Service. Courtney Mackay, Archeological Intern, National Park Service Partner. Devery Saluskin, Tribal Monitor, Klamath Confederated Tribes.

SUMMARY: This project is a Great Basin Cooperative Ecosystem Studies Unit collaboration between the University of Nevada, Reno and the National Park Service. Archeological inventory was conducted at Crater Lake National Park for fuel management purposes pursuant to Section 106 of the National Historic Preservation Act. The Field Director and archeological crew members surveyed 3,824 acres within Crater Lake National Park. During survey, new archeological sites were recorded and previously recorded sites were relocated and their records updated for submission to Oregon SHPO. GIS and mapping support was provided by Courtney Mackay. Data entry and file organization were conducted by Katherine McCullough with the assistance of Courtney MacKay and Devery Saluskin. Ethnographic information from Klamath Tribal members was completed by Devery Saluskin in the fall of 2009. The project report was compiled by Katherine McCullough.

FUEL MANAGEMENT UNITS: Sun Creek, Sharp Desert, and Cornerstone (Post-Burn)

TOTAL ACRES SURVEYED: 4,824

ARCHEOLOGICAL SITES REEVALUATED: CRLA-1988-01 and KT-CRLA-01.

NEW ARCHEOLOGICAL SITES RECORDED: CRLA-2009-01 through CRLA-2009-10.

ISOLATES RECORDED: IF-CRLA-2009-02 through IF-CRLA-2009-08, IF-CRLA-2009-10 through IF-CRLA-2009-13, IF-CRLA-2009-15 through IF-CRLA-2009-28; IF-CRLA-2009-30 through IF-CRLA-2009-32; IF-CRLA-2009-34; IF-CRLA-2009-44

FIELDWORK DATES: June 29, 2009 through August 17, 2009.

PERSON DAYS: 81 (10 hour workdays)

GREAT BASIN COOPERATIVE ECOSYSTEMS STUDIES UNIT

COOPERATIVE AGREEMENT NUMBER: H8R0760001

PROJECT TITLE: Cultural Resources Survey of Fuel Treatment Areas at Crater Lake National Park.

TASK AGREEMENT NUMBER: J8R07080018

TASK AGREEMENT MODIFICATION: 01 for September 1, 2008 through June 30, 2010.

GREAT BASIN CESU COORDINATOR: Angela Evenden, University of Nevada, Reno

PRINCIPAL INVESTIGATOR: Dr. Donald Hardesty, University of Nevada, Reno.

CULTURAL RESOURCES FIELD DIRECTOR: Katherine McCullough, University of Nevada, Reno

REGIONAL FIRE PROGRAM ARCHEOLOGIST: Nelson Siefkin, NPS

AGREEMENT TECHNICAL REPRESENTATIVE: Joe Svinarich, NPS

CRATER LAKE FIRE MANAGEMENT OFFICER: Greg Funderburk, NPS

CRATER LAKE PARK HISTORIAN: Steve Mark, NPS

ACKNOWLEDGEMENTS

Many people were instrumental in the completion of this project. Many thanks to Greg Funderburk for all the logistical planning regarding housing, office space, and transportation. Thanks as well to Maria Mackie in the Crater Lake fire program for keeping the field crew covered in bug spray and with access to a vehicle throughout the fieldwork season. This was a remarkable feat considering all of the fire personnel that descended on the park due to the wildland fires. Finally, I greatly appreciate the assistance of Steve Mark with the archival search and Chris Wayne with GIS and aerial photography support.

Members of the Klamath Tribe also provided valuable support for the fieldwork project. Perry Chocktoot and Les Anderson of the Klamath Tribes provided an excellent and thoughtful introduction to the Native American material in the area and provided thoughtful historical context. In addition, several members of the tribe participated in interviews with field crew and tribal member Devery Saluskin. These interviews aided in the interpretation of religious sites recorded within the project boundary and will hopefully aid in the appreciation of such sites amongst park personnel and visitors.

As always, thanks to Joe Svinarch and Dr. Don Hardesty, particularly for allowing me my first opportunity in leading a field crew. Joe was vital in the planning of this project and I appreciate him braving the Sun Creek mosquitoes along with the crew during the first field session. Thanks to Dr. Hardesty for his advice and help during the various stages of this project, especially for embarking on the long journey to Crater Lake for the final presentation!

My most sincere thanks go to the field crew, Courtney Mackay and Devery Saluskin. Their hard work in the field made it possible for us to cover substantial acreage and their help in the office was inestimable. Without Courtney, there would not be the beautiful maps included in this report. Devery provided all of the background research on local Native American custom, particularly relating to the religious context of the park. Thank you so much for these contributions to the final product.

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INTRODUCTION

This project was a collaborative effort under a Cooperative Ecosystem Studies Unit (CESU) agreement between the National Park Service (NPS) and the University of Nevada – Reno (UNR). The project included archeological reconnaissance survey conducted from June 29 to August 17, 2009 in Crater Lake National Park. This survey was conducted pursuant to Section 106 of the National Historic Preservation Act in order to meet compliance for future prescribed burning.

National Park Service fuel reduction projects employ two methods to reduce flammable fuels: prescribed fire and mechanical fuel reduction. Prescribed fire is utilized to reduce standing or downed fuels under controlled conditions to limit the chance of wildfire spreading into those areas. Mechanical fuel reduction consists of creating fuel breaks by removing heavy accumulations of surface fuels, smaller trees and brush by hand. National Park Service staff have used both methods at Crater Lake National Park for the purpose of controlling the volume of fuels in preparation for natural wildfires and promoting the growth of native species that thrive under such conditions (NPS 2003). This report will include recommendations to identify and mitigate the effects of fire management activities on the cultural resources recorded during survey.

Cultural resource inventories were conducted in three prescribed burn units. Two of the units (Sharp Desert and Sun Creek) were surveyed in advance of a prescribed burn while the final unit (Cornerstone) was surveyed post-burn. With few exceptions, the strategy employed during the course of the survey was Block Survey with 20 meter transect spacing. The only exceptions were areas where the slope was above 30° and/or the terrain was determined to be unsafe. In these instances, the areas were spot-checked from a safe distance. In instances where the context suggested there could be a rock feature in a steep area, the field crew attempted to reach the location if it was safe.

This report was prepared by Katherine McCullough according to the *State of Oregon Archaeological Reporting Guidelines* dated January 2009. All project material will be archived at Crater Lake National Park.

PROJECT LOCATION

Crater Lake National Park is located in south-central Oregon in Klamath County. The park is managed by the National Park Service, but is bordered on all sides by land managed by the National Forest Service. The locations of the prescribed burn units included in this project are discussed individually below and are pictured on the map labeled Figure 1. The acreage given is the total number of acres within the unit, rounded to the nearest whole acre.

Sun Creek Unit (2037 Acres): The unit is located in the southeastern portion of the park. The legal location of the project area is Township 32 South, Range 7 ½ East, and includes parts of Sections 5, 7, 8, 9, 17, and 18. The unit is bounded on the east, north, and west sides by topography. The unit is in the generally flat area and the boundary lies approximately at the 5000 ft. contour line on the USGS 7.5' topographic map. This is obvious on the ground as the topography steepens sharply at this point. The southern boundary of the unit is also the southern park boundary. Sun Creek runs through the middle of the unit from the northern to southern boundaries.

Sharp Desert Unit (1924 Acres): The legal location of the project area is Township 30 South, Range 6 East, and Sections 3, 4, 5, and 9. Also, Township 30 South, Range 7 ½ East, and Section 9. The unit's eastern boundary is also the park boundary. The unit extends west to the fire road running approximately north to south. The southern edge is located a variable distance south of the main fire road running from the east to the west sides of the unit and the boundary is the southernmost extent of the ponderosa pine stand, which is quite evident on the ground. The northern boundary of the unit is approximately the Desert Creek drainage.

Cornerstone Unit (730 Acres): The unit is located in the northeast corner of the park. The unit's northern and eastern boundary is the park boundary. The legal location of the project area is Township 29 South, Range 6 East, and Sections 4, 5, and 9. The unit is bordered to the north and the east by the park boundary. The western and southern boundaries are delimited by handline that served to control the prescribed burn.

Below is an overview map of the burn units and their location within the park.

2009 Fire Archaeology Survey

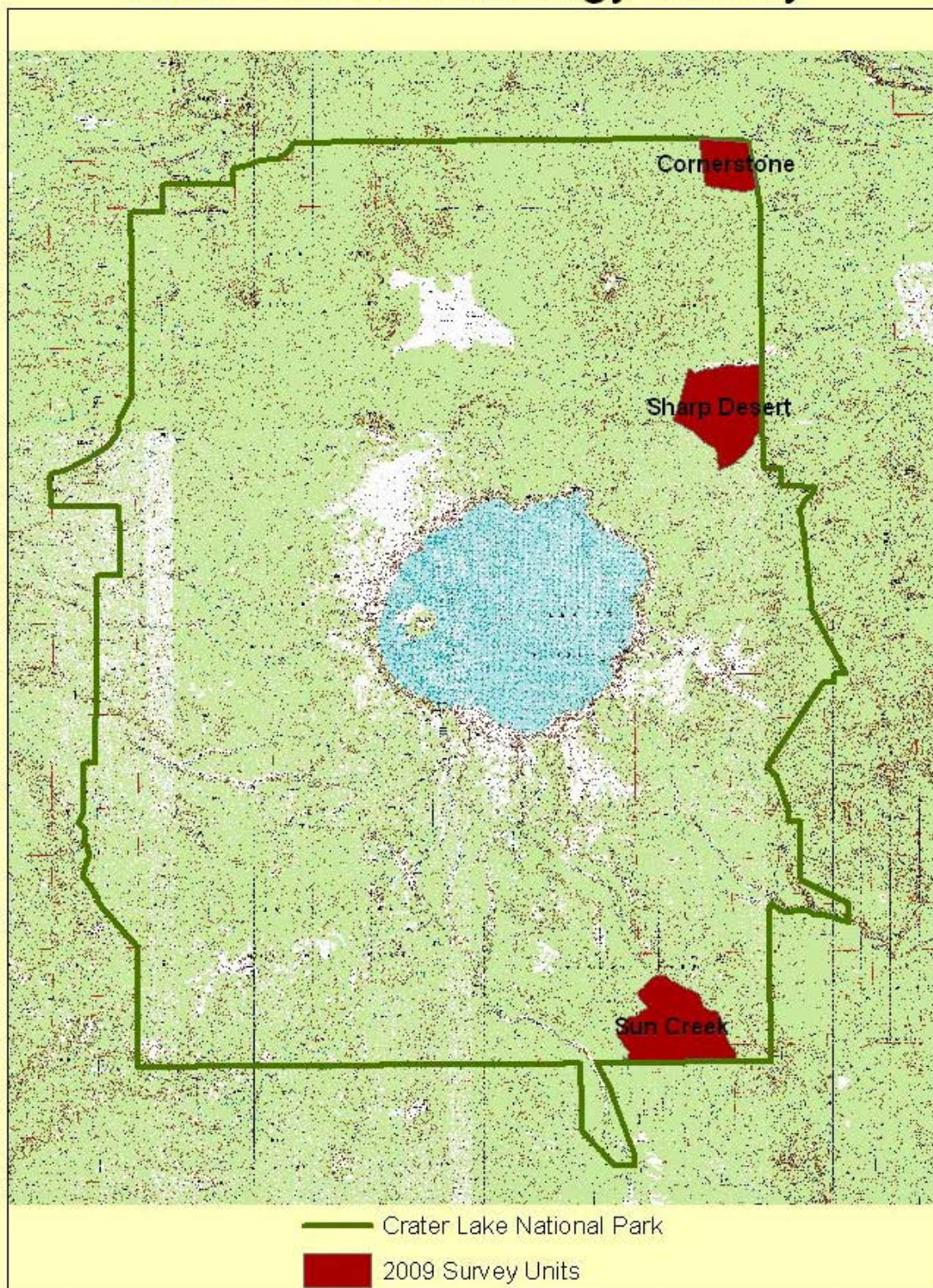


Figure 1: Overview map of project locations.

ENVIRONMENTAL SETTING

While this project is more concerned with the cultural rather than natural resources located in the park, an environmental overview of the geology, vegetation and wildlife is necessary. Understanding the geological and environmental setting of CRLA is central to understanding its significance for archaeological populations and for modern populations. Additionally, the geology and vegetation of the park greatly affected the survey strategy and the confidence of the survey outcomes in terms of identifying all cultural resources during pedestrian survey.

The park is located in the southern Oregon Cascade Range. The climate of the area includes cool summers and winters typified by heavy snowfall. The amount of snowfall and accumulation varies by elevation, which ranges from 3,997 feet in Red Blanket Canyon to 8,929 feet at the peak of Mount Scott. Winter temperatures typically range from the high teens to about 35°F, while summer temperatures can range from about 40°F to 80°F depending on the day and the elevation.

Crater Lake has a maximum depth of 1,943 feet, which makes it the deepest lake in the United States. The lake filled over the course of 250 years, filling up the caldera formed after the eruption of Mount Mazama approximately 7700 cal. years B.P. This eruption literally blew the top off of the former volcano, thereby creating the 10 km diameter caldera and spewing out approximately 50 km³ of rhyodacitic magma (Mandeville et al. 2009). Pre-eruption glaciations also molded the geology of Crater Lake National Park. Within the present project area, the Sun Creek area is a glaciated valley that was partially filled with material from the later eruption of Mount Mazama. The geology of the park affected the survey strategy on several occasions. First, the slopes down to Sun Creek were too steep to safely transverse and were therefore mainly avoided. Secondly, the talus slopes up to the peaks lining the fire road in Sun Creek were unstable to the point that they were oftentimes unsafe to climb.

The survey crew also encountered different vegetation in each burn unit that affected the survey strategy and its outcomes differently. Sun Creek is predominately an area of mixed fir. The large number of snags and downed logs seriously affected ground visibility and limited the ability of the crew to walk straight transects. There were also several stands of immature fir trees that were packed so close together that they were difficult to pass while still surveying the ground. The vegetation in Sharp Desert is variable, but the majority is a mixture of lodgepole pine and fir species. The ponderosa pine in the southernmost portion of the unit, south of the fire road, allowed for excellent visibility and maneuverability. This area had little vegetation that slows down survey including snags, downed material, or understory. The area will be included in the burn in order to ensure healthy growth of this remaining stand. Jim Agee and Dan Perrakis (highlighted in Clark 2007) have argued that fire suppression activities in CRLA have significantly endangered the ponderosa stands and that whole age cohorts died off due to

fire suppression.¹ Dense manzanita in the relatively flat areas reduced ground visibility substantially. These flat areas were found on the plateaus of “peaks” just north of the fire road and also at the bottom of the valleys found in the central portion of the unit. The field crew attempted to maintain straight transects through these areas of the burn unit whenever possible; however, at times the vegetation become nearly impassable. Vegetation in the Cornerstone unit was far less troublesome, as the area was burned in the fall of 2007. The thick layer of ash may have obscured some resources, but the visibility was relatively excellent.

Crater Lake is also home to many species of wildlife, including 4 threatened or endangered species. These include the lynx, northern spotted owl, bull trout, and the tailed frog. Hunting is prohibited within the park boundaries, and elk and mule deer roam freely. One species, the Bull Trout, affected the survey strategy. The Bull Trout is the only native fish species identified in the park. Sun Creek is a protected habitat for the Bull Trout population, an endangered species that is in danger of being outcompeted by the exotic Eastern Brook Trout species. Other introduced fish species include the Rainbow Trout and the German Brown Trout.

¹ However, it should be noted that modern burning has increased the vulnerability of older ponderosas to bark beetle attacks (Clark 2007).

CULTURAL RESOURCES OVERVIEW

The land around Crater Lake has been occupied for thousands of years. The lake and the land that surrounds it have been used for various purposes, from resource procurement to religious purposes. The following is a summary of the current state of knowledge about the history and land use practices of the area currently within the boundaries of CRLA, including the prehistoric, ethnographic, and historical backgrounds.

Prehistoric Background

The prehistory the western United States is commonly divided into four broad periods: Paleo-Indian, Early Archaic, Middle Archaic, and Late Archaic (Mairs et al. 1994). The first two periods include the time before the eruption of Mount Mazama. Several of the available projectile point typologies developed for dating the different periods is found in Mairs et al. (1994, between pages 102 and 103).

Paleo-Indian (12,000 BP – 10,500 BP): This is the period of the transition between the Pleistocene and the early Holocene as people began entering the northwestern portions of the modern United States. As of the date of the Archaeological Inventory of the park (1994), there were no recorded Paleo-Indian sites in southwestern Oregon. The only evidence for human activity is a few early dated projectile points (ibid.).

Early Archaic (10,500 BP – 7000 BP): The earliest sites in southwestern Oregon are dated to the Early Archaic period. These include sites in the Rogue River drainage, the northern Klamath Basin, the Umpqua Basin, and North Umpqua River. It is unclear whether there was little occupation of the land or if the sites have been obscured by the material ejected from the eruption of Mount Mazama (ibid.).

Middle Archaic (7000 BP – 2000 BP): The Early Archaic closed with the eruption of Mount Mazama. There are several sites in southwestern Oregon that can be dated to this period through projective point typologies. The recorded sites are in river basins and along river banks, but there are no identified semi-permanent or permanent village sites. At about 4500 years BP, there was a recognizable shift to less reliance on obsidian. This was potentially due to changes or disruptions in trade networks. Winthrop states that there is little evidence for human occupation in the Middle Archaic, although this does not preclude ritual use of the land during this period (ibid., p. 135).

Late Archaic (2000 BP – Contact): The appearance of the bow and arrow is used to identify Late Archaic contexts. During this period, the resource procurement strategy was semi-sedentary. A number of village sites, base camps, and single purpose sites have been identified and some excavated in the river basins of southwestern Oregon. Winthrop suggests that, besides ritual use, hunting parties may have entered the park lands following game.

At the time of Euro-American contact four American Indian tribes held land in or adjacent to the modern boundaries of Crater Lake National Park. These are the Klamath, Takelma, Upper Umpqua, and Molala tribes.

Ethnographic Background

The eruption of Mount Mazama is one of the most important events in the prehistory of the Crater Lake Area, and also one of the most formative events for the history of the native groups in the area. There are several versions of the origin narrative, although they all suggest that Mount Mazama was central to the story (See Deur 2008, pp. for one version). Crater Lake, called *giwas* by the Klamath Tribes, is a spiritual place deeply tied to many spiritual and traditional beliefs of the Klamath, Takelma, Upper Umpqua, and Molala. Vision questing is the most common form of religious activity associated with Crater Lake. This type of practice involves solitary prayer, fasting, and physical activity. A vision quest is normally associated with a rite of passage or any other event that native groups believe requires power or special guidance and knowledge. Further ethnographic information was collected from members of the Klamath Confederated Tribes by tribal member Devery Saluskin (2009, Appendix II, this report) in association with this project and the archaeological survey conducted in August and September of 2009 at Lava Beds National Monument.

Aside from the spiritual significance of Crater Lake and the surrounding land, there is ethnographic evidence suggesting that the land was important in terms of seasonal hunting and gathering patterns. Winter villages were left for the rivers for salmon and mullet runs. Then, wocus was harvested in August. In the summer and [fall, hunting and berry gathering occurred. In the winter, the population occupied winter villages and participated in ice fishing and consumed the stripped inner cambium layers from pine trees. The “seasonal round” of food resource gathering meant that the populations were very mobile from season to season. The most important mobility route was the traditional road past Crater Lake to Huckleberry Mountain, an area west of the park in Rogue River National Forest that was an area of seasonal gathering. This route through the park has been paved over and is currently known as Highway 62. Additionally, fire was used traditionally to maximize procurement of resources – increasing berry plant yields, moving game, and allowing for the movement of people (Deur 2008, p. 107).

In the post-contact period, the tribes with traditional lands around Crater Lake were removed to reservations. The Klamath, along with the Modoc and a band of the Northern Paiute tribe were placed on a reservation after the Klamath Tribes Treaty of 1864 that was within the traditional lands of the Klamath Tribes, now the western portion of CRLA. The remaining tribes were relocated to a geographically removed reservation but also faced massed causalities from violence and disease. The descendents of the Takelma, Upper Umpqua, and Molala are members of the Confederated Tribes of Grand Ronde and the Confederated Tribes of Siletz Indians.

The Klamath Confederated Tribes lost recognition by the federal government in 1954 due to a policy of forced assimilation. In 1986, the tribes were re-recognized by the federal government, but did not regain the land that comprised reservation holding based on the agreement in the 1864 treaty (Deur 2008). The Klamath tribes currently have an active Culture and Heritage Department that consults with the necessary federal land management agencies, including the National Park Service, on many issues, such as fire policy.

Euro-American Historical Background

The Klamath, Takelma, Upper Umpqua, and Molala tribal members had sporadic contact with Euro-Americans starting in the early nineteenth century. Fur trapping expeditions, mainly French trappers, were reaching as far as southwestern Oregon and northern California by the 1820s. Some of the fur trappers married and settled down with local women. Crater Lake was first identified by a Euro-American incursion of gold prospectors in 1853 – John Hillman, Henry Klippel, and Isaac Skeeters. They originally named the lake “Deep Blue Lake”, but this name was eventually abandoned for the current name Crater Lake (Deuer 2008).

Major contact between native groups and Euro-Americans began in earnest with the forging of the Applegate Trail, an off-shoot from the Oregon Trail, in 1846. There were a number of violent interactions between Indian groups in southwestern Oregon and the new immigrant population, such as the Ben Wright Massacre in 1853 and the Rogue River Indian War (1854-1856). After the tribes were placed in reservations in the 1860s, the Modoc Wars broke out from 1872-1873 (ibid.).

After the peace process was finalized, members of the reservation worked in a number of different pursuits. The land has been used in the historic-period for a number of purposes. Aside from the early years of fur trapping, the land has been exploited by gold miners and also used for logging and tribal members worked for these companies. The tribes also engaged in ranching on the reservation. Further, the twentieth century was a period of forced assimilation for the population living on the Klamath Reservation, culminating in the termination of the federal recognition of the Klamath Tribes in 1954 by the Klamath Termination Act. After the termination, the United States Forest Service intensified the land use on the former Klamath Reservation, particularly in terms of logging. For further information about the logging companies working within the bounds of the current project area, see the section below entitled Literature Review – Logging Rights.

William Gladstone Steel petitioned Congress for nearly two decades before Crater Lake was authorized as a National Park. This finally occurred on May 22, 1902, one of the earliest national parks to be established. Part of the reason why the park was finally authorized was the result of a survey of Crater Lake conducted for the USGS by Steel and geologist Clarence Dutton. This survey determined the depth of the lake, concluding that it was one of the deepest lakes in

North America. After the park's establishment by President Theodore Roosevelt, the Lodge on Rim Drive was opened in 1915.

LITERATURE REVIEW

Prior to the field survey, the Field Director completed a records search focusing on the prescribed burn units included in the project area. This background research was conducted with the invaluable assistance of Steve Mark, who provided archival information, and Chris Wayne, who provided the park GIS data. The records search included information concerning previously recorded sites in the project vicinity, sites listed or eligible for the National Register, Listed Classified Structures, Cultural Landscapes, historic logging holdings, and homestead parcels.

Previous Archeological Surveys

Less than 2% of the park has been surveyed for cultural resources up to SHPO's standards (USDOI NPS 2008). There have been three main surveys, all in advance of prescribed burns, conducted over the past decade in or near the project areas which are within the scope of this report. A 2004 and 2005 survey of the Stovepipe Prescribed Burn Unit lies directly west of the survey of the modern Sun Creek Burn Unit (Kritzer & Kritzer 2005). This survey discovered no previously unidentified cultural resources. The field crew relocated previously recorded segments of Highway 62 and associated blaze trees. A survey of the TC-2 Unit was conducted in 1999. TC-2 Unit slightly overlapping with the northernmost portion of the Sharp Desert Unit, just north of the Desert Creek drainage (Kritzer 1999). Again, no cultural resources were identified or recorded during the course of this survey. The Cornerstone Unit was burned in the fall of 2007. A pre-burn survey of both the Cornerstone and Phoenix Unit was conducted in 2001 in advance of this burn (Kritzer 2002). This survey of the Cornerstone Unit resulted in the recording of one site KT-CRLA-01 which will be discussed in the next section. This site was revisited for a post-burn assessment during the course of the current project.

Previously Recorded Sites

There is little cultural resources GIS information available for the park and few previous surveys in the project area. Therefore, the majority of cultural resource documentation for the project vicinity was gathered by the US Forest Service on adjacent lands. Below is a summary of the cultural resources information gathered in or in the near vicinity of project areas.

Bergland recorded two vision questing sites in 1988, one near the Sun Creek Unit on Maklaks Crater (CRLA-88-02) and Sharp Peak in the Sharp Desert Unit (CRLA-88-01). Both sites included a number of rock cairns that were photographed and recorded. The Sharp Peak site was reassessed and rerecorded during the course of this project (see below under Cultural Resources Recorded – Previously Recorded Site Assessments).

Archeologists associated with the United States Forest Service have conducted a number of archeological inventories directly to the east of the Sharp Desert Unit. There are both prehistoric and historic resources documented in this area. The prehistoric sites recorded are generally

spiritual sites associated with vision questing practices. The historic sites are typically associated with historic logging activities.

Ray (1999) recorded a number of sites on National Forest land in the vicinity of Sharp Peak that have similar rock features associated with vision questing practices. The Scout Hill Vision Quest Site (USFS # 30-06-14-1P) includes 23 rock placements and 4 rock rings (Ray 1999). These rock features are mostly oriented towards Mount Scott, but also towards Mount Thielsen, and Potholte Butte. The Forest Service has determined that it is eligible for the National Register. The Pothole Vision Quest (USFS # 30-07-30-2P) is larger with more rock features recorded (Ray 1999). The site contains 62 rock stacks (32 single placements, 30 multiple placements), 2 prayer seats, and 1 rock ring. The rock features are oriented towards Mount Yamsey, Mount Scott, Klamath Marsh, Mazama Crater, Mt. McLaughlin, and skyward. The Lookout Butte Rock Feature Site (USFS # 30-07-07-2P) includes 30 rock stacks (18 single placements and 12 multiple placements) and 1 rock ring. These features are oriented towards Mount Scott, Mazama Crater, Pothole Butte, Klamath Marsh, and possibly towards Mount Yamsey, but this could not be determined with certainty. There is also a prehistoric component to the "Lookout Butte Multicomponent Site" associated with the historic-period Forest Service Fire Lookout Tower (USFS # 30-07-07-1M). At the site there are 19 basalt rock stacks oriented towards Mount Scott, Mazama Crater, Pothole Butte, and skyward. Finally, the Unnamed Butte Vision Quest (USFS # 30-07-18-1P), which is located on an unnamed butte southeast of Lookout Butte, has 16 rock stacks (8 single placements and 8 multiple placements). These are oriented towards Pothole Butte, Mount Scott, Mount Thielsen, and skyward.

Other prehistoric resources recorded from this area include obsidian flakes and cambium stripped, culturally modified ponderosa pine (Bergland 1984). The culturally modified tree recorded by Bergland was evaluated by Malcolm Stump, who determined that the date of the tree scarring was approximately 1844.

A number of sites recorded on Winema National Forest land just east of the Sharp Desert Unit are associated with historic logging activities, particularly those related to the railroad logging of the first half of the twentieth century (Bowden u.d.). One site known as "Ode to a Wildlife Dump" site (USFS # 30-6-1-1H) is a can dump that was interpreted as an old logging camp (Duncan 1990). This camp was located northwest of Lookout Butte just to the north of Bear Creek. Another site commonly known as the "Three Buttes Can Dump Site" (USFS # 30-06-12-1H) included 5 can dumps, a pit, and an old road that was also interpreted as a historic-period logging camp (Ray 1999). The camp was located northwest of Lookout Butte south of Bear Creek. Finally, the site called "Bear Creek Cabin" (USFS # 30-6-11-2H) was a collapsed historic-period log cabin located on the park boundary just east of Bear Butte (Yazzie 1992).

In the Cornerstone Unit, a site (KT-CRLA-01) was recorded in the pre-burn survey conducted in 2001 (Kritzer 2002). The site is a spur of a logging railroad administered by the Pelican Bay Lumber Company and Klamath Falls in use in the 1920s and 1930s. The railroad grade was

identified during the survey and also included an associated artifact scatter. The site was revisited for a post-burn assessment per the request of Park Historian, Steve Marks. For further information on the site, see the post-burn assessment below under Cultural Resources Recorded: Previously Recorded Site Assessments.

National Register of Historic Places

The National Register of Historic Places lists historic resources deemed worthy of preservation by Federal law. To be included on the list, the historic resource must meet one of four criteria. These are (A) association with an important event in American history, (B) association with an important person or people in American history, (C) distinctive construction and architecture, or (D) has yielded or likely to yield prehistoric or historic information. In addition to meeting one of the four criteria, the historic resource must retain two of seven types of historical integrity. The categories of integrity include location, design, setting, materials, workmanship, feeling, and association.

There are no officially registered resources within the survey area. However, the vision quest site on the top of Sharp Peak, CRLA-1988-01 is likely eligible. There are a number of other vision quest sites in the vicinity of the Sharp Desert Unit that have been deemed eligible by the Forest Service (Ray 1999).

List of Classified Structures

Listed Classified Structures are historic or prehistoric structures of historical, architectural or engineering significance in which the National Park Service has (or may in the future have) legal interest. The criteria for being listed as a classified structure is as follows: (1) the structure is individually listed or is eligible for listing in the National Register; (2) the structure is a contributing component to an historic site or district listed or eligible for listing in the National Register, or (3) the structure is managed as a cultural resource because of significance received over the last fifty years. The structure need display only one characteristic to be considered for listing.

There are no listed Classified Structures within the project area.

Cultural Landscape Inventory

Of the 13 designated Cultural Landscapes, one is located within the project area. This is the previously recorded site KT-CRLA-01, a logging railroad grade recorded in the pre-burn survey of the Cornerstone Unit (Kritzer 2002). For more information, see the description of the site under the Cultural Resources Recorded section.

Logging Rights

A small number of logging companies had logging rights within the park boundary into the 1940s. The park administration at the time, particularly the Superintendent E.P. Leavitt, successfully acquired all of the private land holdings within the park. We have records of two

major logging companies that held land within and adjacent to the current project areas: the Yawkey Lumber Company and the Gladstone Land and Timber Company

The Yawkey Lumber Company, based out of Wausau, Wisconsin, owned 1,872.91 acres of wooded land in the southeastern quadrant of the park. That is, in what is currently the Sun Creek Prescribed Burn Unit. The company owned land in Township 32 South, Range 7 ½ East, portions of Sections 5, 6, 7, 8, 16, 17, and 18. The park corresponded with the company about acquiring the land as early as 1924. The Yawkey Company removed all of the merchantable timber off the land before arranging to transfer the land to the federal government. The Yawkey Tract was passed onto the federal government in 1941.

The holdings of the Gladstone Land and Timber Company were located just to the east of the Sun Creek Unit. The proceedings for the condemnation and acquisition of the Gladstone lands were contemporary with the push to acquire the Yawkey lands in the same vicinity of the southeastern corner of the park. The Attorney General instituted condemnation proceedings in order to acquire 73.36 acres from the Gladstone Land and Timber Company (*United States v. Gladstone Land and Timber Company*, Civil No. 785 (D. Ore. 1941)). The land was located in Township 32 South, Range 7 ½ East, Northeast Quarter of Section 16. The company was paid \$2.50 per acre for the land based upon the appraised value of the timber on the land. The proceedings were finally concluded in 1942 (although the court ruling was decided in 1941) with Crater Lake National Park taking full possession of the land and title.

Homestead Act

The Homestead Act of 1862 provided 160 acres of land to citizens or potential citizens who were given the opportunity to gain ownership provided they worked the land for at least six months out of the year for a period of five years. A search of the General Land Office on the BLM website (www.glorecords.blm.gov/PatentSearch) did not return any results for land patents within the project area. Two Homestead Entry plots were included on a map concerning private land holdings in the park sent in a letter dated 1947 from Director J.A. Hall from the Forest Service to Superintendent E.P. Leavitt. These homesteads were located in the current Sun Creek Unit, Township 32 South, Range 7 ½ East, Section 6. In the western half of Section 6, Louis Stanosheck had a homestead dated to June 15, 1902 (Homestead Entry No. 2660). In the southwestern quarter of Section 6 extending into the northwestern quarter of Section 7, John Wallace Dickey had a homestead dated to April 24, 1902 (Homestead Entry No. 2620).

RESEARCH DESIGN

In coordination with the park's fire management plan, survey was conducted for Section 106 compliance of the National Historic Preservation Act (NHPA) in two areas of proposed prescribed burns. In addition, a post-burn survey was conducted in one previously burned unit to further identify cultural resources after the removal of vegetation and to facilitate management of these cultural resources. Both of these aspects of the project's methodology are designed to calculate and avoid potential damages to cultural resources from fire impacts. Below is a brief discussion of the potential impacts that fire, both prescribed and wild, can have on cultural resources. Following this discussion is a summary of the survey strategy employed in each prescribed burn unit.

Fire Impacts

Wildland fires have been a natural ecological process in the Crater Lake area for recordable history. In addition, prescribed burns have become routine fuel management practice during more recent history to mitigate future affects of natural wildfires on park resources, both natural and cultural. Cultural resources, however, are vulnerable to the destructive forces of both fire and fire management actions. The impact a fire may have on a cultural resource, which could be an archeological site, cultural landscape, historic structure, or ethnographic resource, depends on a number of factors. These factors include the type of fuel, fuel load/distribution, moisture content of fuels, soil type, weather, and terrain, among others. The possible impacts on cultural resources of all types must be considered in any fire situation, particularly those impacts that may destroy or diminish characteristics necessary for eligibility on the National Register of Historic Places. Fire impacts are oftentimes divided into the following categories: direct, indirect, operational, and cumulative impacts.

Fire, both planned and unplanned ignitions, will affect cultural resources through Direct Impacts. Organics are at the greatest risk of fire damage. For example, above ground historic structures, particularly wooden structures and buildings, are particularly vulnerable. Inorganics, such as glass, ceramics, chert, or obsidian, have varied temperature thresholds above which they can be damaged or destroyed by fire. For example, obsidian is particularly susceptible to damage or breakage from high temperatures and long duration burns (Loyd et al. 2002). Depending on the intensity and the severity of the burn, even buried archeological resources may be affected. In general, well-buried archeological resources are protected, but surface smoldering and/or stump burning has the potential to affect subsurface material. This subsurface material may be affected in ways that may diminish their future information potential. This may include new carbon contamination of older archeological organic materials or cracking of obsidian artifacts, which is of particular importance to prehistoric sites.

The Indirect Impacts of fire normally are delayed effects, consequences of the environmental destruction of cultural landscapes. Erosion is a major environmental concern in burnt landscapes. The loss of vegetation, the formation of hydrophobic soil layers, and increased

human traffic through fire affected areas contribute to increased erosion and the potential loss of archeological information. The decimation of plant communities during wildland fires and fire suppression actions (e.g. fireline construction) greatly affects the underlying soil. The loss of root systems and protection from the wind exponentially increases soil displacement, which has the potential to shift, expose or devastate archeological artifacts and even whole sites. Vegetative loss also increases the visibility and accessibility of archeological sites and artifacts. This may lead to greater human impacts on cultural resources, either unintentional (e.g. trampling) or intentional (e.g. looting). Erosive soil conditions can also be created from the direct effects of fire on soil composition. The formation of hydrophobic soil layers during wildland fires reduces water infiltration, therefore increasing the volume of surface water and the amount of runoff. Fire management decisions and actions can also have a profound effect on post-burn soil displacement. Fire suppression and post-fire restoration activities increase traffic through wildland areas, increasing erosion and potentially trampling, displacing, or destroying archeological resources. Of particular concern is human and vehicle traffic on unstable ground in burnt environments.

Fire suppression activities can also prove disastrous for archeological resources, which are known as Operational Impacts. New infrastructure such as helicopter pads or overnight camps can be constructed quickly in fire emergencies and may disturb archeological sites or artifacts. The construction of firelines, either hand or machine constructed, can expose, displace, or destroy archeological materials as well. The use of chemical fire retardant products on cultural resources may affect their appearance or integrity and should be used only after consultation with an archeologist.

The last form of impacts related to fire and fire suppression are Cumulative Impacts. These are impacts that are caused by the interplay between all the other types of impacts and usually occur over time. Therefore, they are usually only identified by park personnel after the fire has been managed. A more detailed account of the potential impacts on previously and newly recorded archeological sites within the burn units and proposed fuel management treatment areas falling within the bounds of this project will be presented in depth in the discussion section of this report. For further information on planning for fire impacts on cultural resources within Crater Lake, see the park's Fire Management Plan (USDOI NPS 2008)

Survey Strategy and Coverage

The field crew followed a general survey strategy that conformed to the Oregon SPHO's guidelines for compliance. The general strategy employed during the course of the survey was Block Survey with 20 meter transect spacing for all areas from those of low to high probability for sites. The only exceptions were areas where the slope was above 30° and/or the terrain was determined to be unsafe. In these instances, the areas were spot-checked from a safe distance. A datum was identified at each site recorded and included in the sketch map. In historic period sites, the datum is an aluminum capped piece of rebar stuck into the ground and surrounded by rocks. The temporary name of the site was also stamped onto the aluminum cap. This type of

datum was not placed at sites associated with Klamath Tribal spiritual practices at the request of the tribes Culture and Heritage Department. Instead, a natural feature was chosen and included on the sketch map. Additionally, each burn unit presented its own individual issues affecting the survey strategy that will be discussed in detail below.

Sun Creek was the first unit surveyed. Due to the thickness of the foliage and the downed vegetation in the unit, there were areas where transect spacing may have been closer to 30 meters; while not an ideal situation in terms of survey coverage, this is still within SHPO standards for compliance. The park's fire management strategy for the planned prescribed burn in this unit does not include burning into the Sun Creek Drainage. This is due to the presence of the Bull Trout in the creek which is an endangered species. However, the banks of the river and the tops of the slope were still surveyed due to the high probability for sites. The slope of the Sun Creek drainage ranged from about 20° to sheer cliff faces and therefore the slopes were not surveyed. The mosquitoes, especially near the creek, were also a significant factor affecting the field crew during survey. While unlikely to have significantly affected the survey outcome, the thick clouds of mosquitoes both distracted the crew and decreased overall visibility. Also, the sheer amount of debris littering the ground, especially the downed trees, made it nearly impossible to see the ground in places. The crew used a handheld GPS unit to identify the boundaries of the unit, but also used topographic changes to gauge the unit edges (i.e. walked until the terrain became steep). The area surveyed thus oftentimes went beyond the mapped edges of the unit or the crew did not continue their transects far enough. See the following Figure 2 for a map of the area surveyed in the Sun Creek unit.

The Sharp Desert, the largest unit included in the project area, was surveyed second. The survey crew encountered very different vegetation depending on the location within the unit and this greatly influenced the confidence in the outcomes of the survey in terms of ground visibility. For example, the ponderosa stand in southernmost portion of unit allowed for excellent visibility because of the minimal understory. This is in sharp contrast to the central portion of unit, particularly in the lowest and highest elevations, where there was thick manzanita that made straight transects impossible to complete. Finally, the northern portion of the unit had completely diminished visibility due to the greater numbers of downed trees and areas of thick, immature pine.

The terrain in the Sharp Desert unit also influenced the survey strategy. As stated in the general strategy, areas of steep slope or dangerous terrain were only spot checked. However, the records search and conversations with the Klamath Tribes indicated that the area surveyed was an important vision questing area; therefore, prominent rock outcroppings needed to be surveyed wherever possible. The steep slopes with unstable talus deposits made 100% coverage impossible, but all slopes were climbed and spot checked from above and below. Every attempt was made to safely evaluate possible vision questing locations. While the vast majority of the Sharp Desert unit could be considered a low probability area due to its distance from water sources, the unit received nearly 100% survey coverage with 20 meter transect spacing. The only

exception was a single transect width that was missed due to logistical and time constraints. The crew also revisited a previously recorded site, CRLA-1988-01, and evaluated and rerecorded the features for submission to SHPO. See Figure 3 below for a map of the survey coverage.

The Cornerstone Unit was the only post-burn survey completed over the course of the project. The unit burned between September 20 and 26th, 2007. As it was burned recently, the ground visibility was excellent. There was little understory that consisted of a spattering of immature pine and sparse grass growth. The sole concern is that the layer of ash on the ground was quite thick and may have covered some small resources lying on the surface. The field crew is confident that visible cultural resources were recorded. The crew also relocated and assessed a previously recorded site, KT-CRLA-01, that was within the burn area during the course of the survey. See Figure 4 below for a map of the total survey coverage in the Cornerstone Unit.

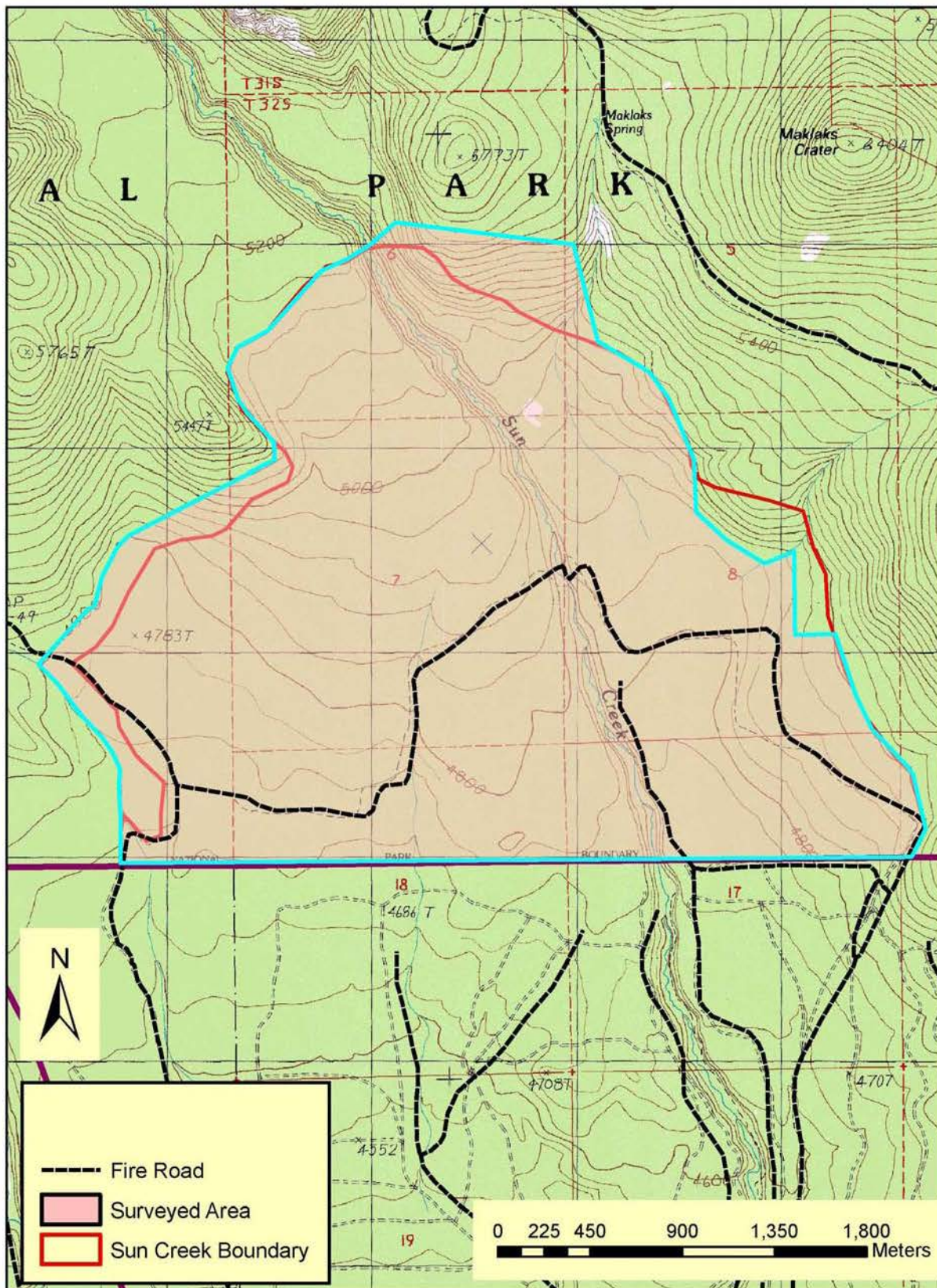


Figure 2: Map of survey coverage in the Sun Creek Unit
[18]

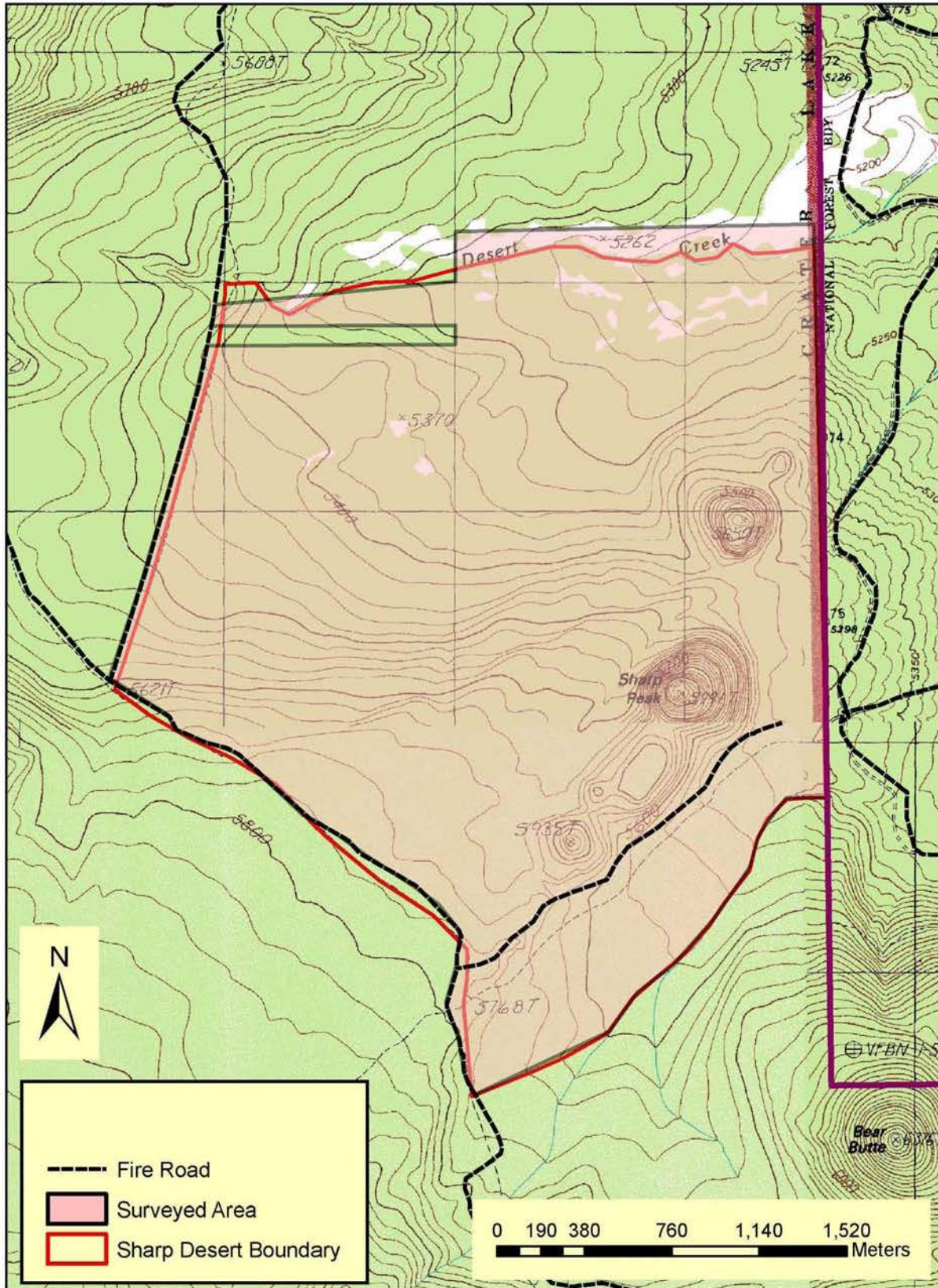


Figure 3: Map of the survey coverage in the Sharp Desert Unit.

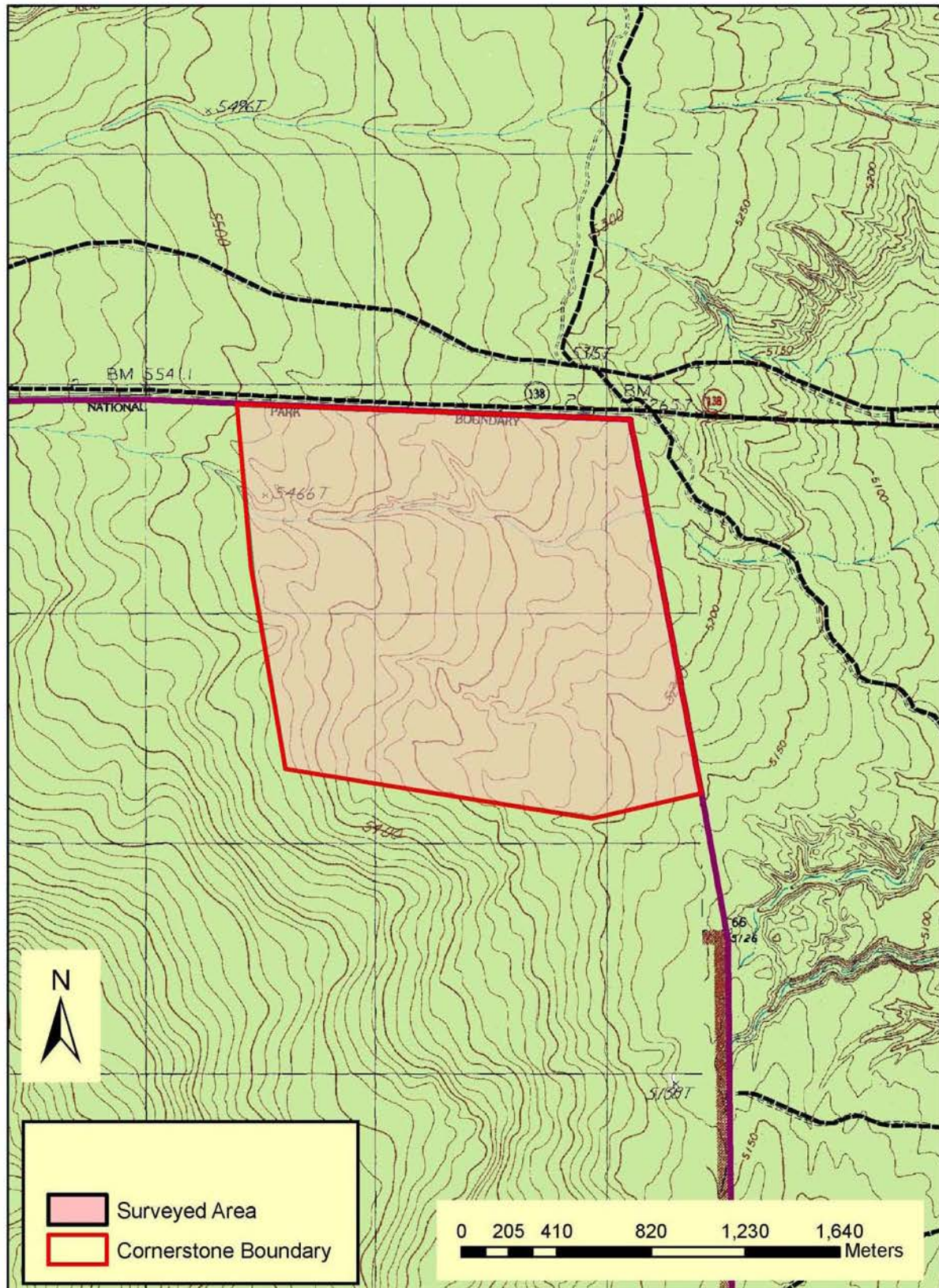


Figure 4: Map of Cornerstone survey area.

CULTURAL RESOURCES RECORDED

During the course of the 2009 field season, 4,824 acres were surveyed by pedestrian reconnaissance in 3 prescribed burn units in Crater Lake National Park. 10 archeological sites were newly recorded, 2 previously recorded sites were revisited for assessments, and 39 isolates were identified. One of these previously recorded sites, CRLA-88-01, a vision questing site, was fully rerecorded in compliance with the wishes of representatives of the Klamath Confederated Tribes. This section includes summaries of the sites and a list of the isolates recorded. The full site forms are attached in Appendix III and IV.

Newly Recorded Archeological Sites

The Oregon State Historic Preservation Office publishes guidelines and policies for the recordation of cultural resources (Gilsen 1994; Oregon 2009). The office defines a site as 10 artifacts or more. The Oregon SHPO also has determined that segments of historic roads should be recorded as archeological sites. These conventions were followed in the recording of archeological sites and isolated finds in the field. The following is a summary of the 10 sites recorded during the course of the pedestrian reconnaissance survey.

CRLA-2009-01 (Sharp Desert Unit): Site is a historic-period logging property located adjacent to the fire road that forms the west boundary of the Sharp Desert Unit. No features were recorded in the site boundary. There were four individual artifacts (a thin logging cable, gallon sized crimped seam can, and two vent hole cans) and one artifact locus (can dump with 12 sanitary cans in a rusted tire rim) recorded, all datable to the first half of the twentieth century. Vent hole cans were introduced at the beginning of the twentieth century, but was a popular type for evaporated milk for an extended period of time (Rock 1987).



Figure 5: Photograph 07-18-2009-02. An overhead view of Artifact Locus 1 from CRLA-2009-01, including the remains of a rubber tire and associated tin cans.

CRLA-2009-02 (Sharp Desert Unit): The site is a historic-period trash scatter, probably a logging property. There are 6 loci (all can dumps) and 2 individual artifacts recorded in the site. Between 150 and 200 cans were recorded between the 6 artifact loci. Besides sanitary cans, there were a number of anti-freeze and oil cans recorded. Also recorded was a clear glass bottle of Gordon's gin. The bottle also has stamped "FEDERAL LAW FORBIDS SALE OR REUSE OF THIS BOTTLE" on the front. This was stamped on bottles between the years 1933-1964.



Figure 6: Photograph 07-20-1009-02. Overhead view of Artifact Locus 3, a concentrated can dump.

CRLA-2009-03 (Sun Creek Unit): Site is a historic-period road associated with logging activities. The road is about 18 feet wide. Archival evidence has shown that the Yawkey Lumber Company owned and worked Sections 8 and 17, the two sections that the road runs through. The lumber company relinquished ownership of the land to the National Park Service in 1941. The road runs parallel to CRLA-2009-05. The roads are visible on the earliest aerial photographs available which were taken in 1979.

CRLA-2009-04 (Sharp Desert Unit): Site is a single rock stack on a large rock outcropping on the eastern side of a relatively large drainage. The volcanic rock stacked on top of the outcropping is oriented 335° towards Timber Crater. The stacked rock is covered in bright green lichen. There is lichen on the foundation rock outcropping that is black and dead. There is decomposing pumice ("pummy dirt") underneath the stacked

rock. There are no other rock stacks in the vicinity, although there are other rock outcroppings on the other side of the drainage.

CRLA-2009-05 (Sun Creek Unit): Site is a historic-period road associated with logging activities. The road is about 18 feet wide and is cut into a gentle slope. There is a 10 inch fir tree in the middle of the road. There are many other fir trees and snowbrush growing in the middle of the road. Several trees on the edge of the road have healed cat faces suggesting that heavy machinery transverse the road. Archival evidence has shown that the Yawkey Lumber Company owned and worked Sections 8 and 17, the two sections that the road runs through. The Lumber Company relinquished ownership of the land to the National Park Service in 1941. The road runs parallel to CRLA-2009-03. The roads are visible on the earliest aerial photographs taken in 1979. There is an associated metal logging cable. It is $\frac{3}{4}$ inch diameter but it is of unknown length as the majority is buried. One end is looped and the other end is frayed with the middle of the cable length buried.

CRLA-2009-06 (Cornerstone Unit): The site is a historic-period trash scatter located just inside the tree line south of Highway 138 on the northern boundary of the park. The site contains two artifact loci and a number of individual artifacts, including brown and clear glass bottles and sanitary cans. One of the clear glass bottles reads "No Return No Deposit." This phrase dates to after 1940. Also included in the site are rusted, linked tire chains.

CRLA-2009-07 (Cornerstone Unit): The site is a historic-period camp with an associated road. The camp is located on the top of a short slope above the road. The site consists of a large trash scatter with some of the artifacts spilling down the side of the slope. The trash includes several sanitary cans, tobacco tins, a large animal trap, an amethyst bottle, and several metal containers and pans. The zinc oxide in amethyst tinted glass was in use from 1880-1915 (Toulouse 1971). There are a number of vent hole cans present. Vent hole cans were introduced at the beginning of the twentieth century, but was a popular type for evaporated milk for an extended period of time (Rock 1987). The only feature recorded at the site was an associated road that is 10 feet wide with discernable track marks. There is no indication of how old the road is from the available evidence. If there had been vegetation growing in the road that could supply a date, it was likely burned out in the Cornerstone prescribed burn. However, its proximity to the trash scatter, which likely dates to the early nineteenth century based upon the types of artifacts, suggests that it might be contemporaneous with the site.



Figure 7: Photograph 08-11-2009-04. Photograph of the road facing north, Feature 1, CRLA-2009-07.

CRLA-2009-08 (Sharp Desert Unit): Site is a stacked rock feature and a likely prayer seat located on the southern and westernmost peak just north of the fire road. The rock stack is at the highest point on the peak. There is a large, foundation boulder pointing 130° towards Bear Butte. Mount Scott is also in the viewshed, but is not the central orientation. There is lichen growth on both rocks. It is possible that the stack was originally higher. There are a number of rocks lying around the stack that may have been knocked off the top. The prayer seat feature is oriented towards Bear Butte, but Mount Scott is also visible in the viewshed but again is not the central orientation. The rocks on the south side of the slope have bore holes that are consistent with geologic cores.

CRLA-2009-09 (Sharp Desert Unit): Site is a stacked rock feature on a triangular foundation boulder. The feature is on a southern facing slope of a point of high elevation north of the fire road running through the middle of the Sharp Desert Unit. The slopes are very steep and there are talus slides on all sides. The rock feature is oriented approximately 140° towards Bear Butte, but Mount Scott is also in the viewshed. There is lichen browning on both the foundation boulder and the stacked rock and both also have black, dead lichen as well.

CRLA-2009-10 (Sharp Desert Unit): Site is a side-by-side rock stack on the top of a large, flat boulder on the slopes leading up to the peak just north and slightly east of Sharp Peak (CRLA-88-01). The stack is made up of three medium sized rocks. The foundation boulder is a triangular shaped, large boulder with rounded corners. The straight side of the boulder is oriented towards Sharp Peak. There is lichen growth on the stacked rocks and some between the rocks which suggests the stack should be considered historic. The site is located at a very low elevation; however, given the orientation towards Sharp Peak and the unnatural appearance of the rocks the stack was determined to be a vision

questing site. The tribal monitor on the field crew, Devery Saluskin, suggested that the low elevation may indicate that the rock stack represented vision questing site associated with an adolescent rite of passion.

Previously Recorded Site Assessments

Two previously recorded sites were revisited during the course of the survey project. The first was visited for an assessment and to rerecord the site according to the wishes of the Klamath Confederated Tribes Culture and Heritage Department's wishes. The second site was visited as a post-burn assessment, but the site was adequately recorded during the pre-burn survey (Kritzer 2002).

CRLA-1988-01 (Sharp Desert Unit): Resource is a pre-contact rock cairn complex previously recorded on Sharp Peak. The site was revisited to determine what, if any, disturbances have changed the appearance or integrity of the site. In addition, sketches of the rock cairn features were completed to replace the photographs in the original site recording. This was completed at the request of the Klamath Confederated Tribes as related by Perry Chocktoot and Les Anderson in order to respect their religious beliefs concerning the nature of vision questing.

KT-CRLA-01 (Cornerstone and Phoenix Units): Resource is a historic railroad grade and related artifacts associated with historic logging and transportation. KT-CRLA-01 was revisited to assess what, if any, effects the prescribed burn of the Cornerstone Unit had on the site recorded in 2002. The site continues south of the Cornerstone Burn Unit into the Phoenix Burn Unit; however, as the Phoenix Unit has yet to be burned, the field crew only revisited and assessed the northwestern portion of the site. The site was originally recorded during the pre-burn survey of the Phoenix/Cornerstone Units conducted by Matthew Kritzer working for the Klamath Tribes (Kritzer 2002).



Figure 8: Photograph 08-12-2009-03. A collapsed corrugated metal shelter relocated during the post-burn site assessment of KT-CRLA-01.

Isolated Finds

The Oregon SHPO defines any location containing less than 10 artifacts as an isolated find. Therefore, the majority of archeological material identified during survey was recorded as isolates, even if multiple artifacts were grouped in a single location. Many of the isolates are related to historic logging activities within the park boundaries. These include a number of logging cables, large metal drums, and historic-period trash associated with probably logging camp sites. No pre-contact period isolates were recorded. One isolate is likely associated with traditional resource procurement in the park. This is a culturally modified tree with a lenticular shaped scar that appears to be a product of inner cambium stripping for consumption. See below for a table listing all of the isolates recorded during the survey.

CONCLUSIONS AND RECOMMENDATIONS

Summary

The pedestrian reconnaissance survey completed during the summer of 2009 identified cultural resources that have the potential to be affected by prescribed burning and fire management activities in the Sun Creek and Sharp Desert Prescribed Burn Units. In addition, a post-burn survey was conducted in the Cornerstone Unit after it burned following a planned ignition in September of 2007. The following two tables summarize the sites and the isolated finds recorded by the field crew. In total, there were 10 sites and 39 isolates.

Table 1: List of Sites Recorded During the 2009 Field Season.

Site Name	Burn Unit	Age	Site Type
CRLA-2009-01	Sharp Desert	Historic	Trash Scatter
CRLA-2009-02	Sharp Desert	Historic	Trash Scatter
CRLA-2009-03	Sun Creek	Historic	Road
CRLA-2009-04	Sharp Desert	Pre-Contact	Vision Quest Site
CRLA-2009-05	Sun Creek	Historic	Road
CRLA-2009-06	Cornerstone	Historic	Trash Scatter
CRLA-2009-07	Cornerstone	Historic	Trash Scatter and Road
CRLA-2009-08	Sharp Desert	Pre-Contact	Vision Quest Site
CRLA-2009-09	Sharp Desert	Pre-Contact	Rock Stack
CRLA-2009-10	Sharp Desert	Pre-Contact	Rock Stack

Table 2: List of Isolates Recorded During the 2009 Field Season.

IF Number	Burn Unit	Item Description
IF-CRLA-2009-02	Sun Creek	Culturally Modified Tree – Possible blaze tree
IF-CRLA-2009-03	Sun Creek	Logging Cable
IF-CRLA-2009-04	Sun Creek	Tin Can – Church Key Opened
IF-CRLA-2009-05	Sun Creek	Historic Trash – Drum and Bumper
IF-CRLA-2009-06	Sun Creek	Logging Cable
IF-CRLA-2009-07	Sun Creek	Logging Cable
IF-CRLA-2009-08	Sun Creek	Tin Can – Hole-in-Cap
IF-CRLA-2009-10	Sun Creek	Logging Cable
IF-CRLA-2009-11	Sun Creek	Drum with Lid
IF-CRLA-2009-12	Sun Creek	Logging Cable and Glass Bottles
IF-CRLA-2009-13	Sun Creek	Tin Can – Gallon Sized Sanitary Can
IF-CRLA-2009-15	Sun Creek	Logging Cables
IF-CRLA-2009-16	Sun Creek	Logging Cable
IF-CRLA-2009-17	Sun Creek	Logging Cable
IF-CRLA-2009-18	Sun Creek	Logging Cable

IF-CRLA-2009-19	Sun Creek	Clear Glass Bottle
IF-CRLA-2009-20	Sun Creek	Green and Brown Glass Bottles
IF-CRLA-2009-21	Sun Creek	Logging Cable
IF-CRLA-2009-22	Sun Creek	Wooden Structure
IF-CRLA-2009-23	Sun Creek	Brown Glass Bottle
IF-CRLA-2009-24	Sun Creek	Logging Cable around Tree
IF-CRLA-2009-25	Sharp Desert	Upright Tobacco Tin
IF-CRLA-2009-26	Sharp Desert	Brown Glass Bottle
IF-CRLA-2009-27	Sharp Desert	Culturally Modified Tree – Lenticular Scar
IF-CRLA-2009-28	Sharp Desert	Tin Can – Church Key Opened Can
IF-CRLA-2009-30	Sharp Desert	Metal Pipe Section
IF-CRLA-2009-31	Sharp Desert	Metal Pipe with Joint
IF-CRLA-2009-32	Sharp Desert	Tin Can – Knife Opened
IF-CRLA-2009-34	Cornerstone	Tin Can – Church Key Opened
IF-CRLA-2009-35	Cornerstone	3 Tin Cans – Can Opener Opened
IF-CRLA-2009-36	Cornerstone	2 Tin Cans – Can Opener Opened
IF-CRLA-2009-37	Cornerstone	Brown Glass Bottle
IF-CRLA-2009-38	Cornerstone	Tin Can and Bottle Scatter
IF-CRLA-2009-39	Cornerstone	Tin Can and Bottle Scatter
IF-CRLA-2009-40	Cornerstone	3 Brown Glass Bottles
IF-CRLA-2009-41	Cornerstone	Tin Can – Can Opener Opened
IF-CRLA-2009-42	Cornerstone	Upright Tobacco Tin
IF-CRLA-2009-43	Sun Creek	Amethyst Glass Fragments and Bottle; Metal Cover
IF-CRLA-2009-44	Sun Creek	Tin Can, Clear Glass Jar, Brown Glass Bottle

Fire Impacts Recommendations

None of the sites recorded should be negatively impacted by fire; however, all have the potential to be affected by fire management activities, such as moving heavy machinery through sites or trampling artifacts. All of the sites should be flagged and avoided by fire personnel. Vision questing sites, particularly the potentially eligible site on Sharp Peak (CRLA-88-01), should be avoided by all fire management personnel. In addition, the Culture and Heritage Department of the Klamath Confederated Tribes requested that the rock features associated with vision quest sites are not touched. There is a belief that these stacks contain power and therefore could adversely affect those who disturb them. Fire personnel should be trained on such matters and instructed to avoid all rock stacks and other vision questing features.

The two culturally modified trees (IF-CRLA-2009-02 and IF-CRLA-2009-27) should be relatively safe from the prescribed fire, although there will be scorching of the bark at the base of the

trunk. It is recommended that the understory should be cleared from around the base of the trees to ensure that this scorching is minimal.



Figure 9: Photograph 06-29-2009-03. View of IF-CRLA-2009-02, a culturally modified tree showing evidence of axe markings.



Figure 10: Photograph 07-16-2009-05. View of IF-CRLA-2009-27, the lenticular cat face scar of a culturally modified ponderosa pine.

Further, the wooden structure (IF-CRLA-2009-22) may be negatively impacted by fire. If the park would like to see it preserved, brush should be cleared from around the structure and fire resistant covering should be used to protect the wood elements. However, as there is no potential for eligibility, its protection is dependent upon the discretion of the park historian.



Figure 11: Photograph 07-14-2009-06. Side view of wooden structure (IF-CRLA-2009-22).

Fire management personnel should be prepared to identify cultural resources during the course of the fire management activities and the fire management officer (FMO) should be informed immediately in that case. It is further recommended that any cultural resources identified should be brought to the attention of either the Park Historian or the Klamath Network Fire Archaeologist who should be consulted before continuing work.

Listing Recommendations

The historic-period logging camps newly recorded during the course of this project are unlikely to be eligible for the National Register. The logging roads in Sun Creek are the only sites that are associated with known documentary sources of specific logging activities. However, the previously recorded site KT-CRLA-01 may be eligible. Kritzer (2002) did not provide any eligibility recommendations in the original recording of the site. The railroad grade is associated with a network of logging railroads. This railroad network likely fits into regional and historic research contexts for historic-period land use and the growth of transportation networks in southwestern Oregon. Further evaluation is needed to assess whether the site should be considered eligible for the National Register, particularly determining whether it has sufficient integrity to be listed.

The vision questing sites on the eastern boundary of the park may be eligible for the National Register. It is unlikely that the single stack sites would be eligible; however, multiple feature sites that are rock stack complexes should be fully evaluated for eligibility. The Forest Service has determined that a number of analogous sites on peaks just to the east of the park boundary are eligible. The site on the top of Sharp Peak, CRLA-88-01, is the largest site with the greatest number of features. It is therefore the most likely site to be eligible.

Conclusion

To summarize, this pedestrian reconnaissance survey was conducted in advance of fire management activities in prescribed burn areas pursuant to Section 106 of the National Historic Preservation Act. During the course of the fieldwork season, 4,824 acres were surveyed leading to the recording of 10 sites and 39 isolated finds. Two previously recorded sites were assessed during the course of survey, one (CRLA-88-01) to rerecord the site and the second (KT-CRLA-01) for a post-burn assessment. Both of the previously recorded sites are potentially eligible for the National Register.

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