Request for Proposals

National Environmental Policy Act - Cultural Resources

Inyo National Forest

Eastern Sierra Climate and Communities Resilience Project

Requesting Organization: Great Basin Institute

Contact: Preston Alden, GBI Project Coordinator: palden@gbinstitute.org

IMPORTANT DATES & TIMES

Proposal Posting Date & Time: Wednesday March 8th, 2023 by 5:00pm
Posting URL: https://www.thegreatbasininstitute.org/employment/

Written Proposal Questions: Any questions regarding this RFP must be submitted to palden@gbinstitute.org no later than Thursday, March 16th, 2023 by 12:00pm

Written Response to Proposal Questions Posting Date and Time: Friday March 17th, 2023 by 5:00pm

Posting URL: https://www.thegreatbasininstitute.org/employment/

Voluntary GBI-hosted Zoom Proposal Meeting: Tuesday, March 21st, 2023 10:00am

https://us02web.zoom.us/j/9078140743

Proposal deadline: Thursday, March 23rd, 2023 by 5:00pm

Overview

The Great Basin Institute (GBI), on behalf of the U.S. Forest Service ("Forest Service" or "FS"), Inyo National Forest (INF) and Mammoth Lakes Ranger District (MLRD), intends to contract a qualified consultant to provide comprehensive National Environmental Policy Act (NEPA) Cultural Resource consulting services for the Eastern Sierra Climate and Communities Resilience Project (ESCCRP).

The successful consultant will work closely under the direction of GBI's Cultural Resources Project Manager to oversee the coordination and implementation of survey. The successful consultant will be selected through a competitive Request for Proposals (RFP) process. The period of performance will not surpass December 31, 2023 and the consultant will be expected to meet predetermined timelines for deliverables described below.

Background

The ESCCRP Project (Exhibit A) seeks to reduce the potential of uncharacteristic wildfire and improve forest health, resistance, and resilience around the Town of Mammoth Lakes (TOML), the economic and recreation hub of Mono County. The ESCCRP includes 56,000 acres surrounding the TOML (referred to as the Project area, shown in Figure 1) and is largely composed of Jeffrey pine (*Pinus jeffreyi*), dry mixed-conifer, red fir (*Abies magnifica*), and lodgepole pine (*Pinus contorta*) forests, with other unique vegetation types and species interspersed [e.g., meadows, sagebrush, whitebark pine (*Pinus albicaulis*)]. Due to a combination of complex factors including fire exclusion, commercial logging, past management on the INF, and warming temperatures, many of the forests in the Project area have extremely high tree, elevated fuel loads, and an increasing number of dead and dying trees. As a result, the Project area is at an increasing risk of wildfires of higher severity and intensity across larger extents than what has been documented under natural, historical.

The ESCCRP is designed to be in conformance with the Inyo National Forest Land Management Plan (LMP) of 2019.

Contract Scope

GBI intends to contract a qualified consultant to collaborate with the INF to complete third-party NEPA for Cultural Resources survey to the standards and approvals required by the Forest Service. The preferred qualifications for the consultant are described as follows:

- Qualified specialist expertise in Heritage Resources and Archeological Assessment;
- Demonstrated NEPA survey protocol knowledge and experience;
- Experience leading CR programmatic involvement to accomplish environmental planning;
- Strong knowledge of regional cultural resources management issues;
- Experience with landscape scale forest restoration projects;
- Prior working relationship with the US Forest Service and the INF.

The consultant will be required to work closely with INF / GBI Staff to ensure timely completion

of all tasks. GBI may provide supplemental support by providing additional field technicians to ensure project completion, depending on need and as mutually agreed upon.

Surveys and Permits

The consultant will work under the Authority of the INF to provide Section 106 Archeological and Cultural Resource surveys for NEPA compliance described in the Overview. The consultant will use the data and research gathered to support recommended project design features or proposed action modifications or alternatives.

Task 1: Cultural Resources & Archaeological Assessment

The consultant shall complete Section 106 Survey and Recordation for the previously unsurveyed portions of the Project Area (to be determined by the Forest Service in consultation with the State Historic Preservation Office [SHPO]) with permissions and permits from the Forest Service and other agencies as needed, which will include but is not limited to:

- Directing Survey priority areas that do not have existing up-to-date records. Record sites utilizing "Historic Property Recording Specifications";
- Recording all newly discovered prehistoric, ethnographic, and historical heritage resources encountered within and directly adjacent to the Project Area;
- Re-recording or supplementing existing site records as needed based on discrepancies, alterations and impacts observed;
- In-Situ Artifact Recording procedures will be followed during both inventory and site recording activities.
- Recording all heritage resource sites using SHPO site forms; and
- Using Forest Service Region 5 standards to record all site boundaries (resource-grade Global Positioning System (GPS).
- The consultant shall coordinate with the INF who will consult with the SHPO for concurrence on eligibility and effects findings.
- The consultant shall assign CA State Trinomial numbers for all sites in project area for inclusion in the Final Report. Anticipated level of baseline data collection / fieldwork / survey needed:
- Section 106 Survey: Consultant to complete surveys for field season (2023). Total project area is **4,265 acres** (see 'Exhibit A & B' below).

Deliverables include:

- Task 1.1: Completed Organic Act Permit
- Task 1.2: Pre-Season Coordination Meeting
- Task 1.3: Plan of Operations for Field Surveys
- Task 1.4: Archaeological Assessment Report

Estimated Start Date & Contract Time (to complete the above Specific Work Requirements): Start: May 1st, 2023; End: December 31st, 2023.

Criteria for Competitive Applications

The evaluation criteria listed below will be used to evaluate Proposals for the purpose of ranking them based on how fully each Proposal meets the requirements of this RFP. The successful consultant may be asked to modify objectives, work plans, or budgets prior to final approval of the award.

Understanding of the Scope of Work. A statement demonstrating a thorough understanding of the field survey protocol and implementation management, data analysis (QA/QC), and deliverable reports as required by NEPA. Priority is given to those who evidence technical expertise in survey, environmental affects analysis and drafting NEPA report documents for USDA agency review and approval. Additional credit will be given to applicants actively providing NEPA support services in the southern Sierra Nevada. (25%)

Technical Approach. The proposed technical approach for fulfilling the scope of work must demonstrate familiarity with the Project, IDT collaboration and partnership with federal agencies, and proficiency in understanding the CR survey and demonstration of successful management of complex projects with high levels of technical expertise required. (25%)

Qualifications of Proposed Personnel. The Proposal should describe relevant professional experience in the following areas: (a) experience dealing with federal, state, and local governmental agencies, as well as national and local organizations involved with NEPA, and experience completing surveys, analysis or other services in support of NEPA compliance for the Forest Service, if any; (b) an understanding of conducting NEPA generally, and preparing NEPA documents, specifically; (c) biographies including resumes and/or vitae of key staff and their potential role in your proposed work area. If consultant intends to hire these key staff as an outcome of this award, a succinct staffing plan complete with position descriptions seeking necessary specialists and/or letters of interest from prospective hires will be accepted in lieu of team resumes (20%)

Consultant's Past Performance. Preference will be given to those who have experience conducting NEPA compliance on Federal lands with experience writing cultural resource reports for California forest units. The ideal applicant will be able to showcase its experience working cooperatively with the US Forest Service and have examples of NEPA documentation that they have provided to previous clients.

The Proposal should include:
(a) information on the consultant's past performance related to the NEPA technical expertise you will be offering; (b) list recent (last 2-5 years) accomplishments, events and previous services related to the NEPA technical expertise; (c) references including a list of three (3) clients who have received services from your organization that is similar in nature to the proposed work; include names, postal and email addresses, and telephone numbers. (15%)

Cost Proposal. The Cost Proposal budget should be cost effective and should maximize the value for monies requested in the consultant's budget. Proposal costs should be presented in a 'time and materials, not to exceed' format quoted in United States dollars.

Pricing for activities under this Proposal shall be on a time-and-materials basis for hours actually spent in performance of the work described within this RFP plus direct costs. Consultant shall provide unit (hourly) costs for key personnel expected to perform work under this Proposal. Proposal costs should be the minimum necessary to adequately achieve the stated scope of work. (15%)

Submission Requirements

Submission requirements will include two distinct and separate documents: 1) Technical Proposal and 2) Cost Proposal.

Interested parties will submit Proposals via email to Preston Alden palden@gbinstitute.org no later than the deadline stated on the cover page above and provide the information as described below:

1. Technical Proposal (6-page limit for entire Technical Proposal): Narrative - Concise (6-page limit) description of the work plan to include the following sections from the

   Criteria for Competitive Applications:

   - Understanding of the Scope of Work;
   - Technical Approach;
   - Qualifications of Proposed Personnel;
   - The consultant's Past Performance;
   - Contact Information - Primary contact person, company name, address, phone, email, and website.

2. Cost Proposal: The Cost Proposal includes the Proposal budget and budget justification.

Respondents may indicate that they consider any part of their Proposal to be confidential and/or trade secret information by clearly stamping any pages that contain such information with the word "CONFIDENTIAL" in the header of that page. However, respondents must also be aware that, as a public agency, this project is subject to the California Public Records Act, and by submitting a Proposal to GBI, all parts of the Proposal may become a public record that is subject to disclosure to any member of the public. Should GBI receive a Public Records Act request to disclose a Proposal that contains allegedly confidential information, GBI will independently assess the respondent's assertion of a need for confidentiality to determine whether any part of the Proposal can be withheld from disclosure.

- Late Proposals in response to this RFP will not be accepted.
- All costs required for the preparation and submission of a Proposal in response to this RFP shall be borne by the consultant.
- The Proposal in response to this RFP shall remain open to acceptance and is irrevocable for a period of 90 days, unless otherwise specified in the RFP documents.

- The right is reserved to reject any or all Proposals, or to accept one part of a Proposal and reject the other, unless the consultant stipulates to the contrary.
- GBI has the right to decline to award this contract or any part of it for any reason.

Protests

Protests must be in writing by email received no later than 7 business days after GBI issues the Notice of Intent to Award. GBI will reject the protest as untimely if it is received after this specified time frame. Protests will be accepted from proposers only. Proposal protests must contain a detailed and complete written statement describing the reason(s) for protest. The protest must include the RFP title, the name of the firm protesting, and include a name, telephone number, email address and physical address of the protestor. If a firm is representing the protestor, they shall include their contact information in addition to that of the protesting firm. Electronic mail protests are sent to **Jerry Keir, GBI Administrator, at jkeir@gbinstitute.org** and must arrive within the 7-day time limit.

The GBI Chief Executive Officer (CEO), in consultation with the FS and GBI Board of Directors, will investigate the protest and if determined to be valid. The CEO may reject and re-propose or not re- propose the work, or recommend award to the remaining best qualified proposer. Affected proposers will be notified by electronic mail within 7 business days of the action taken. GBI may transmit copies of the protest and any attached documentation to all other parties who may be affected by the outcome of the protest. The decision of GBI as to the validity of any protest is final. GBI's final decision will be transmitted to all affected parties in a timely manner.

Exhibit A: Inyo National Forest – Mammoth Lakes Ranger District:
Eastern Sierra Climate and Communities Resilience Project
Draft Proposed Action

Purpose & Need and Proposed Action

Purpose & Need:

1) **Improve Community Wildfire Resilience**

Action is needed to reduce hazardous fuels and stand densities to help protect human communities and critical infrastructure and facilitate wildfire management operations.

Current forest conditions are susceptible to large-scale and uncontrollable wildfires capable of impacting large areas with high-severity fire effects. At-risk forests in the Project area are will now support undesired fire events that would have devastating impacts to lives, property, and infrastructure within and surrounding the TOML. Moreover, the forested ecosystems that are central to recreation, which is critical to the economy of the Eastern Sierra, are irreplaceable and at imminent risk. Without actions to reduce fuel loading around the TOML and improve the ability of firefighters to safely and effectively respond to a fire, catastrophic wildfire could occur and result in widespread community damage, loss of life, extensive economic impacts, and the loss of highly valued ecosystem services.

2) **Improve Forest Health, Resistance, and Resilience**

Action is needed to restore forest structure to desired conditions and develop forested landscapes that are resistant and resilient to disturbances. Action is also needed to restore and enhance other important terrestrial and riparian habitats.

The composition and structure of forests in the ESCCRP are greatly departed from their NRV and are not in alignment with the desired conditions outlined in the LMP. About 35% of the landscape is at a maximum stocking level where competition induced mortality is inevitable, and the rest of Project area is quickly approaching this threshold. Because of this, these forests are experiencing high levels of tree mortality and are not resistant or resilient to disturbances.

Within the Project area, tree densities and stand structure and composition need to be returned to historic levels to improve forest resistance and resilience and protect and enhance wildlife habitat. Without action, it is expected that stands will experience greater levels of tree mortality due to the interaction between high tree competition and drought, pests, and pathogens. An aim of this Project is to reduce the potential for unprecedented tree mortality. Prior to implementation, large tree mortality events may occur, and, as such, there is a need to be able to respond quickly to such events to reduce their associated risks. Action is also needed to restore unique ecosystems in the ESCCRP, such as sagebrush *(Artemisia tridentata)* steppe,

where conifer encroachment has resulted in habitat degradation and increased the potential for undesirable fire behavior and effects.

3) **Prepare Landscape for Reintroduction of Beneficial Fire**

Action is needed to restore forest structure through the reduction of tree densities and surface fuels in order to create safe conditions for the reintroduction of low- to moderate- severity fire that was historically present and played an important role in these ecosystems.

Ecosystems across the Project area are severely departed from their historical fire regimes. These ecosystems evolved with a fire regime where the average period between fires, known as the Fire Return Interval (FRI), was generally shorter than it is currently. Historically, in much of the Project area, such as in Jeffrey pine and dry mixed conifer forests, fires occurred frequently (9- and 11-year FRI, respectively) and burned at a low to moderate severity. While fire burned less frequently in other ecosystems in the Project area (e.g., red fir; 27-year FRI) and sometimes at a high severity in small patches, their current FRI is also greater than historically. Such historic fires served an important role by reducing surface and ladder fuels and shaping both species composition and forest structure. Under current forest conditions, it is increasingly challenging to allow most natural fires or prescribed fires to burn without causing unacceptable safety and ecosystem risks due to high tree densities and surface fuel loads. Thus, forest thinning and fuel reduction actions are necessary to create safe conditions for the eventual reintroduction of fire to this landscape and increase treatment effectiveness (Agee and Skinner 2005, Safford et al., 2012, North et al., 2021). It is important to note that this Project is intended to create forests and communities that are resilient to fire, not to prevent fire altogether. Over time, implementation of this Project will allow us to influence the type of fire on the landscape, helping us to restore fire as an ecological necessity and create increasingly fire-adapted communities.

Proposed Action:

The Project area is dominated by four primary forest types: Jeffrey pine, dry mixed conifer, red fir, and lodgepole pine. Other vegetation types or conditions within the Project area that require unique treatments include aspen stands, meadows, riparian areas, sub-alpine zone which includes whitebark pine stands, sagebrush, pinyon-juniper woodlands, areas with tree mortality, Infrastructure Buffers, Inventoried Roadless Areas, and Cultural Resource Stewardship Opportunities. The Project area was categorized into the above primary forest types and vegetation types as they dominate the landscape and are represented in the 2019 LMP. While unique tree species (e.g., foxtail pine, limber, pine, mountain hemlock) also occur across the landscape, they are generally minor components of the other primary forest types and therefore do not warrant their own treatment specifications. Henceforth, all these areas are referred to as 'Emphasis Areas'. On the landscape scale, the ESCCRP is comprised of a mosaic of these Emphasis Areas, and in some cases they spatially overlap.

A set of General Treatments and Methods applies throughout the Project area. Emphasis Areas have unique desired structural and compositional conditions and/or constraints. Therefore, in

addition to the General Treatments and Methods, each Emphasis Area has specific treatment specifications (outlined below). Dominant Emphasis Areas are shown in Figure 2. Note that in the primary forest types shown in Figure 2 other tree species may also be present (e.g., foxtail pine, limber, pine, mountain hemlock), but these areas are dominated by the tree species shown in the map. Furthermore, as the extent and location of many Emphasis Areas is modeled, all treatment units will be ground-truthed prior to unit development and implementation to confirm the Emphasis Area present so that the most relevant treatment is applied. Treatment actions and approximate acreages for each Emphasis Area are summarized in Table 1. Emphasis Areas overlap spatially; therefore, the total acreage reflected in Table 1 is greater than the acreage within the Project area.

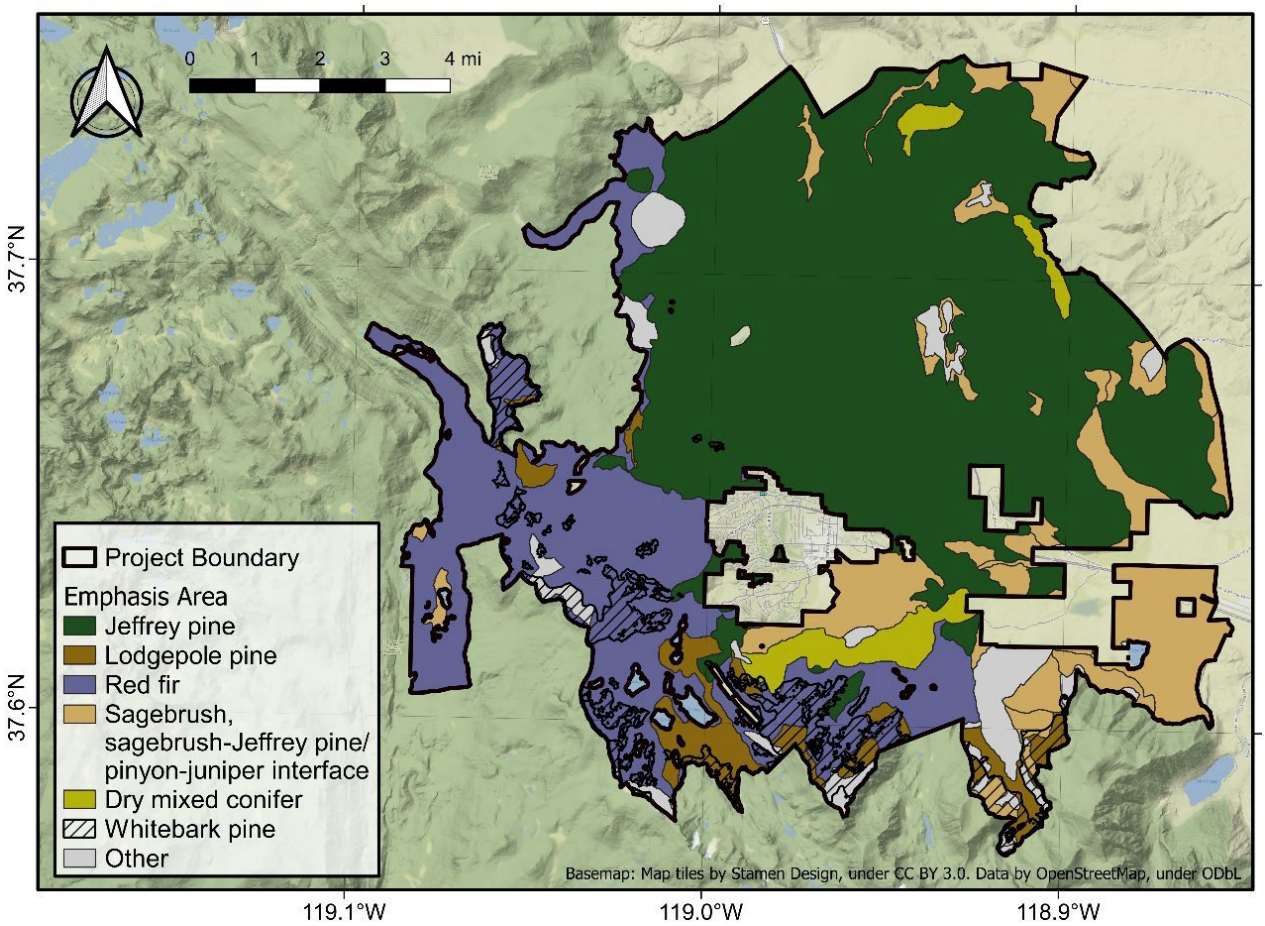

Figure 2: Dominant Emphasis Areas with the ESCCRP boundary. Data for Whitebark pine are from Whitebark Pine Range spatial data and for the other areas from the Terrestrial Ecological Unit Inventory.

Table 1: Treatment Summary Table

Emphasis Area	Treatment Summary	Estimated Acres Within Project Area
Jeffrey Pine	• Thin stands using an Individuals, Clumps, and Openings (ICO) pattern to reach stand specifications • Protect and retain remaining old-growth Jeffrey pine • Preferentially remove low vigor, small diameter, and/or fire and drought intolerant tree species • Reduce dead tree density and surface fuel loads	29,600
Dry Mixed Conifer	• Thin stands using an ICO pattern to reach stand specifications • Preferentially retain Jeffrey pine; keep other tree species if large and/or healthy and vigorous • Protect old growth Jeffrey pine and white fir • Reduce dead tree density and surface fuel loads	1,600
Red Fir	• Thin stands using an ICO pattern to reach stand specifications • Promote red fir dominance and tree species diversity • Protect healthy, mature white pines and old growth conifers • Reduce dead tree density and surface fuel loads	12,700
Lodgepole Pine (Dry and Wet)	• Thin stands using an ICO pattern to reach stand specifications • Promote lodgepole pine dominance and tree species diversity • Protect healthy, mature white pines and old-growth conifers • Reduce dead tree density and surface fuel loads	2,350
Riparian Areas	• Thin stands using an ICO pattern; basal area may be higher than the desired conditions in adjacent, non-riparian stand • Reduce dead tree density and surface fuel loads • Maintain shade by retaining native riparian vegetation that is composed of a diversity of species that are well distributed and multi-storied in structure	TBD
Meadows	• Fell or girdle encroaching conifers within and surrounding meadows • Ensure that downed woody material from conifer removal does not occupy > 1 % of the meadow surface	520
Aspen	• Remove encroaching conifers within a defined distance of aspen; protect healthy, mature aspen trees • Reduce unnaturally high surface fuel loads and dead tree density • Promote aspen regeneration	640

Emphasis Area	Treatment Summary	Estimated Acres Within Project Area
Sagebrush, Sagebrush-Jeffrey Pine Interface, and Sagebrush Pinyon-Juniper Interface	• Remove encroaching conifers to improve sage grouse habitat • Conduct targeted mowing of sagebrush where there is a risk of high severity wildfire near community assets	5,600
Pinyon-Juniper Woodland	• Restore traditional tribal stewardship of pinyon groves • Retain trees over 100 years old • Thin groves where necessary to improve condition of stands • Reduce fuel loads and continuity	500
Subalpine Zone – Whitebark Pine and Other High-Elevation 5-Needle Pines	• Remove competing conifers • Reduce fuel loads and continuity • Creating openings for Clark's nutcracker whitebark pine seed caching • Remove dead limbs, standing dead trees, or clumps of dead whitebark pine, as well as those that are diseased and/or beetle-infested	3,870
Tree Mortality	• Remove most dead trees and downed logs while leaving some in accordance with the relevant Emphasis Area • Remove all successfully infested green trees • Keep some large patches of dead trees to maintain a complex early seral habitat	~15,300 from 2017 - 2021 (more prior to 2017; expected to increase)*
Infrastructure Buffers	• Reduce surface fuels, ladder fuels, and dead tree density • Thin forested areas to achieve emphasizing a larger proportion of openings and individual trees over clumps	TBD
Inventoried Roadless Areas (IRAs)	• Conduct ecological forest thinning and fuels reduction in conformance with the Roadless Conservation Rule. Treatments will only occur where necessary due to departure from desired conditions	18,000
Cultural Resource Stewardship Opportunities (CRSO)	• Work cooperatively with HIP consulting parties to properly restore or protect ecosystem and cultural resources while meeting the purpose and need of the Project	N/A

*This includes low (< 1 – 25%), moderate (25 – 74%), and high (>74%) live tree canopy loss from 2017-2021; canopy cover is generally correlated with basal area (Jennings et al., 1999)

Archaeological Management Recommendations:

There is a desire to work with the Native American populations to identify species and help reestablish plant gathering sites. If areas can be identified where this would be appropriate, it will contribute to a healthy ecosystem and provide resources to the communities. Where appropriate the proposed action should leave material where it can be used to screen culturally sensitive areas from the view of the general public. Where necessary the archaeology staff proposes planting species to create a natural screening.

G2 Archaeology

Survey Plan

Priority Area 1, Eastern Sierra Climate and Communities Resilience Project, Inyo National Forest, Mono County, California

USFS Report No. RXXXXXXXXX

Prepared By:

Cydney Lanthier, Emily S. Whorton, and Dayna Tinsley

Prepared For:

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March 1, 2023

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APPENDICES

Appendix A. Inyo National Forest Assessment Topic Paper (November 2013)

CHAPTER 1. INTRODUCTION

G2 Archaeology (G2) was contracted by the Great Basin Institute (GBI) to develop a Survey Plan for the Inyo National Forest (INF), Eastern Sierra Climate & Communities Resilience Project (ESCCRP), Tier 1 Priority Area (Priority Area), which amounts to 10,723 acres of land around the town of Mammoth Lakes. The ESCCRP is a response to the high and ever-increasing risk of wildfires in the state of California. The approximate 56,000-acre ESCCRP area is aimed at protecting Mammoth Lakes, promoting safe and effective fire management, protecting natural resources (water, clean air, wildlife, viewsheds, and carbon sinks), and creating a fire conscious community. The bulk of the work for the ESCCRP will involve removal of live and dead trees and undesirable fuels; therefore, an archaeological survey is required to identify sites to ensure their safety.

The purpose of this Survey Plan is two-fold: 1) develop the Survey Area by determining how many acres within the Priority Area have and have not been previously inventoried; 2) determine the number of previously recorded sites outside of the Survey Area but within the Priority Area that need to be revisited and potentially updated. To complete the Survey Plan, G2 followed a series of steps that included a records search at the INF office in Bishop to gather information on completed inventories and documented sites within the Priority Area, development of the Survey Area though multiple levels of a Geographic Information System (GIS) spatial analysis, and archival research of the Survey Area through various online sources. We determined that 6,238 acres of the 10,723-acre Priority Area have been sufficiently surveyed in the past 20 years, and that an additional 220 acres are at a greater than 30-degree slope and possibly unsafe to survey. The Survey Area for the 2023 season, therefore, amounts to 4,265 acres. Additionally, there are 132 previously recorded sites within the Priority Area that need to be revisited and possibly updated. Thirty-nine of these are situated within the Survey Area; the remaining 93 are outside the Survey Area but within the boundary of the Priority Area.

This Survey Plan is intended as a guide for recording and evaluating sites during the 2023 field season. It contains six chapters: Chapter 1 provides a project overview; Chapter 2 contains the results of the record search for the entire Priority Area; Chapter 3 presents the GIS analysis and the development of the Survey Area; Chapter 4 contains results of archival research for the Survey Area; Chapter 5 builds off of the existing INF historic overview (Appendix A) and presents research themes and questions that will be used to evaluate a site's eligibility to be listed in the National Register; and, Chapter 6 contains field methods and safety measures.

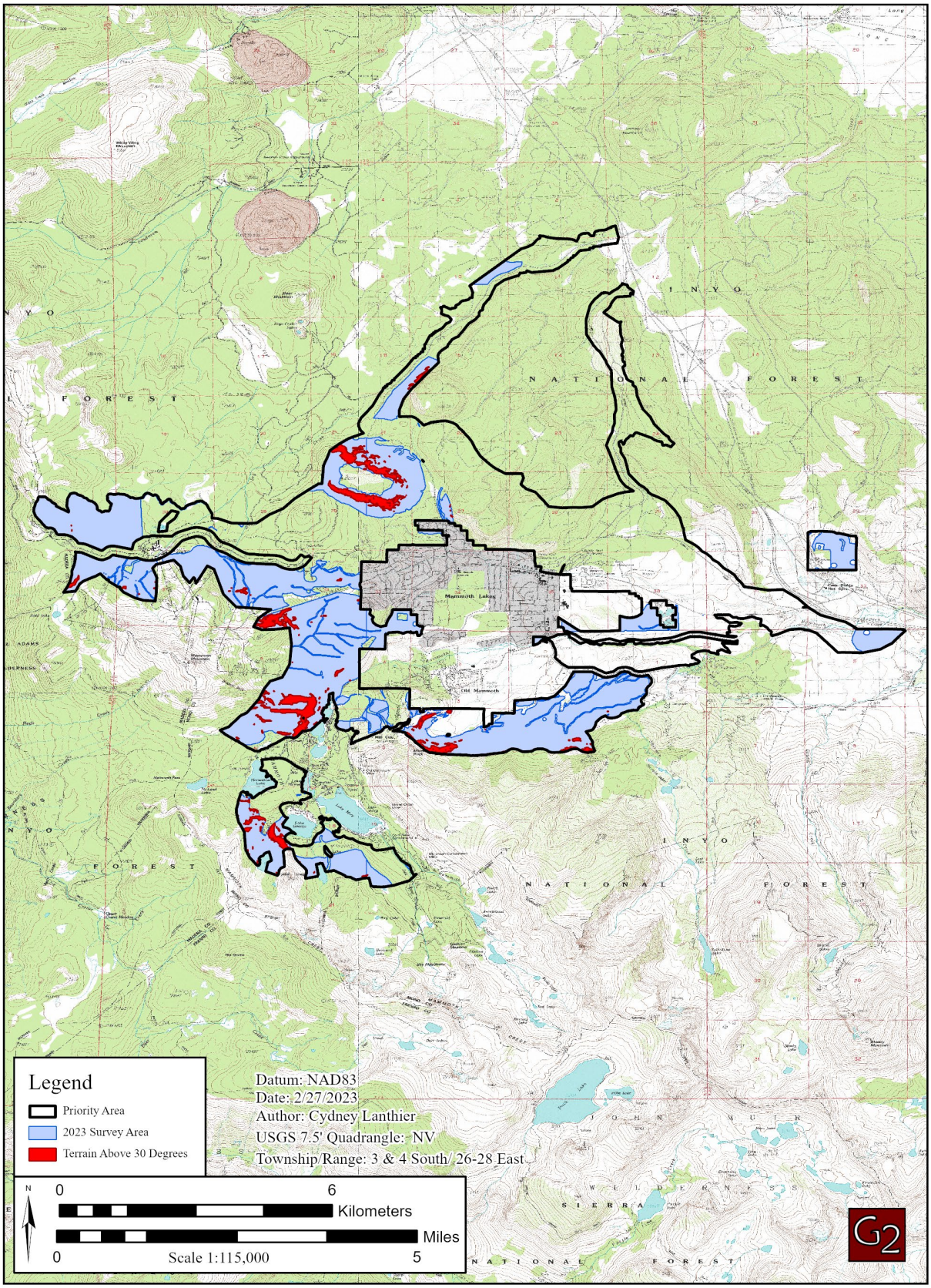

Figure 1. The 2023 Survey Area within the Priority Area of the ESCCRP.

CHAPTER 2. RECORD SEARCH RESULTS

An archaeological records check for the 10,723-acre Priority Area and a 0.25-mile buffer area was completed using information available from the Inyo National Forest (INF). Ms. Laurel Lueders, Forest Service Archaeologist for the INF, coordinated with G2 and provided the following references:

- GIS layers for previous cultural resource inventories within the Project Area and future priority units.
- GIS layers for previously recorded cultural resources within the Project Area and future priority units.
- GIS layers of the Project Area and future priority units.
- Copies of previous cultural resource inventory reports within the Priority Area and 0.25-mile buffer.
- Copies of previously recorded cultural resource records within the Priority Area and 0.25-mile buffer.
- Synopses of cultural resource site types within the Priority Area, 0.25-mile buffer, and broader area.

PREVIOUS INVENTORIES WITHIN THE PRIORITY AREA

A total of 211 previous cultural resource inventories, covering 6,238 acres of land, have been completed within the Priority Area (Table 1). Of the 211 inventories, 118 were completed in advance of projects related to tourism and/or facility and land improvements, including architectural construction, repairs/enhancements, or historic evaluations for lodging and other facilities, trails/off-road use, ski area development or ski lift construction/modification, airport construction or modifications, land exchange, land/range improvements, development/upgrades to day use areas, RV park development, parking area construction or modifications, and various other small projects. There were 89 inventories completed for utility projects (e.g., line and/or pole replacements), geothermal development, road/ highways construction, hazard tree removal, community water well or water utilities, timber sales, fuels treatment, and scientific studies. Four recent reports are forthcoming, with two (2021 and 2022) likely representing forest-wide inventories for fuels reduction but the reports were not available. Of these 211 projects, 127 were completed in the last 20 years (since 2002).

PREVIOUS INVENTORIES WITHIN A 0.25-MILE RADIUS OF THE PRIORITY AREA

Seventy-six cultural resource inventories have been conducted within the 0.25-mile buffer of the Priority Area (Table 2). Many of these inventories are related to tourism and include seasonal residences, facility, or infrastructure projects, architectural construction, repairs/enhancements, or historic evaluations for lodging and other facilities, parking area construction or modifications, development/upgrade projects related to local access and recreational areas, ski area infrastructure, trails or off-road use, campground improvements, and land remediation/improvements. Additionally, a portion of these inventories were completed for utility projects including line and/or pole replacements, community water well, sewer, or water utilities, land exchange, mineral exploration or natural resources development, road improvements, scientific studies including seismic and geotechnical studies, wilderness management, fuels reduction, and timber sales. Of the 76 total inventories in the 0.25-mile buffer, 41 were completed within the last 20 years.

Table 1. Previous Cultural Resource Inventories within the Priority Area

Report No.	Report Title	Author	Reliable Coverage?	Survey Acres Within the Priority Area
R1975050400017	Archaeological Survey Known Geothermal Area Inyo National Forest and Benton Planning Unit, Mono County, California	Beth Jersey and Clyde Kuhn	0-15m/ Yes	92.11
R1976050400790	The Surface Archaeology of the Long Valley Caldera, Mono County, California	Robert L. Bettenger	0-15m/ Yes	49.3
R1977050400035	Archaeological Reconnaissance Report: Dry Creek Timber Sale	William Self	0-15m/ Yes	608.3
R1978050400058	Archaeological Reconnaissance Report: Coyote Flat/ Corporation Yard Exchange	Randy Witters	0-15m/ Yes	8.1
R1979050400074	Mammoth Creek Day Use	William T. Taylor	0-15m/ Yes	28.7
R1979050400075	Highway 203 Salvage Timber Sale	William T. Taylor	16-30m/ No	89.8
R1979050400076	Archaeological Reconnaissance Report: Arcularius Meadows Rehab and Hidden Lake Restoration	Rich Weaver and William T. Taylor	0-15m/ Yes	11.6
R1979050400094	Archaeological Reconnaissance Report: Mamoth Creek Administrative Pasture	William T. Taylor	0-15m/ Yes	<1
R1980050400120	Archaeological Reconnaissance Report: Mammoth Mountain New Lifts	William T. Taylor	0-15m/ Yes	22.1
R1980050400135	A Probabilistic Surface Survey of the Sawmill Timber Compartment, Mono County, California	Robert L. Bettenger	16-30m/ No	2,762.7
R1980050400140	Archaeological Reconnaissance Report: Mammoth Lakes/June Lake Airport Proposed Expansion	William T. Taylor	0-15m/ Yes	15.5
R1980050400150	Archaeological Reconnaissance Report: Chair Ten Run Widening	William T. Taylor	0-15m/ Yes	1.6
R1980050400152	Archaeological Reconnaissance Report: Convict Unit, Hot Creek Allotment Fertilization Project	William T. Taylor	0-15m/ Yes	24.2
R1980050400156	Archaeological Reconnaissance Report: Shady Rest Motorcycle Trail	William T. Taylor	0-15m/ Yes	42.7
R1981050400191	Archaeological Investigations at CA-MNO-561: An Obsidian Stoneworking Camp on Mammoth Creek, Mono County, California	M.C. Hall	0-15m/ Yes	1.2
R1981050400195	Archaeological Reconnaissance Report: Deer Mountain/ Earthquake Timber Sale	Jeff Burton	16-30m/ No	837.6
R1981050400205	Archaeological Reconnaissance Report: Mono County Yard/Rayson Exchange	William T. Taylor	0-15m/ Yes	<1
R1982050400230	The Archaeology of Camp High Sierra (CA-MNO-1529): A Preliminary Report	Mark E. Basgall	0-15m/ Yes	24.6
R1982050400244	Archaeological Reconnaissance Report: Mammoth County Water District	Jeff Burton	16-30m/ No	69.9
R1982050400245	Archaeological Reconnaissance Report: Mammoth Mountain RV Park	Jeff Burton	0-25m/ Yes?	83.0
R1982050400253	Archaeological Reconnaissance Report: Mammoth Mountain Ski Area Improvements	Jeff Burton	16-30m/ No	84.9
R1982050400261	Archaeological Reconnaissance Report: Airport Access Road	Jeff Burton	0-15m/ Yes	30.4
R1982050400264	Archaeological Reconnaissance Report: Lakes Basin	Jeff Burton	0-15m/ Yes	0.1
R1982050400266	Archaeological Reconnaissance Report: Shot Holes and Seismic Tests	Jeff Burton	0-15m/ Yes	1.7
R1982050400283	Archaeological Reconnaissance Report: Union Oil Geothermal Magneto-Telluric Survey	Nicholas A. Faust	16-30m/ No	<1

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R1983050400280	Archaeological Survey Report of Mammoth Bluff	Jeff Burton	0-15m/ Yes	36.7
R1983050400302	Archaeological Reconnaissance Report: Smoke Timber Compartment	William A. Sawyer and Nicholas A. Faust	0-15m/ Yes	41.5
R1983050400306	Southern California Edison Company's Hurley and Ski District Lines Relocation	David R. M. White	0-15m/ Yes	13.8
R1983050400307	Mammoth County Water District Waterwell Locations	Philip J. Wilke	0-15m/ Yes	<1
R1983050400310	An Archaeological Reconnaissance of Mammoth Mountain, Mono and Madera Counties, California	Robert L. Bettenger, Mark E. Basgall, and Michael DeLacorte	0-15m/ Yes	1,900.5
R1984050400317	Archaeological Survey Report: Caltrans Highway 203 Widening	Valerie A. Levulett	0-20m/ Yes	104.45
R1984050400320	Archaeological Survey Report for a Proposed Highway Project Along Highway 395, Caltrans	Valerie A. Levulett	25-30m/ No	19.0
R1984050400342	Archaeological Survey Report: Caltrans Meridian Blvd. State Route 203 Intersection	C. Adams and V. Levulett	16-30m/ No	<1
R1985050400357	Archaeological Reconnaissance Report: Santa Fe Geothermal TG Drill Sites	R.A. Weaver	0-15m/ Yes	<1
R1985050400368	Archaeological Reconnaissance Report: Mammoth County Water District Tank Locations	P.J. Wilke	0-15m/ Yes	1.2
R1985050400380	Unical Geothermal Exploration	U	0-15m/ Yes	<1
R1985050400382	Report on a Cultural Resources Survey of Proposed Geothermal Energy Development Locations Near Casa Diablo Hot Springs, Mono County, California	M.C. Hall	0-15m/ Yes	81.6
R1986050400372	Archaeological Reconnaissance Report: DOE Drill Sites	Linda A. Reynolds	0-15m/ Yes	<1
R1986050400378; R1986050400387	Sherwin Ski Bowl Survey	U	0-15m/ Yes	689.0
R1986050400392	Archaeological Reconnaissance Report: Shady Rest Baseball Field Expansion	Nicholas A. Faust	16-30m/ No	14.3
R1986050400395	Archaeological Reconnaissance Report: Brown University Magneto-Telluric Sites	Linda A. Reynolds	0-15m/ Yes	<1
R1986050400397	Archaeological Reconnaissance Report: Mammoth County Water District Flumes	Linda A. Reynolds	31-50m/ No	1.3
R1987050400419	Archaeological Reconnaissance Report: Laurel Pond Bypass Road	Frank Deitz	0-15m/ Yes	8.4
R1987050400420	Archaeological Reconnaissance Report: Mammoth Boneyard	Frank Deitz	0-15m/ Yes	16.8
R1987050400440	UNR Geophysical Survey	U	16-30m/ No	<1
R1988050400446	Archaeological Reconnaissance Report: Hot Creek Range Improvement Project	Wallace B. Woolfenden	16-30m/ No	79.4
R1988050400448	Route Relocation Sierra Quarry and Southern California Edison Company's Replacement of 15 H-Frames	Wallace B. Woolfenden	0-15m/ Yes	2.8
R1988050400451	Mammoth County Water District Exploratory Dry Creek Wells	Linda A. Reynolds	16-30m/ No	9.3
R1988050400457	Archaeological Reconnaissance Report: Shady Rest Bicycle Trail	Wallace B. Woolfenden	16-30m/ No	10.7

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R1989050400487	Southern California Edison Company's Land Exchange	David R. M. White	0-15m/ Yes	3.3
R1989050400497	Bodle Ditch Rehabilitation	U	0-15m/ Yes	<1
R1989050400498	Archaeological Reconnaissance Report: Contel-Mammoth Ski and Racquet Club Realignment	Nicholas Faust	0-15m/ Yes	1.1
R1989050400499	Heritage Resources Report: Mill City Road Paving Project	Nicholas Faust	0-15m/ Yes	1.7
R1989050400546	Administrative Building Evaluation for Eight Sites	ND	NA	NA
R1990050400488	Jim Dunn Bobsled Run	ND	0-15m/ Yes	34.0
Report Number Unknown	Archaeological Excavations at Sites CA-MNO-574, -577, -578, and -833: Stoneworking in Mono County, California.	Susan Goldberg, Elizabeth Skinner, and Jeffrey Burton	NA	NA
R1990050400527	Mammoth Tack Room Relocation	Tamara Sawinski	0-20m/ Yes	25.5
R1990050400532	Archaeological Reconnaissance Report: Convict Lake Waterline	Nicholas Faust and Jan Shannon	0-15m/ Yes	24.5
R1991050400544	UNR Mammoth Microwave	U	0-15m/ Yes	<1
R1991050400556	Archaeological Survey and Testing for Mammoth Creek Park and Trail System	Jeff F. Burton	16-30m/ No	46.0
R1991050400557	Mammoth Pacific Geothermal Exploratory Core Hole #3	Tamara Sawinski	0-15m/ Yes	31.2
R1992050400565	Shady Rest Entrance and Parking Reorganization	Nicholas Faust	0-15m/ Yes	31.7
R1992050400573	Heritage Resources Report: Lakes Basin Waterline	Wallace B. Woolfenden	0-15m/ Yes	3.9
R1992050400580	Post-Fire Archaeological Survey of Devil's Postpile National Monument, Madera County, California	Kathleen L. Hull and Mark R. Hale	0-25m/ Yes	4.3
R1992050400590	Hayden Cabin/ Mammoth Museum Evaluation and Stabilization	U	0-15m/ Yes	<1
R1992050400591	Mammoth County Water District Mammoth Knolls Water Tank and Waterline	U	0-15m/ Yes	8.9
R1994050400378	Archaeological Testing of Eight Sites Within the Proposed Sherwin Ski Area, Mono County, California	Jeff F. Burton	31-50m/ No	176.5
R1994050400589	Mammoth Helipad Phone Contel Line Burial	Molly McCartney	31-50m/ No	2.6
R1994050400664a	Heritage Resources Report: Horseshoe Lake Hazard Trees	Nicholas A. Faust	0-15m/ Yes	<1
R1994050400664b	A Cultural Resources Survey Section for the Mammoth Lakes Basin Environmental Impact Report, Mono County, California	Eleanor H. Derr	20-30m/ No	ND
R1995050400675	Mammoth Connector Trail	Nicholas A. Faust	0-15m/ Yes	14.4
R1996050400546	Heritage Resources Survey: Mammoth Ranger Station	Janette Cutts	0-15m/ Yes	69.6
R1996050400565	Heritage Resources Survey of the Mammoth Ranger Station Compound	Nicholas A. Faust	0-15m/ Yes	47.6
R1997050400622a	An Archaeological Survey of the Proposed South Gateway Land Exchange, Mammoth Lakes, mono County, California.	Jeffrey F. Burton	16-30m/ No	149.4

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R1997050400622b	Archaeological Testing at Five Sites Within the Proposed South Gateway Land Exchange, Mammoth Lakes, California	Jeffrey F. Burton	NA	NA
R1998050400755	USGS Drill Holes and GPS Receivers	Wallace B. Woolfenden	0-15m/ Yes	5.3
R1999050400769	USGS GPS Site Additions	U	0-15m/ Yes	1.4
R2000050400781	Caltrans 395 Right-of-Way Fence Replacement	U	0-15m/ Yes	1.2
R2001050400821	Heritage Resources Survey: Lake Mary Bike Path	Jennifer A. Corwin	0-15m/ Yes	1.3
R2001050400822	Cultural Resources Survey for Mammoth Pacific L.P. Basalt Canyon Geothermal Exploration Project Long Valley KGRS Federal Geothermal Leases CA-11667 and CA 14408 Mono County, California	David Wilcox, Lisa Shapiro, and Robert Jackson	0-25m/ Yes	107.8
R2002050400897	Archaeological Survey of Recreation Residence Tracts in the Inyo National Forest	L. Prishmont	16-30m/ No	8.8
R2004050401073a	Heritage Survey Report: Off-Highway (OHV) Route Designation Strategy	Michael R. Hilton	16-30m/ No	35.2
R2004050401073b	Heritage Resources Report for the Inyo National Forest Motorized Travel Management Project (California Portion)	Sarah Johnston	0-15m/ Yes	ND
R2006050401211	Crowley Lake Range Allotments EA	Crystal West	0-15m/ Yes	30.0
R2008050401031	Heritage Resources Report: Mill City Fuels Reduction Project	William Kerwin	0-15m/ Yes	100.56
R2008050401318	Cultural Resource Report for Southern California Edison Company's Utility Pole Replacement Reverse Peak 12kV Line and Snowdrift 12kV Line	Crystal West	0-15m/ Yes	1.7
R2008050401329	National Public Lands Day Stay the Trail Sign Project	Crystal West	0-15m/ Yes	6.
R2009050401346	Cultural Resources Inventory of Caltrans District 9 Rural Conventional Highways in Inyo, Eastern Kern, Mono, and Northern San Bernardino Counties	Laura Leach-Palm, et al	0-15m/ Yes	95.2
R2009050401348	Cultural Resources Report: Mammoth Meadows Restoration Project	Crystal West	0-15m/ Yes	53.0
R2009050401354	Mammoth to June Cultural Resources Survey, Mono and Madera Counties, Caifornia	Christopher Duran and Michelle Treviño	16-30m/ No	683.2
R2010050401427	A Class III Cultural Resources Inventory for the Basalt Canyon Project, Mono County, California	Craig Hauer and Sarah Branch	16-30m/ No	6.7
R2010050401444	Cultural Resources Report: Madden Property Road Access	Mary Lee	0-15m/ Yes	7.0
R2010050401459	Archaeological Survey Report for the Southern California Edison Company Deteriorated Pole Replacement Program for a Three-Pole Structure on the Lee Vining- Rush Creek 115kV Circuit and an H-Frame Structure on Casa Diablo-Control-Sherwin 115kV Circuit on Public Land Within Inyo National Forest Mono County, California	Stacey C. Jordan	0-15m/ Yes	<1
R2010050401493	Mill City Recreational Residence Tract Historical Architecture Evaluation	Elizabeth Dickey, et al.	0-15m/ Yes	8.0

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R2010050401498	Cultural Resource Assessment for the Southern California Edison Company Turner Propane Tank Farm Project Inyo National Forest Mammoth Lakes, Mono County, California	Robert E. Parr	0-25m/ No	2.1
R2010050401537	Cultural Resources Report: Panorama Dome Bike Trail Project	Tim Wolfe and Mary Lee	0-15m/ Yes	12.6
R2010050401544	Southern California Edison Company's Mammoth Mountain Ski Back Trail Relocation Project	Crystal West	0-15m/ Yes	<1
R2010050401572	Heritage Resources Inventory Report for the Southern California Edison Company Replacement of Fifteen Deteriorated H-Frame Structures on the Casa-Diablo-Rush Creek and Casa Diablo-Control Transmission Lines, Inyo National Forest, Mammoth Lakes Area, Mono County, California	Hubert Switalski and Andrea Bardsley	0-15m/ Yes	2.2
R2011050401427	A Class III CRI Basalt Canyon Project, Mono County, CA	Craig Hauer and Sarah Branch	0-15m/ Yes	140.5
R2011050401615	Upper Owens Bishop Creek OHV Restoration Planning North Zone	ND	0-15m/ Yes	75.5
R2011050401622	Southern California Edison Company's Replace 1 Triple H-Frame on Casa Diablo-Control 115kV Line	U	0-15m/ Yes	<1
R2011050401624	Southern California Edison Deteriorated Pole Replacement 2054159E (TD484963) on Slope 12kV	Janelle Walker	16-30m/ No	<1
R2011050401662	Master Cultural Resource Report: A Class III Cultural Resource Inventory for the Digital 395 Broadband Project	Chambers Group	0-15m/ Yes	55.8
R2011050401702	Cultural Resources Report: Mammoth Mountain Ski Area Sledz 2011 Summer/Fall Improvements	Mary Lee	0-15m/ Yes	6.0
R2012050401718	A Heritage Resource Inventory for the Southern California Edison Company's Replacement of 19 Deteriorated Power Poles, Inyo National Forest, Inyo and Mono and Mono Counties, California	Hubert Switalski and Timothy Kelly	0-15m/ Yes	1.9
R2012050401734	Cultural Resources Report: Travel Management Road Closures North Zone, California	Stacy Zolnoski	0-15m/ Yes	5.2
R2012050401744	Three Creeks Cultural Resource Survey Phase I, Inyo National Forest, Mono County, California	Christopher Duran, et al.	0-15m/ Yes	4.7
R2013050401799	Southern California Edison Company's Deteriorated Pole Replacement (TD705839, #1792196E) on the Hurley 12kV Distribution Circuit	Janelle Walker	16-30m/ No	<1
R2013050401806	Three Creeks Cultural Resource Survey Phase II, Inyo National Forest, Mono County, California	Robert Jackson and Amy Kovak	16-30m/ No	729.1
R2013050401815	Cultural Resources Report: Sherwins Working Group	Tim Wolfe	0-15m/ Yes	155.6
R2013050401824	Cultural Resources Report: Lakes Basin 2013 Bike Path Survey	Stacy Zolnoski	0-15m/ Yes	18.9
R2013050401833	An Expanded Cultural Resource Inventory Report for the Proposed Casa Diablo IV Geothermal Expansion Project	Gregory J. Haverstock	16-30m/ No	639.6

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R2014050401839	Sherwin-Scenic Fuels Reduction	William Kerwin	16-30m/ No	507.0
R2014050401843	TM Upper Owens Bishop Creek Phase II NZ	U	Undefined	<1
R2014050401849	Cultural Resource Report: Southern California Edison Company's Minaret Substation- Chair 4 Project TD339564	Janelle Walker	16-30m/ No	1.9
R2014050401850	Cultural Resource Report: Southern California Edison Company's Deteriorated Pole Replacement Trout TD594483	Janelle Walker	0-15m/ Yes	<1
R2014050401852	Three Creeks Forest Health and Restoration Project	Breton Friel	16-30m/ No	146.0
R2014050401862	Cultural Resource Report: Mammoth Lakes Basin Hazard Fuel Reduction Project	Ashley A. Blythe	0-15m/ Yes	107.6
R2014050401867	Cultural Resources Survey for the Inyo National Forest: Mammoth Lakes Basin and Obsidian Hill Areas, Mono County California	William Kerwin	0-15m/ Yes	414.1
R2015050401974	Southern California Edison Company's TD708852 TD736033 TD736037 TD736049 TD736079 TD718689	U	0-15m/ Yes	5.7
R2015050401975	Southern California Edison Company's Deteriorated Pole on the Autumn 12kV (TD753091), Convict Lake Resort (TD745586, TD757205), Trout 33kV (TD708859), Reverse Peak 12kV (TD780228, TD858278) and Unnamed Circuit (TD929236)		0-15m/ Yes	1.4
R2015050401979	Restoration and Maintenance of the Townsend Gravesite	Jacqueline Beidl	0-15m/ Yes	<1
R2016050402035	Mammoth Water System	Ashley Blythe	0-15m/ Yes	23.7
R2016050402036	Mammoth Airport Fence	U	U	<1
R2017050402090	MMSA McCoy and Chair 9 Weather Stations	U	U	<1
R2017050402091	Southern California Edison Company's Minaret Substation Heating Element Replacement	U	0-15m/ Yes	1.0
R2017050402098	Mammoth Snowmobile Adventure O&G Permit Renewal	U	0-15m/ Yes	1.0
R2017050402119	MMSA Base Land Exchange	U	16-30m/ No	<1
R2017050402140	Population Structure and WUE of Conifers	U	0-15m/ Yes	1.0
R2017050402149	Mammoth Mountain Inn- Winter 2017 Emergency Storm Damage Repair	U	16-30m/ No	<1
R2017050402150	Mammoth Pack Station Defensible Fire/Fuel Break	Jacqueline Beidl	0-15m/ Yes	8.0
R2017050402157	Dr. Morrison Bat Project	U	0-15m/ Yes	2.0
R2017050402164	Old Mammoth Road Damage Repair	U	0-15m/ Yes	<1
R2017050402176	MMSA Canyon Lodge Grease Interceptor Install	U	ND	<1
R2017050402177	High Sierra YMCA Camp Outreach	Ashley Blythe, Jaqueline Beidl and Arianna Heathcote	0-15m/ Yes	5.0
R2017050402179	MCWD Timber Ridge Tank Replacement	U	ND	<1
R2017050402180	Mammoth Stamp Mill Proposed Fireline	Michelle Hart	0-15m/ Yes	4.3

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R2017050402185	Shady Rest Park Bleachers and Benches	Arianna Heathcote	0-15m/ Yes	14.2
R2017050402198	OHV Ground Operations (GOMAR) Little Antelope Valley, Mammoth, and June Lake	Michelle Hart	0-15m/ Yes	21.8
R2017050402205	Ormat Monitoring Wells BLM	Ashley A. Blythe	16-30m/ No	<1
R2017050402212	Southern California Edison Company's Autumn 12kV TD1257069, Lake Mary Relocation	Ashley A. Blythe	0-15m/ Yes	2.9
R2018050402213	Town of Mammoth Lakes Drainage Repair	Arianna Heathcote	0-15m/ Yes	<1
R2018050402230	Amerigas Eagle Express Propane Pipeline Permit Renewal	U	0-15m/ Yes	<1
R2018050402233	Mailboxes on Hot Creek Road	U	0-15m/ Yes	<1
R2018050402238	Falls Tract Cabin #8 Reconstruction	Jaqueline Beidl	0-15m/ Yes	<1
R2018050402255	Mammoth Mountain Ski Area (MMSA) Main Lodge Summer Uses	Janelle Walker	0-15m/ Yes	<1
R2018050402256	Silicic Volcanism in the Rosalie Lake Area Research Permit	U	0-15m/ Yes	<1
R2018050402257	Mammoth Mountain Ski Area (MMSA) Chair 1 Removal and Replacement	U	ND	1.0
R2018050402265	USC Mesozoic Surface Expression of the Sierra Nevada Arc	U	0-15m/ Yes	<1
R2018050402267	Pit 5 and 6 Broadcast Burn	Jaqueline Beidl	0-15m/ Yes	8.0
R2018050402271	Sierra Meadows Ranch Corral Repair	U	0-15m/ Yes	1.0
R2018050402276	CalTrans GazEx Permit Reissuance	U	0-15m/ Yes	1.0
R2018050402277	Owens River Fire Roadside Hazard Tree Felling	U	U (5 prev. reports @ 0-15m)	5.0
R2018050402281	Mammoth Stamp Mill Time Critical Removal Action	Jaqueline Beidl	0-15m/ Yes	24.0
R2018050402286	Southern California Edison Company's SUP Permit R50003 for Deteriorated Pole Replacements SWCA (2016-2017)	U	16-30m/ No	1.3
R2018050402299	Southern California Edison Company's Emergency SUP 2016-2017 Hazard Tree Removal	Ashley A. Blythe Haverstock	0-15m/ Yes	17.45
R2018050402305	TOML Gap Project	Jaqueline Beidl	0-15m/ Yes	95 .0
R2018050402310	OHV Ground Operations	Orlando Ramos	0-15m/ Yes	128.9
R2018050402311	Mammoth Trails Project, Town of Mammoth Lakes	Michael Vader and Fatima Clark	0-15m/ Yes	69.8
R2019050402328	Mammoth Motocross Track Permit Reissuance	U	0-15m/ Yes	1.0
R2019050402330	YMCA Camp Water and Electrical	U	0-15m/ Yes	1.0
R2019050402339	MMSA Wollley's and Chair 16 Projects	Janelle Walker	0-25m/ Yes	97.55
R2019050402342	Reds Meadow Fuels Reduction Project	Krystal A. Kissinger	16-30m/ No	16.0

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R2019050402348	Cultural Resources Report for Southern California Edison's Replacement of Deteriorated Poles in Support of the Region 5 Special Use Permit R5000302, Inyo National Forest, Inyo and Mono Counties, California	Joanne Minerbi, Kyle Montgomery, and Alyssa Newcomb	0-15m/ Yes	13.6
R2019050402350	Archaeological Survey Report Southern California Edison Company's Deteriorated Pole Replacement Program Autumn 16kV Circuit Inyo National Forest, Mono County, California	Stacey C. Jordan and Andrea M. Craft	0-15m/ Yes	18.89
R2019050402353	Excavations at Mammoth: Data Recovery at Four Sites Near Mammoth Creek: MNO 11, MNO 823, MNO 1644, and MNO 1645	Stephen Bouscarin and Philip J. Wilke	0-15m/ Yes	2.0
R2019050402360	TOML Shady Rest Disc Golf Course	Cody Dalpra	0-15m/ Yes	151.0
R2019050402369	Southern California Edison Company's SUP R5000302 Hazard Trees Report (2017-2018) EI	Rebecca Gilbert	0-15m/ Yes	56.0
R2019050402388	MMSA Gun 1 and 3 Building and Barricades	U	ND	<1
R2019050402399	Hayden Cabin Roof Replacement	U	0-15m/ Yes	U
R2020050402408	TOML Mammoth Rock Trail Reroute	Jaqueline Beidl	0-15m/ Yes	5.7
R2020050402410	Cultural Resources Inventory and Evaluation Report: Sierra Meadows Ranch Park Model Buildings Project, Inyo National Forest, Mono County, California	Joseph Freeman, et al.	16-30m/ No	14.5
R2020050402411	Sierra Responsible Riders Mammoth Trail 27E205 Reroute	Cody Dalpra	16-30m/ No	4.0
R2020050402417	Cultural Resources Inventory for the Mammoth Mountain Ski Area Snowmaking Project in the Inyo National Forest, Mono County, California	Graham Dalldorf	0-15m/ Yes	73.4
R2020050402420	Cultural Resource Report: Mammoth Lakes Concept 1 Section 110 Survey	Breton Friel	16-30m/ No	966.7
R2020050402422	Mammoth Airport Road Paving and Rehab Project	Ashley Blythe Haverstock	16-30m/ No	3.0
R2020050402423	FY 2019 SWCA Southern California Edison MSUP Work	Ashley Blythe Haverstock	16-30m/ No	37.2
R2020050402424	Southern California Edison Company's INF MSUP Class IIc 00076	Ashley Blythe Haverstock	0-15m/ Yes	17.0
R2020050402437	Earthquake Fault Hazard Tree Removal Area and Pile Burns	Jaqueline Beidl	0-15m/ Yes	50.0
R2020050402440	Verizon Canyon Lodge Tower	U	0-15m/ Yes	<1
R2020050402442	TOML Mountain View Trail Reroute	Orlando Ramos	16-30m/ No	1.4
R2020050402443	Town of Mammoth Lakes (TOML) Lakes Basin Connector Trails	Kiaya Charlton-Grant and Jacqueline Beidl	31-50m/ No	<1
R2020050402451	Mammoth Lakes Visitor Center Restroom	U	0-15m/ Yes	<1
R2020050402458	Ormat CD4 Geothermal Magnetotelluric Study	Gregory Haverstock	0-15m/ Yes	55.5
R2020050402459	Southern California Edison Company's SUP R5000303 Annual Report (2018-2019)	Ashley Blythe-Haverstock	0-15m/ Yes	13.89
R2020050402466	BLM Monitoring Wells 2 and 3 at Shady Rest	U	16-30m/ No	2.4

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R2020050402468	Cultural Resources Inventory of 14 Seismic Monitoring Stations on the Inyo National Forest, Inyo, Mono, and Madera Counties, California	Bridgit Wall and Kathleen Hanrahan	16-30m/ No	2.9
R2021050402469	FY 2020 Environmental Intelligence Southern California Edison Company's MSUP Work. *The actual report is absent. On file are four separate MSUP reports: 724, 814, 821, and 1030.	Rebecca Gilbert	16-30m/ No	50.7
R2021050402470	FY 2020 SWCA Southern California Edison Company's MSUP Work	Ashley Blythe-Haverstock	31-50m/ No	59.2
R2021050402477	Cultural Resources Survey Report for Southern California Edison's Casa Diablo IV Renewable Generation and Customer Interconnections Program, Inyo National Forest and Private Lands, Mono County, California	Rebecca Gilbert	0-15m/ Yes	3.5
R2021050402488	FY 2021 EI Southern California Edison MSUP Work	Rebecca Gilbert, Amber López-Johnson, and Maria Wiseman	0-15m/ Yes	13.5
R2021050402494	Great American Outdoors Act (GAOA) Recreation Site Toilet Replacement	Laurel E. Leuders	0-15m/ Yes	<1
R2021050402500	Southern California Edison INF Whole Circuit Survey. *This report is currently ongoing and not completed as of this analysis.	NA	0-15m/ Yes	523.3
R2021050402507	MCWD Lake Mary Tank Electrical Line	U	16-30m/ No	<1
R2021050402511	Inyo Craters Hazard Tree Removal	Laurel Lueders	0-15m/ Yes	45.0
R2021050402513	Archaeological Study Report for the Shady Rest Parking Area Improvements Project, Inyo National Forest and the Town of Mammoth Lakes, Mono County, CA	R. Scott Baxter	0-15m/ Yes	<1
R2021050402515	MMSA Small Projects 2021	U	0-15m/ Yes	2.0
R2021050402517	Southern California Edison Company's SUP Emergency Hazard Tree Removals 2018-2019	Ashley Blythe Haverstock	0-15m/ Yes	38.0
R2021050402525	FY 2021 Southern California Edison Company's MSUP Class IIC Testing	U	0-15m/ Yes	<1
R2021050408880	MMSA Motocross Track Tunnel	U	0-15m/ Yes	<1
R2021050409995	MMSA Redevelopment Record Search. *This report is currently ongoing and not completed as of this analysis.	NA	NA	92.0
R2022050402536	Southern California Edison, Class IIC MSUP Notifications 2021-2022	U	0-15m/ Yes	2.0
R2022050402541	Mammoth Community Water District Laurel Pond MOU. *This report is currently ongoing and not completed as of this analysis	NA	NA	34.0
R2022050402553	Mammoth Knolls Hazard Tree Removal	Laurel Lueders	16-30m/ No	1.4
R2022050402566	Eastern Sierra Fire Restoration and Maintenance – Unit 96. *This report is currently ongoing and not completed as of this analysis.	NA	0-15m/ Yes	668.7
R2022050402611	ND- completed by INF. *Likely forthcoming	ND	ND	ND
R2022050477777	SHARP 2022. *Placeholder number- report not available in FS records	ND	ND	352.0

Report No.	Report Title	Author	Reliable Coverage?	Survey Acres Within the Priority Area
2021 Forthcoming	Environmental Intelligence LLC.	ND	ND	ND
2021 Forthcoming	Subsurface Testing Results Conducted in Support of Southern California Edison's Master Special Use Permit (MSUP) Transmission and Distribution Poles and Wires Program, Notifications MSUP 00137 and MSUP 00230 (Distribution), Inyo National Forest, Mono County, California.	M. Wilson	ND	NA
2021 Forthcoming	Forestwide RX- Unit 96 (Inventory of Current Priority Units 3, 4, and 5)	Laurel Lueders	0-15m/ Yes	2,601.0
2022 Forthcoming	GBI 2022 Mammoth/Inyo Survey	ND	0-15m/ Yes	597.0

ND, No Data; U, Unknown

Table 2. Previous Cultural Resource Inventories within a 0.25 Mile Radius of the Priority Area

Report No.	Report Title	Author	Reliable Coverage?	Survey Coverage Within 0.25-Mile Buffer
R1975050400019	Archaeological Reconnaissance Report: Mammoth Hospital Project	Edwin C. Rockwell	ND	5.0
R1977050400036	Archaeological Reconnaissance Report: Lookout Mountain Timber Sale	William Self	ND	39.0
R1978050400059	Archaeological Reconnaissance Report: Exchange-Corp. Yard/Woodstock for Monache Meadows	Randy Witters	ND	3.0
R1979050400093	Archaeological Reconnaissance Report: Lake Mary Parking	William T. Taylor	0-15m/ Yes	1.0
R1979050400095	Archaeological Reconnaissance Report: Lake George Parking	William T. Taylor	16-30m/ No	9.0
R1979050400098	Archaeological Reconnaissance Report: Camphouse Tract	William T. Taylor	16-30m/ No	26.0
R1979050400104a	Shady Rest Land Exchange (Report missing- only excavation report available- below)	ND	0-15m/ Yes	<1
R1979050400104b	Archaeology of the Triple R Site, FS-05-04-52-53 (CA-MNO-714), Mono County, California	Robert L. Bettenger and Philip J. Wilke	NA	NA
R1981050400007	Archaeological Reconnaissance Report: Interagency Mineral Material Pits (Sherwin and Airport Sites)	M.M. Farrell	16-30m/ No	14.0
R1981050400079	Hot Creek Fish Hatchery Pipeline	ND	0-15m/ Yes	1.0
R1981050400204	Archaeological Reconnaissance Report: Mammoth School Site/ Dempsey Exchange	William T. Taylor	16-30m/ No	6.0
R1981050400207	Archaeological Reconnaissance Report: Woodstock Parcel/Tanner Exchange	William T. Taylor	16-30m/ No	7.0
R1981050400208	Archaeological Reconnaissance Report: Fire Station Site/ Rayson Exchange	William T. Taylor	0-15m/ Yes	1.0
R1981050400209	Archaeological Reconnaissance Report: Dempsey-Sherwin Meadow	William T. Taylor	16-30m/ No	11.0
R1981050400210	Effluent Disposal Facility Mammoth	ND	ND	1.0
R1982050400246	Phillips Petro Drill Sites	ND	0-15m/ Yes	<1

Report No.	Report Title	Author	Reliable Coverage?	Survey Coverage Within 0.25-Mile Buffer
R1982050400248	Archaeological Reconnaissance Report: Occidental Petroleum Drill Sites	Jeff Burton	0-15m/ Yes	<1
R1982050400249	Archaeological Reconnaissance Report: USGS Shot Holes	Jeff Burton	0-15m/ Yes	<1
R1982050400275	Archaeological Reconnaissance Report: Lake George Outlet Waterline	Jeff Burton	16-30m/ No	10.0
R1983050400303	Mammoth County Water District Proposed Water Storage Tanks and Well Locations	Philip J. Wilke and Richard A. Weaver	0-15m/ Yes	<1
R1985050400359	Mammoth County Water District Tank Locations	P.J. Wilke	0-15m/ Yes	2.0
R1987050400402	Historic Resource Study Mammoth Consolidated Mine	William H. Michael		NA
R1987050400431	Heritage Resources Report: Mammoth Escarpment	Molly McCartney	0-15m/ Yes	<1
R1988050400437	Woods Lodge Cabin Construction	Wallace B. Woolfenden	0-15m/ Yes	7.0
R1988050400439	USCB Seismic Sites	U	0-15m/ Yes	<1
R1988050400462	Laurel Canyon Drift Fence	U	0-15m/ Yes	2.0
R1990050400529	Contel Telephone Carrier System	U	0-15m/ Yes	<1
R1990050400533	Sherwin Creek Bridge	U	0-15m/ Yes	1.0
R1992050400562	Pacific Energy Monitoring Well	U	0-15m/ Yes	<1
R1993050400656	Heritage Resources Report: Twin Lakes General Store Improvements	Molly McCartney	0-15m/ Yes	2.0
R1994050400628	Caltrans Material Sites Investigation	Robert I. Orlins	16-30m/ No	22.0
R1994050400661	Crystal Crag Lodge Evaluations	U	0-15m/ Yes	<1
R1997050400736	Heritage Resources Report: Twin Lakes Art Gallery	Nicholas A. Faust	0-15m/ Yes	<1
R2001050400817	Heritage Resources Report: Mammoth Mine Development	Nicholas A. Faust	16-30 m/ No	7.0
R2002050400828	Heritage Resources Report: Sherwin Creek Campground Beetle Infestation	Nicholas A. Faust and Linda Reynolds	0-15m/ Yes	4.0
R2004050400915	John Muir and Ansel Adams Wilderness Cumulative Effects Analysis	William C. Kerwin	0-25m/ Yes	4.0
R2005050401158	Historic Resources Evaluation Report for the Tamarack Lodge and Associated Cabins Inyo National Forest, Mono County, California	Garcia and Associates	NA	NA
R2009050400382	Archaeological Investigations for Geotechnical Studies at Prehistoric Site CA-MNO-559/628/449, Mono County, California	Rob Jackson and Lisa Shapiro	0-15m/ Yes	3.0
R2010050401435	MMSA Land Exchange	U	ND	2.0
R2010050401457	Heritage Resources Inventory Report for the Southern California Edison Company's Replacement of Three Deteriorated Pole Structures on the Falls 2.4kV Distribution Circuit, Falls and Twin Lakes Recreational Residence Tracts, Inyo National Forest, Mono County, California	Hubert Switalski and Sonia Hutmacher	0-15m/ Yes	<1

Report No.	Report Title	Author	Reliable Coverage?	Survey Coverage Within 0.25-Mile Buffer
R2010050401499	Lost Land Lane Fuel Reduction Project, Mammoth Lakes, California	Stephanie Velasquez	31-50m/ No	17.0
R2010050401521	Heritage Resources Inventory Report for the Southern California Edison Company Replacement of Two Deteriorated Pole Structures on the Autumn Distribution Circuit and the Casa Diablo Control Transmission Line, Inyo National Forest, Mammoth Lakes Area, Mono County, California	Hubert Switalski and Andrea Bardsley	0-15m/ Yes	<1
R2010050401528	Cultural Resources Report: Lake George Cabin #6 Sewer Line	Mary Lee	0-15m/ Yes	1.0
R2010050401546	Cultural Review of Cultural Resource Assessment for the Replacement of One Deteriorated Pole Structure on the Autum 12kV Distribution Circuit	Crystal West	0-15m/ Yes	1.0
R2010050401547	Cultural Review of Cultural Resource Assessment for the Replacement of One Deteriorated Pole Structure on the Falls 2.4kV Distribution Circuit.	Crystal West	0-15m/ Yes	1.0
R2011050401593	Cultural Resource Report: Southern California Edison Company proposed Installation of an Underground Conduit on the Autumn 12kV Distribution Line	Janella Walker	0-15m/ Yes	<1
R2011050401638	Travel Management Resource Route Mitigation Survey	U	0-15m/ Yes	1.0
R2013050401818	Cultural Resources Survey Results Grid Reliability and Maintenance Program Autumn 12kV and Falls 2.4 kV, Twin Lakes, Southern California Edison, Inyo National Forest, Mono County, California	Natalie Brody and Roderic McLean	0-15m/ Yes	5.0
R2015050401918	Cultural Resource NHPA Consultation Documentation Report: Lakes Basin Bike Path Survey Addendum	Janelle Walker	0-15m/ Yes	8.0
R2015050401974	Archaeological Survey Report for the Southern California Edison Company Replacement of Twelve Deteriorated Poles, Inyo National Forest, Mono County, California	Natalie Brody and Roderic McLean	0-15m/ Yes	1.0
R2016050402072	Cultural Resource NHPA Section 106 Consultation Documentation Mammoth Mountain Main Lodge Deck Project R2016050402072	Ashley A. Blythe	0-15m/ Yes	1.6
R2016050402076	Lake Mary Tract #5 Cabin Improvements Proposal	Ashley A. Blythe	0-15m/ Yes	60.0
R2016050402087	Lake Mary Additional Parking Areas	U	ND	2.0
R2017050402107	Archaeological Survey Report for the Reds Meadow Road Improvement Project, Madera County, California	Tucker O. Orvald and Albert R. Garner	0-15m/ Yes	16.0
R2017050402168	Lake Mary Recreation Residence Tract Cabin #5 Removal and Replacement	U	ND	<1
R2017050402197	Mammoth Mountain Chalet Winter Damage Repairs	Jacqueline Beidl	31-50m/ No	12.0
R2017050402202	Mammoth Mountain Ski Area Tamarack Lodge Stepped Log Trellis Repair	U	ND	<1
R2017050402211	Mammoth Mountain Chalet Resort Caretaker Cabin/Office Emergency Repairs	Jacqueline Beidl	31-50m/ No	8.0

Report No.	Report Title	Author	Reliable Coverage?	Survey Coverage Within 0.25-Mile Buffer
R2018050402222	Friends of the Inyo OHV Route Restoration Planting Crowley/Convict	U	ND	<1
R2018050402289	Cultural Resources Inventory and Evaluation Report for the Mammoth Mountain Chalet Association Mono County, California	Joseph Freeman and Brian Larson	0-15m/ Yes	8.0
R2018050402308	Historic Resources Compliance Report: Caltrans Mono Winter Parking	Emilie Zelazo	0-15m/ Yes	1.0
R2018050402315	Southern California Edison Company's TLRR GO 131 D Evaluation Casa Diablo-Rush Creek 115kV	Ashley A. Blythe Haverstock	0-15m/ Yes	2.0
R2019050402324	Horseshoe Recreation Site Projects	U	ND	<1
R2019050402329	Mammoth Lakes Lions Club Fishing Dock on Twin Lakes	Ashley A. Blythe Haverstock	0-15m/ Yes	<1
R2019050402336	Lake Mary Lot #5 Remediation	Jaqueline Beidl	0-15m/ Yes	<1
R2019050402377	Twin Lakes Campground Discovery	Jaqueline Beidl	0-15m/ Yes	<1
R2019050402387	MMSA 2019 Snow Fencing	U	ND	1.0
R2019050402396	MMSA Chair 10 Container Bar	U	ND	1.0
R2019050402398	MMSA Canyon Super Sign Installation	U	ND	<1
R2020050402405	Laurel Pond Monitoring Wells	Ashley Blythe Haverstock	0-15m/ Yes	2.0
R2020050402466	BLM Monitoring Wells 2 and 3	Gregory Haverstock	0-15m/ Yes	2.0
R2021050402479	Historic Structure Report and National Register Evaluation Cabin No. 8 Lake Mary Recreation Residence Tract Inyo National Forest Mammoth Ranger District Mono County, California	Judith Marvin	0-15m/ Yes	<1
R2021050402480	Mammoth Geothermal Lease Determination. *This report is currently ongoing and not completed as of this analysis.	-	-	7.0
R2021050402489	Emergency Support Request –New Pole Installation Monitoring, Inyo National Forest, Mono County (LSA Project No. Southern California Edison Company's 1303B CWA1442 IO 301933)	Natalie Brodie	0-15m/ Yes	<1
R2021050402507	Mammoth Community Water District (MCWD) Lake Mary Tank Electrical Line	Jaqueline Beidl	0-15m/ Yes	<1
R2021050499999	*This is a placeholder number- report not available in FS records	ND	ND	ND

ND, No Data; U, Unknown

PREVIOUSLY RECORDED CULTURAL RESOURCES WITHIN THE PRIORITY AREA

When combined, the 211 previous inventories resulted in the recordation of 242 archaeological sites within the Priority Area (Table 3). The majority of these sites were identified in four inventories (05-04-135 which may be R1980050400135, R2009050401354, R2013050401833, and 2021 Environmental Intelligence, LLC. (EI) -report number forthcoming). Thirty cultural resource records are attributed to inventory "05-04-135" and recorded by 'Brooks 1979'; however, a closer look at inventory R1980050400135 revealed the

author is R. Bettinger and that only seven total cultural resources were identified in this report. A large number of cultural resources (23 sites and 78 isolates) were recorded by inventory R2009050401354, and the R2013050401833 effort identified between 15 and 17 sites. The terrain covered in these surveys comprises 1,323 acres of mostly flat to gently sloping landforms at the western extent of the Priority Area. Report '05-04-135,' if it does refer to R1980050400135, covered a total of 2,763 acres on flat to gently sloping alluvial fans, the valley floor, gently to moderately sloping hillsides, and hilltops. Survey strategy employed in all three inventories involved 16-30 meter (m) transect intervals. Although not within the Forest Service standards for adequate survey coverage, typically under 20 m transect spacing, intervals of this size in mostly open terrain are sufficient for identifying most surface archaeological deposits. The inventory carried out in 2021 by EI, identified 24 resources both in the Priority Area and within the 0.25-mile buffer; however, the report and GIS information are currently absent.

Of the 242 previously recorded cultural resources within the Priority Area, 146 are prehistoric era, 62 are historic era, 33 are multicomponent, containing both prehistoric and historic-era components, and one is unknown, p[possibly ethnohistoric (Table 3). The following discussion pertains to sites and not isolates except in some situations where an isolate received a Forest Service site number.

Prehistoric Sites

There are a total of 146 prehistoric resources and an additional 33 multicomponent sites with prehistoric elements have been recorded within the Priority Area (Table 3). Prehistoric site types include lithic scatters, bedrock milling (BRM)/milling features with or without lithic deposits, habitation sites (with lithic scatters, ground stone, midden deposits, and/or BRM/milling features), rockshelter sites with or without associated lithic deposits, lithic quarry sites, and rock alignments with or without lithic deposits. One ethnohistoric site (05-04-52-02435) with a ditch, two rock alignments, and a lithic scatter is also present within the Priority Area.

Lithic Scatters

Lithic Scatters within the Priority Area contain only flaked stone material and no evidence of habitation or other features. These site types comprise the majority of prehistoric sites (n = 132) and prehistoric components of multicomponent sites (n = 29). Lithic Scatters range from sparse and dispersed scatters to dense and/or extensive deposits. Most lithic scatters consist primarily of obsidian debitage, with some sites containing cryptocrystalline silicate (CCS) materials as well. Many sites appear to reflect primary core reduction activities or expedient biface thinning locations, an expected outcome based on the proximity of obsidian quarries within both the Priority Area and the 0.25-mile buffer. However, many of the denser and/or more complex sites contain tertiary biface thinning flakes and biface tools. Several lithic scatters originally recorded as sites were revisited and determined to be isolated resources due to the low density of debitage (<10 flakes). Spatial analysis indicates that many lithic scatters are located on flat to gently sloping landforms in the Priority Area, including large mid-slope terraces or along alluvial plateaus. Generally, lithic scatters are concentrated toward the eastern edge of the Priority Area where the mountains slope downward into Long Valley, as well as to the northeast near a large obsidian quarry, and along the protected flats to the southeast near Sherwin Creek. These sites also generally occur around similar elevations, between 2,200-2,400 m (7,218-8,530 feet [ft.]) above mean sea level (amsl). Vegetation generally consists of a low sagebrush and shrub community with sparse to moderately spaced conifer trees and decent ground visibility with gravelly, coarse sandy soils consisting of decaying volcanic materials.

Table 3. Previously Recorded Cultural Resources within the Priority Area

Forest Service No.	Trinomial/ Primary No.	Era	Site Type	Comments	Year	NRHP	Excavated? Y/N	Revisit? Y/N
05-04-51-00046	CA-MNO-0574; P-26-000574	M	P: Lithic scatter H: Refuse scatter	Extensive lithics; Combined with Sites 00069 and 00266 during a 2021 update	1974	E	Y	Y
05-04-51-00048	CA-MNO-0627	P	Lithic scatter	-	1976	U	N	Y
05-04-51-00050	CA-MNO-0651	P	Lithic scatter	-	1976	U	N	Y
05-04-51-00056	CA-MNO-0729; P-26-000729	P	Lithic scatter	-	1976	U	N	N
05-04-51-00057	CA-MNO-0730; P-26-000730	P	Lithic scatter	-	1976	U	N	Y
05-04-51-00059	CA-MNO-0768	P	Lithic scatter	-	1976	U	N	N
05-04-51-00089	U	U	U	-	?	?	N	Y
05-04-51-00228	CA-MNO-0814	P	Lithic scatter	-	1980	U	N	N
05-04-51-00236	-	P	Lithic scatter	Not located in 2021	1980	U	N	N
05-04-51-00241	CA-MNO-0816	H	Historic mining	With refuse deposit	1980	U	N	Y
05-04-51-00242	CA-MNO-0817	H	Cabin/Residence	Remnants with refuse dump	1980	U	N	Y
05-04-51-00267	CA-MNO-0824	P	Lithic scatter	-	1979	U	N	N
05-04-51-00274	-	P	Lithic scatter	Updated as an isolate in 2021	1979	U	N	N
05-04-51-00276	-	P	Lithic scatter	-	1979	U	N	N
05-04-51-00280	CA-MNO-0038	M	P: Lithic scatter H: Refuse scatter	-	1978	U	N	N
05-04-51-00281	CA-MNO-0828	P	Lithic scatter	-	1979	U	N	N
05-04-51-00282	CA-MNO-0829	P	Lithic scatter	-	1979	U	N	Y
05-04-51-00283	-	P	Lithic scatter	-	1979	U	N	Y
05-04-51-00284	CA-MNO-0830; P-26-000830	P	Rockshelter	With small lithic scatter; Not located in 2013	1979	U	N	Y
05-04-51-00285	CA-MNO-0648; P-26-000648	P	Lithic scatter	-	1979	U	N	Y
05-04-51-00286	CA-MNO-3459; P-26-003644; P-26-005613	P	Lithic scatter	Not located in 2013	1979	U	N	Y
05-04-51-00287	CA-MNO-0831; P-26-000831	P	Lithic scatter	-	1979	U	N	Y
05-04-51-00289	-	P	Lithic scatter	-	1979	U	N	N
05-04-51-00290	-	P	Lithic scatter	No lithics located in 2021; Updated as single historic artifact	1979	U	N	Y
05-04-51-00291	CA-MNO-0833; P-26-000833	P	Lithic scatter	-	1979	U	N	Y
05-04-51-00292	CA-MNO-0576; P-26-000576	P	Lithic scatter:	Not located in 2013	1979	U	N	Y
05-04-51-00297	CA-MNO-0626	P	Lithic scatter	-	1979	NE	N	Y

Forest Service No.	Trinomial/ Primary No.	Era	Site Type	Comments	Year	NRHP	Excavated? Y/N	Revisit? Y/N
05-04-51-00298	CA-MNO-0834	P	Rockshelter	Two rockshelters with lithic scatter	1979	U	N	N
05-04-51-00300	CA-MNO-0835	P	Lithic scatter	-	1979	U	N	Y
05-04-51-00301	CA-MNO-3532; P-26-003764	P	Lithic scatter	-	1979	U	N	Y
05-04-51-00305	CA-MNO-0040	P	Lithic scatter	-	1979	U	N	Y
05-04-51-00306	CA-MNO-0836; P-26-00836	M	P: Lithic scatter H: Refuse scatter	-	1979	U	N	Y
05-04-51-00307	CA-MNO-0621	P	Lithic scatter	-	1979	U	N	N
05-04-51-00308	-	P	Lithic scatter	-	1979	U	N	Y
05-04-51-00310	CA-MNO-0837; P-26-00837	P	Lithic scatter	-	1979	U	N	Y
05-04-51-00313	-	P	Lithic scatter	Not located in 2021	1979	U	N	N
05-04-51-00316	CA-MNO-0840; P-26-000840	M	P: Lithic scatter H: Refuse dump	Updated to include lithic scatter in 2008	1979	U	N	Y
05-04-51-00317	CA-MNO-0841; P-26-000841	M	Historic Cabin/Residence	With refuse scatter; Updated to include lithic scatter in 2021	1979	U	N	N
05-04-51-00318	CA-MNO-0842; P-26-000842	H	Refuse scatter	-	1979	U	N	N
05-04-51-00319	CA-MNO-0843	H	Refuse scatter	-	1979	U	N	N
05-04-51-00320	CA-MNO-0844	H	Refuse scatter	Not relocated in 2021	1979	U	N	N
05-04-51-00322	CA-MNO-0622	H	Historic Mill	Remnants of Home Lumber Co. sawmill foundation	1979	U	N	Y
05-04-51-01791	CA-MNO-4949; P-26-6597	P	Lithic scatter	-	2011	U	N	Y
05-04-52-00001	CA-MNO-1529; P-26-001529	P	BRM/Milling feature	With lithic scatter	1981	NE	N	Y
05-04-52-00007	CA-MNO-1644	P	Lithic scatter	-	1982	U	Y	Y
05-04-52-0008; 05-04-52-00096	CA-MNO-1645;	P	Lithic scatter	Combined with site 05-04-52-0096	1982	U	Y	Y
05-04-52-00011	CA-MNO-0888	P	Lithic scatter	Not located in 2021	1974	U	N	Y
05-04-52-00017	CA-MNO-0621	H	Historic cabin/ Residence	With refuse scatter	1975	U	N	Y
05-04-52-00018	CA-MNO-0622	H	Historic Mill	Home Lumber Co./ Hess sawmill, flume, and associated refuse scatter; Determined completely destroyed pre-2021	1975	NE	N	N
05-04-52-00019	CA-MNO-0623	H	Civilian Conservation Corps Site	Civilian Conservation Corps summer camp remains; Determined completely destroyed pre-2021	1975	U	N	N
05-04-52-00020	CA-MNO-0624	M	P: Lithic scatter H: Historic cabin	Combined with site 05-04-52-02196 in 2021	1975	U	N	N
05-04-52-00024	CA-MNO-0577; CA-MNO-0626	M	P: Prehistoric lithic quarry H: Refuse scatter	Obsidian, with BRM/milling features and dense lithic scatter	1976	U	N	Y
05-04-52-00034	CA-MNO-0870	P	Lithic scatter	-	1974	U	N	Y

Forest Service No.	Trinomial/ Primary No.	Era	Site Type	Comments	Year	NRHP	Excavated? Y/N	Revisit? Y/N
05-04-52-00035	CA-MNO-0871; P-26-000871	M	H: Historic grave P: Lithic scatter	Two gravesites	1974	U	N	N
05-04-52-00038	CA-MNO-0874	P	Lithic scatter	-	1974	U	N	Y
05-04-52-00043	CA-MNO-0561	P	Lithic scatter	Dense, extensive	1979	E	Y	Y
05-04-52-00052	CA-MNO-0626	M	P: Lithic scatter H: Refuse scatter	Updated as multicomponent in 2021	1979	U	N	N
05-04-52-00056	CA-MNO-0847; CA-MNO-4956; P-26-000847; P-26-006604	M	P: Lithic scatter H: Refuse scatter	Updated as multicomponent in 2021	1980	U	N	N
05-04-52-00057	CA-MNO-0832	P	Lithic scatter	Not relocated in 2021	1979	U	N	N
05-04-52-00063	CA-MNO-0093	M	H: Historic Cabin/Residence P: Lithic scatter	Cement foundations and two partial fireplaces	1979	U	N	N
05-04-52-00068	CA-MNO-0205	P	Lithic scatter	-	1979	U	N	N
05-04-52-00087	CA-MNO-0893	H	Historic ditch	Bodle ditch segments with refuse scatter	1981	NE	N	Y
05-04-52-00089	CA-MNO-1203; CA-MNO-561; P-26-001203	P	Lithic scatter	-	1979	U	Y	N
05-04-52-00096	CA-MNO-1645	P	Lithic scatter	Combined with site 05-04-52-0008	1982	U	N	N
05-04-52-00102	CA-MNO-4037; P-26-004916	M	P: Lithic scatter H: Refuse scatter	Combined with site 05-04-52-2479 in 2021	1982	U	N	N
05-04-52-00105	-	H	Historic grave	Townsend, 1882	1982	U	N	N
05-04-52-00106	-	H	Historic Cabin/Residence	Structural remnants with refuse scatter	1982	U	N	Y
05-04-52-00107	CA-MNO-5871; P-26-005231	H	Mining site	with prospect pit, rock circle, and rock piles	1982	U	N	N
05-04-52-00379	CA-MNO-1925; P-26-001925	P	Lithic scatter	Only one flake observed during 2021 update	1983	U	N	N
05-04-52-00389	-	P	Lithic scatter	-	1978	U	N	N
05-04-52-00836	CA-MNO-2222	P	Lithic scatter	-	1985	U	N	Y
05-04-52-00839	CA-MNO-2225	P	Prehistoric habitation	Midden deposit with lithic scatter	1985	U	Y	Y
05-04-52-00840	CA-MNO-2226	P	Lithic scatter	-	1985	U	Y	Y
05-04-52-00841	CA-MNO-2227	M	P: Lithic scatter, H: Arborglyph	Glyph dated to1950s, with refuse scatter; No site access during 2018 update	1985	U	Y	Y
05-04-52-00843	CA-MNO-2229	P	Prehistoric habitation	Extensive, with five lithic concentrations, and midden deposits	1985	U	Y	Y
05-04-52-00844	CA-MNO-2230	P	Lithic scatter	-	1985	U	N	Y
05-04-52-00901	CA-MNO-2425H	M	H: Refuse scatter P: Lithic scatter	-	1985	U	N	N
05-04-52-00903	CA-MNO-2426	P	Lithic scatter	-	1985	U	N	Y
05-04-52-00905	CA-MNO-2429	P	Lithic scatter	-	1985	U	N	Y

Forest Service No.	Trinomial/ Primary No.	Era	Site Type	Comments	Year	NRHP	Excavated? Y/N	Revisit? Y/N
05-04-52-00919	-	M	H: Tent pad P: Lithic scatter	-	1986	U	N	Y
05-04-52-00920	-	P	Lithic scatter	Not relocated in 2020	1986	U	N	Y
05-04-52-00922	-	P	Lithic scatter	-	1987	U	N	Y
05-04-52-00923	CA-MNO-5289; P-26-007395	P	BRM/Milling feature	Three BRMs with lithic scatter	U; Pre-2006	U	N	N
05-04-52-00933	CA-MNO-0028; CA-MNO-0611	M	P: Prehistoric habitation H: Refuse scatter	Extensive use area with obsidian quarries, hunting blind, and lithic scatter	1960; 1989	E	Y	Y
05-04-52-00939	CA-MNO-2562	M	P: Prehistoric habitation H: Refuse scatter	With ground stone and lithic scatter	1989	U	Y	N
05-04-52-00946	-	P	Lithic scatter	-	1989	U	N	N
05-04-52-00947	-	P	Lithic scatter	-	1989	U	N	Y
05-04-52-00948	CA-MNO-2668; P-26-002814	P	Lithic scatter	Extensive; No official site record was generated during original recording	1964; 2009	U	N	Y
05-04-52-00961	-	H	Agency structure	Forest Service ranger station and office structures	1989; 2021	U	N	N
05-04-52-00962	-	H	Agency structure	Wood structure Forest Service ranger station housing, constructed 1938	1989; 2021	U	N	N
05-04-52-00963	-	H	Agency structure	Mammoth Ranger Compound: two-bay garage and storage	1989; 2021	U	N	N
05-04-52-00964	-	H	Agency structure	Mammoth Ranger Compound: Assistant District Ranger's house	1989; 2021	U	N	N
05-04-52-00965	-	H	Agency structure	Mammoth Ranger Compound: District Ranger's house	1989; 2021	U	N	N
05-04-52-00966	-	H	Agency structure	Mammoth Ranger Compound: fire-dock and warehouse	1989; 2021	U	N	N
05-04-52-00967	-	H	Agency structure	Mammoth Ranger Compound: remains of woodshed	1989; 2021	U	N	N
05-04-52-00968	-	H	Historic cabin/Residence	Saloon/cabin; moved from original location	1989; 2021	U	N	N
05-04-52-00971	CA-MNO-2684	M	P: Lithic scatter, H: Refuse scatter	-	1991	U	N	N
05-04-52-00972	CA-MNO-2685	P	Lithic scatter	-	1991	NE	N	Y
05-04-52-00974	-	M	P: Lithic scatter, H: Refuse isolate	Original record missing, No. reassigned to new site in 2015	U; 2015	U	N	N
05-04-52-00977	CA-MNO-4713; P-26-006013	M	H: Historic cabin/ Residence P: Lithic scatter	Hayden Cabin:1928 log cabin residence and associated structures and features	1992	E; Listed on CRHR in 1993	N	N
05-04-52-00982	CA-MNO-2770	P	Lithic scatter	-	1993	U	Y	Y
05-04-52-00988	-	P	Lithic scatter	-	1993	U	N	Y
05-04-52-00989	CA-MNO-2777	P	Lithic scatter	Not located in 2012 and 2014	1993	U	N	N
05-04-52-00990	CA-MNO-2778	P	Lithic scatter	Not located in 2014	1993	U	N	Y
05-04-52-00991	-	P	Lithic scatter	-	1993	U	N	Y

Forest Service No.	Trinomial/ Primary No.	Era	Site Type	Comments	Year	NRHP	Excavated? Y/N	Revisit? Y/N
05-04-52-00992	CA-MNO-2780	P	Lithic scatter	-	1993	U	N	Y
05-04-52-00993	-	H	Refuse scatter	-	1993	U	N	Y
05-04-52-00994	-	P	Lithic scatter	Original record missing	1993	U	N	Y
05-04-52-00995	-	P	Lithic scatter	-	1993	U	N	Y
05-04-52-00996	CA-MNO-2784	P	Lithic scatter	Located in 2012 but not in 2014	1993	U	N	Y
05-04-52-00997	CA-MNO-2785	P	Lithic scatter	-	1993	U	N	N
05-04-52-01021	-	P	Lithic scatter	-	1995	U	N	N
05-04-52-01034	CA-MNO-0648	P	Lithic scatter	Poor original data, thus not located in 2013	1976	U	N	Y
05-04-52-01056	CA-MNO-2562; CA-MNO-4531; P-26-002562; P-26-004531	H	Historic Recreation Residences/Tract	Mill City Tract: 14 cabins and ancillary structures	1989	NE	N	N
05-04-52-01121	-	H	Historic Recreation Residences/Tract	Lake Mary Recreation Residence Tract: 31 cabins and ancillary structures	2004	NE	N	N
05-04-52-01203	CA-MNO-2783	H	Refuse scatter	1920s refuse	1993	U	N	Y
05-04-52-02020	P-26-003592	H	Historic road/Trail	Fresno Flats historic trail	2000	U	N	Y
05-04-52-02021	CA-MNO-3414H; P-26-003593	H	Historic cabin/Residence	Structural remains, cement water conveyance ditch, associated features and appliances	2000	U	N	Y
05-04-52-02040	P-26-004258	H	Historic road/Trail	Lake Mary road and associated culvert features	2003	U	N	Y
05-04-52-02050	-	P	BRM/Milling features	Bedrock mortars, milling slicks, with large lithic scatter	2004	U	N	Y
05-04-52-02091	CA-MNO-4262; P-26-004796	P	Lithic scatter	-	2006	U	N	Y
05-04-52-02092	CA-MNO-4263; P-26-004797	P	Lithic scatter	-	2006	U	N	Y
05-04-52-02134	CA-MNO-4400	P	Lithic scatter	-	2007	U	N	Y
05-04-52-02137	CA-MNO-4404	P	Lithic scatter	-	2007	U	N	Y
05-04-52-02138	CA-MNO-4403	M	P: BRM/Milling features H: Refuse scatter	Bedrock milling features, lithic scatter, and refuse scatter	2007	U	N	Y
05-04-52-02140	CA-MNO-2562; CA-MNO-4531; P-26-002562; P-26-004531	M	H: Historic mill P: Lithic scatter	Mill City Stamp Mill site with multiple associated features, and lithic scatter	2007	U	N	N
05-04-52-02152	CA-MNO-4626; P-26-005927	P	Lithic scatter	Updated in 2013 to 05-04-52-2244 as one site comprising seven previously recorded isolates and one previously recorded site (05-04-52-2235, 2244, 2245, 0048, 2251, 2253, and 2254)	2009	U	N	Y
05-04-52-02153	CA-MNO-4627; P-26-005928	P	Lithic scatter	-	2009	U	N	Y

Forest Service No.	Trinomial/ Primary No.	Era	Site Type	Comments	Year	NRHP	Excavated? Y/N	Revisit? Y/N
05-04-52-02159	CA-MNO-4633; P-26-005934	P	Lithic scatter	-	2009	U	N	Y
05-04-52-02160	CA-MNO-4635; P-26-005935	P	Lithic scatter	-	2009	U	N	Y
05-04-52-02162	CA-MNO-4635; P-26-005936	P	Lithic scatter	-	2009	U	N	Y
05-04-52-02163	CA-MNO-4636; P-26-005937	P	Lithic scatter	-	2009	U	N	Y
05-04-52-02169	CA-MNO-4642; P-26-005943	P	Lithic scatter	Originally recorded as 05-04-52-0043; later amended as a separate site	2009	U	N	N
05-04-52-02170	CA-MNO-4643; P-26-005944	P	Lithic scatter	Originally recorded as 05-04-52-0043; later amended as a separate site	2009	U	N	Y
05-04-52-02172	CA-MNO-4542; P-26-004915	M	H: Historic town P: Lithic scatter	Mill City historic site: 20 structure pads with numerous associated refuse scatters, and 23 lithic scatters	2004	U	N	Y
05-04-52-02174	CA-MNO-4624; P-26-005925	H	Refuse scatter	-	2009	U	N	Y
05-04-52-02179	-	P	Lithic scatter	-	2009	U	N	Y
05-04-52-02180	-	P	Lithic scatter	-	2009	U	N	Y
05-04-52-02181	CA-MNO-4738; P-26-006151	P	Lithic scatter	-	2010	U	N	N
05-04-52-02183	-	P	Lithic scatter	-	2010	U	N	Y
05-04-52-02184	-	P	Lithic scatter	-	2010	U	N	Y
05-04-52-02186	-	H	Refuse scatter	-	2010	NE	N	N
05-04-52-02187	-	P	BRM/Milling feature	With lithic scatter	2010	U	N	N
05-04-52-02189	-	H	Refuse scatter	-	2010	U	N	Y
05-04-52-02190	-	P	Lithic scatter	-	2010	U	N	Y
05-04-52-02193	-	M	P: Lithic scatter H: Refuse scatter	-	U; 2019	U	N	N
05-04-52-02194	CA-MNO-4997; P-26-006678	H	Historic road/Trail	Possible road grade; with refuse scatter	2010	U	N	Y
05-04-52-02196	-	M	H: Historic cabin/Residence P: Lithic scatter	With domestic debris scatter; combined with 05-04-52-0020 in 2021	2010	U	N	Y
05-04-52-02197	-	M	Lithic scatter H: Refuse scatter	-	2010	U	N	Y
05-04-52-02198	-	P	Lithic scatter	-	2010	U	N	Y
05-04-52-02200	-	P	Lithic scatter	-	2001	U	N	Y
05-04-52-02235	P-26-005927	P	Lithic scatter	Updated in 2013 to 05-04-52-2244 as one site comprising seven previously recorded isolates and one previously recorded site (05-04-52-2235, 2244, 2245, 2248, 2251, 2253, and 2254)	2009; 2013	U	N	Y

Forest Service No.	Trinomial/ Primary No.	Era	Site Type	Comments	Year	NRHP	Excavated? Y/N	Revisit? Y/N
05-04-52-02236	CA-MNO-4393; P-26-005004	P	Lithic scatter	-	2007	U	Y	N
05-04-52-02241	P-26-006073	P	Lithic scatter	-	2009	U	N	Y
05-04-52-02244	P-26-005927	P	Lithic scatter	Updated in 2013 to 05-04-52-2244 as one site comprised of seven previously recorded isolates and one previously recorded site (05-04-52-2235, 2244, 2245, 2248, 2251, 2253, and 2254)	2009; 2013	U	N	N
05-04-52-02245	P-26-005927	P	Lithic scatter	Updated in 2013 to 05-04-52-2244 as one site comprised of seven previously recorded isolates and one previously recorded site (05-04-52-2235, 2244, 2245, 2248, 2251, 2253, and 2254)	2009; 2013	U	N	N
05-04-52-02248	P-26-005927	P	Lithic scatter	Updated in 2013 to 05-04-52-2244 as one site comprised of seven previously recorded isolates and one previously recorded site (05-04-52-2235, 2244, 2245, 2248, 2251, 2253, and 2254)	2009; 2013	U	N	N
05-04-52-02251	P-26-005927	P	Lithic scatter	Updated in 2013 to 05-04-52-2244 as one site comprised of seven previously recorded isolates and one previously recorded site (05-04-52-2235, 2244, 2245, 2248, 2251, 2253, and 2254)	2009; 2013	U	N	N
05-04-52-02282	-	P	Lithic scatter	-	2011	U	N	Y
05-04-52-02283	-	P	Lithic scatter	-	2011	U	N	N
05-04-52-02284	-	P	Lithic scatter	-	2011	U	N	N
05-04-52-02285	CA-MNO-6638	P	Lithic scatter	-	2011	U	N	Y
05-04-52-02286	-	P	Lithic scatter	-	2011	U	N	Y
05-04-52-02287	-	P	Lithic scatter	-	2011	U	N	Y
05-04-52-02308	P-26-004925	H	Historic water feature	Isolated concrete retainer box	2004	U	N	N
05-04-52-02318		P	Lithic scatter	-	2013	U	N	N
05-04-52-02349	CA-MNO-5510; P-26-007620	P	Lithic scatter	-	2013	U	N	N
05-04-52-02350	CA-MNO-5511; P-26-007621	P	Lithic scatter	-	2013	U	N	N
05-04-52-02356	CA-MNO-5517; P-26-007627	P	Lithic scatter	-	2013	U	N	Y
05-04-52-02357	CA-MNO-5518; P-26-007628	P	Lithic scatter	-	2013	U	N	Y
05-04-52-02360	CA-MNO-5521; P-26-007631	P	Lithic scatter	-	2013	U	N	Y

Forest Service No.	Trinomial/ Primary No.	Era	Site Type	Comments	Year	NRHP	Excavated? Y/N	Revisit? Y/N
05-04-52-02361	CA-MNO-5522; P-26-007632	P	Lithic scatter	-	2013	U	N	N
05-04-52-02362	CA-MNO-5523; P-26-007633	P	Lithic scatter	-	2013	U	N	Y
05-04-52-02363	CA-MNO-5524; P-26-007634	P	Lithic scatter	-	2013	U	N	Y
05-04-52-02364	CA-MNO-5525; P-26-007635	P	Lithic scatter	-	2013	U	N	N
05-04-52-02365	CA-MNO-5526; P-26-007635	P	Lithic scatter	-	2013	U	N	Y
05-04-52-02378	CA-MNO-5539; P-26-007649	P	Lithic scatter	-	2013	U	N	Y
05-04-52-02393	CA-MNO-5854; P-26-008074	H	Historic cabin/Residence	Structural remnants with refuse scatter	2014	U	N	N
05-04-52-02395	CA-MNO-5856; P-26-008076	H	Refuse scatter	-	2014	U	N	N
05-04-52-02396	CA-MNO-5857; P-26-008077	H	Historic rock quarry	Granite quarry	2014	U	N	N
05-04-52-02406	CA-MNO-5866; P-26-008086	P	Lithic scatter	-	2014	U	N	N
05-04-52-02412	-	H	Historic campground	Old Shady Rest CCC campground: concrete and rock fire pits	2015	U	N	N
05-04-52-02413	-	P	BRM/Milling feature	With lithic scatter	2012	U	N	Y
05-04-52-02414	-	P	BRM/Milling feature	Two BRMs	2012	U	N	Y
05-04-52-02415	-	P	Lithic scatter	-	2012	U	N	Y
05-04-52-02416	-	P	Lithic scatter	-	2012	U	N	N
05-04-52-02417	-	P	Prehistoric habitation	Lithic scatter with ground stone	2012	U	N	Y
05-04-52-02418	-	P	Lithic scatter	-	2012	U	N	Y
05-04-52-02419	-	P	Prehistoric rock alignment	With rockshelter and lithic scatter	2012	U	N	Y
05-04-52-02421	-	P	Lithic scatter	-	2012	U	N	Y
05-04-52-02422	-	H	Refuse scatter	-	2012	U	N	Y
05-04-52-02423	-	H	Refuse scatter	-	2012	U	N	Y
05-04-52-02424	-	H	Refuse scatter	-	2012	U	N	Y
05-04-52-02425	-	H	Refuse scatter	-	2012	U	N	Y
05-04-52-02426	-	H	Refuse scatter	-	2012	U	N	Y
05-04-52-02427	-	H	Refuse scatter	With cut tree stumps	2012	U	N	Y
05-04-52-02428	-	M	P: Lithic scatter H: Historic ditch	Water conveyance ditches and earthen dam	U; 2012	U	N	Y
05-04-52-02429	-	P	Lithic scatter	-	2012	U	N	Y
05-04-52-02435	-	M/E	Prehistoric/Historic/Ethnohistoric rock alignment	Possible ethnohistoric site with ditch features, lithic scatter, and stacked logs	2015	U	N	Y

Forest Service No.	Trinomial/ Primary No.	Era	Site Type	Comments	Year	NRHP	Excavated? Y/N	Revisit? Y/N
05-04-52-02436	-	H	Refuse scatter	-	2015	U	N	N
05-04-52-02439	-	H	Historic isolate	Isolated stack of split logs	2015	U	N	Y
05-04-52-02440	-	H	Refuse scatter	-	2015	U	N	Y
05-04-52-02441	-	P	Lithic scatter	-	2015	U	N	N
05-04-52-02445	-	H	Refuse scatter	1920s-1930s; associated with Mammoth Ranger Station	2016	NE	N	N
05-04-52-02452	-	P	Lithic scatter	-	2011	U	N	Y
05-04-52-02460	CA-MNO-0907; P-26-000907	M	P: Lithic scatter H: Historic fence	Extensive lithic scatter; fence alignment feature added in 2016	1982	U	N	Y
05-04-52-02462	-	H	Historic cabin/Residence	Stone and mortar remnants	2017	U	N	N
05-04-52-02469	CA-MNO-6167; P-26-008621	H	Historic road/Trail	-	2018	NE	N	N
05-04-52-02479	CA-MNO-4037; P-26-004916	M	P: Lithic scatter H: Refuse scatter	Combined with 05-04-52-0102 in 2021	2004	U	N	N
05-04-52-02484	-	H	Refuse scatter	-	2019	NE	N	N
05-04-52-02485	-	P	Lithic scatter	-	2019	U	N	N
05-04-52-02486	-	H	Historic Inn/ Lodge/Resort	Sierra Meadows Guest Ranch, 1969	2019	NE	N	N
05-04-52-02487	CA-MNO-6429; P-26-008929	P	Lithic scatter	-	2019	U	N	Y
05-04-52-02489	-	P	Lithic scatter	-	2019	U	N	N
05-04-52-02490	-	H	Historic Transmission Line	-	2019	U	N	N
05-04-52-02492	-	M	P: Lithic scatter H: Refuse scatter	-	2019	U	N	Y
05-04-52-02505	-	P	Lithic scatter	-	2019	U	N	N
05-04-52-02506	-	P	Lithic scatter	-	2019	U	N	N
05-04-52-02512	-	P	Lithic scatter	-	2020	U	N	Y
05-04-52-02515	-	H	Historic cabin/Residence	Wood frame foundation remnants and refuse scatter	2020	U	N	N
05-04-52-02528	-	H	Historic rock cairn	With one upright pocket tobacco tin	2019	U	N	N
05-04-52-02530	-	P	Lithic scatter	-	2020	U	N	N
05-04-52-02532	-	P	Lithic scatter	-	2018	U	N	N
05-04-52-02533	-	H	Historic cabin/Residence	Three stacked rock foundations with refuse scatter	2020	U	N	N
05-04-52-02535	-	P	Lithic scatter	-	2018	U	N	N
05-04-52-02536	-	P	Lithic scatter	-	2019	U	N	N
05-04-52-02540	-	H	Refuse scatter	-	2020	U	N	N

Forest Service No.	Trinomial/ Primary No.	Era	Site Type	Comments	Year	NRHP	Excavated? Y/N	Revisit? Y/N
05-04-52-02541	-	M	P: Lithic scatter H: Refuse scatter	-	2021	U	N	Y
05-04-52-02542	-	P	Lithic scatter	-	2021	U	N	Y
05-04-52-02543	-	P	Lithic scatter	-	2021	U	N	Y
05-04-52-02544	-	H	Refuse scatter	-	2021	U	N	N
05-04-52-02545	-	P	Lithic scatter	-	2021	U	N	N
05-04-52-02546	-	M	P: Lithic scatter H: Refuse scatter	-	2021	U	N	N
05-04-52-02552	-	H	Historic rock alignment	Associated with nearby trail	2021	U	N	Y
05-04-52-02553	-	P	BRM/Milling feature	With lithic scatter	2021	U	N	Y
05-04-52-02555	-	H	Refuse scatter	-	2021	U	N	N
05-04-52-02556	-	P	Lithic scatter	-	2021	U	N	N
05-04-52-02563	-	M	P: Lithic scatter H: Refuse scatter	-	2021	U	N	N
05-04-53-02579	-	H	Historic transmission line	Bishop-Lundy 1913 55kV transmission line	2019	NE	N	N
05-04-53-02580	-	H	Historic transmission line	Casa Diablo-Control 115kV transmission line	2019	NE	N	N
05-04-52-02592	-	H	Refuse scatter	Can dump	2021	U	N	N

Bedrock Milling / Milling Features

Bedrock milling/milling features are defined as a site with one or more BRMs or milling features with or without associated lithic scatters. If the site contains a rockshelter, evidence of habitation, or a lithic quarry, then those site types will define the location. There are seven BRM/milling feature sites within the Priority Area (05-04-52-00001, 05-04-52-00923, 05-04-52-02050, 05-04-52-02187, 05-04-52-02413, 05-04-52-02414, and 05-04-52-02553), and one multicomponent site (05-04-52-02138) with a BRM/milling feature component. Six BRM/milling feature sites contain associated lithic deposits, while one consists solely of BRM features (05-04-52-02414). All seven sites are located in the eastern two thirds of the Priority Area. Two BRM sites (05-04-52-00001 and 05-04-52-02050) are found in locations with steep slopes. The remaining five BRMs are in the easternmost section of the Priority Area and include three sites (05-04-52-00923, 05-04-52-02413, and 05-04-52-02414) that are located near an obsidian quarry, and two sites at the entrance to Long Valley where the vegetation community shifts to high desert. Soils around these sites consist of gravelly-loamy sands on 15- to 30-percent slopes in the western areas and gravelly sands on 0- to 15-percent slopes in the eastern locations.

Habitation

Habitation sites are defined as sites with evidence of living surfaces such as midden soils, and/or extensive artifact assemblages with ground stone and/or ceramics. There are five habitation sites within the Priority Area. Three of these contain large lithic scatters (05-04-52-00839, 05-04-52-00843, and 05-04-52-00933), and two contain moderately dense lithic deposits with ground stone (05-04-52-00939 and 05-04-52-02417). Two of these sites contain clear midden deposits (05-04-52-00839 and 05-04-52-00843) and are located in

the south-central portion of the Priority Area within 700 m of each other on flat terrain at an elevation of 2,440 m (8,005 ft.) amsl. Both midden sites contain numerous bifaces and flake tools. The vegetation community at these sites consists of grasses, manzanita, snowberry, and moderately spaced white fir trees. Site 05-04-52-00939 is also located at the same elevation as the two midden locations, 690 m east of site 05-04-52-00843, and comprises mostly obsidian debitage with two CCS flakes, one Late Archaic projectile point, and a handstone. The site was minimally tested for subsurface components in 2004 and monitored by G2 in 2018 during hand and machine test excavations which resulted in the site boundary extending beyond the original surface recordation. Excavations yielded subsurface obsidian flakes, but no flaked stone tools (see Previous Subsurface Excavations at Sites in the Priority Area section below). Site 05-04-52-00933 is a very extensive (130 acre) habitation site with hunting blinds, BRMs, a rock ring, thousands of obsidian and CCS flakes, projectile points ranging from the Early Archaic to Contact period, bifaces and other flaked stone tools, ceramic sherds, two handstones, and three small obsidian quarries. An update to the site in 1989 described the location as a possible ethnographically recorded village site, while a later update in 2020 separated the two obsidian quarries from the rest of the site, finding no cultural deposits to link them with the main site. Some excavations occurred here in 1970, revealing subsurface deposits up to 2.5 m below the ground surface (see below). Site 05-04-52-02417 is located near the obsidian quarry (05-04-52-00024) and consists of obsidian debitage with a single handstone. Soil types range from gravelly loamy sand to extremely coarse sandy soils on 0- to 15-percent slopes.

Rockshelter

Two rockshelter sites (05-04-51-00284 and 05-04-51-00298) occur within the eastern portion of the Priority Area. Site 05-04-51-00284 is present in the northeast and 05-04-51-00298 is located in the east-central area near the opening to Long Valley. Both rockshelter sites exhibit associated lithic deposits and are located in areas with 15- to 30-percent slopes and loamy coarse sandy soils containing large rock outcrops. Both are also directly adjacent to running water sources, including Hot Creek and an unnamed tributary to Hot Creek.

Lithic Quarry

There are two lithic quarry sites within the Priority Area: 05-04-52-00024 and 05-04-52-00933. Site 05-04-52-00024 is the prehistoric component of a multicomponent site that contains extensive cultural deposits. It is located on a hillside and on flat to gently sloping areas of the hill in the northeastern portion of the Priority Area near numerous prehistoric lithic scatter sites and historic-era site locations. The quarry is situated between 2,350 and 2,450 m (7,710-8,040 ft.) amsl. The site has been updated numerous times over the years since the original recording event in 1976 and has subsumed 26 other previously recorded resources in the area. The assemblage consists of obsidian cobbles and small boulders, cores, hammerstones, Early Archaic projectile points, bifaces, and thousands of obsidian flakes. The site also contains a large, extensive historic component (discussed in the section below). The vegetation community is big sagebrush and other shrubs interspersed with Jeffrey Pine. The ground surface is extremely gravelly, coarse sandy soils with eroding bedrock. Site 05-04-52-00933 is located at the easternmost portion of the Priority Area in Long Valley and contains three small obsidian quarries with large pebbles and cobbles associated with an extensive lithic deposit and subsurface artifacts located during early excavations in 1970-1971 (see Previous Subsurface Investigations at Sites in the Survey Area section below). The site is located on flat to gently sloping terrain in a typical high desert vegetation community below the eastern Sierran flank with gravelly sandy loamy soils. It is situated directly adjacent to Hot Creek and numerous springs.

Historic Sites

The Priority Area contains 62 historic resources, with 33 additional multicomponent sites containing historic components (Table 3). Historic resources consist primarily of refuse scatters but other site types include historic cabin/residence, Forest Service sites, historic transmission lines, Civilian Conservation

Corps (CCC) sites, ditches, historic mills, twentieth-century recreational residences/tracts, graves, trails/roads, mining, quarry, rock cairn, rock alignment, inn/lodge/resort, stacked wood feature, and a water feature.

Refuse Scatters

Refuse scatters are sites that consist solely of artifacts identified as refuse and no associated features. These site types comprise the majority of both historic sites (n = 23) and historic components of multicomponent sites (n = 21) within the Priority Area. Generally, refuse scatters in the Priority Area contain deposits dating from the late nineteenth century to the 1960s and are often located near other historic sites of the same era, such as residences, historic mills or towns, camp areas, Forest Service sites, or recreational residence sites.

Milling and Mining

The Priority Area and surrounding region were subject to both nineteenth- and twentieth-century lumber milling and mining activities. These pursuits are reflected in the presence of two historic mill site remnants (05-04-51-0322 and 05-04-52-0018) and two mining sites (05-04-52-00107 and 05-04-51-00241).

Forest Service and Civilian Conservation Corps

Forest management and recreation activities are evidenced in the Priority Area by seven historic Forest Service structures (05-04-52-00961 through 05-04-52-00967), and two CCC sites including a summer camp (05-04-52-00019) and a CCC campground (05-04-52-02412).

Cabins, Residential Remnants, and Recreational Residential Structures

The Priority Area contains nine historic sites defined by settler-era or early twentieth-century cabins or remnants thereof (05-04-51-00242, 05-04-52-00017, 05-04-52-00106, 05-04-52-00968, 05-04-52-02021, 05-04-52-02393, 05-04-52-02462, 05-04-52-02515, and 05-04-52-02533), two sites that represent seasonal recreational residence tracts (05-04-52-01056 and 05-04-52-01121), and one historic inn/lodge/resort site (05-04-02486). Additionally, five historic components of multicomponent sites include a historic cabin/residence component (05-04-51-00317, 05-04-52-00020, 05-04-52-00063, 05-04-52-00977, and 05-04-52-02196), while the residential remnants of the town site of Mill City, with cabins and structural remains, defines the historic component of one site (05-04-52-02172). Both the recreational residential tracts and the lodge are still operational and have undergone historic building evaluations resulting in all three resources being determined ineligible for listing in the National Register of Historic Places (NRHP).

Other Historic Resources in the Priority Area

The Priority Area also contains several other historic site types represented by only one to a handful of sites. These include a historic-era grave site (05-04-52-0105), transmission line sites (05-04-52-02490, 05-04-53-02579, and 05-04-53-02580), a granite rock quarry (05-04-52-02396), a rock alignment (05-04-52-02552), a cairn site (05-04-52-02528), roads/trail sites (05-04-52-02020, 05-04-52-02040, 05-04-52-02194, and 05-04-52-02469), a stacked wood feature (05-04-52-02439), a water conveyance ditch (05-04-52-00087), and a concrete retainer feature (05-04-52-02308). Additionally, there are six multicomponent sites in the Priority Area not discussed above that include historic elements of a grave (05-04-52-00035), a twentieth-century aborglyph (05-04-52-00841), a tent pad (05-04-52-00919), the historic Mill City stamp mill site (05-04-52-02140), a ditch feature (05-04-52-02428), a historic fence (05-04-52-02460), .

PREVIOUS EXCAVATIONS AT SITES IN THE PRIORITY AREA

Thirteen subsurface investigations, including test excavations, data recovery operations, and cultural monitoring projects with positive results, were completed within the Priority Area and are addressed in 15

reports between 1972 and 2021 (R1981050400191, R198405040320, R1991050400556, R1994050400378, R1997050400622b, R2009050400382, R2016050402054, R2018050402281, R2019050402350, R2019050402353, R2020050402410, R2020050402451, R2021050402525, Goldberg, Skinner and Burton 1990- missing, and M. Wilson for EI 2021- missing). Excavations took place at sites 05-04-51-00046/00069/00266, 05-04-52-00007, 05-04-52-00008/00096, 05-04-52-00043/00089, 05-04-52-00839, 05-04-52-00840, 05-04-52-00841, 05-04-52-00843, 05-04-52-00933, 05-04-52-00939, 05-04-52-00982, 05-04-52-02236, and 05-04-52-02306. Most of these sites comprise large, dense lithic deposits, except sites 05-04-52-00007, 05-04-52-00008, 05-04-52-00982, and 05-04-52-02236 which represent lighter density lithic scatters. Five of these sites (05-04-52-00839, 05-04-52-00840, 05-04-52-00841, 05-04-52-00843, and 05-04-52-00939) represent either seasonal or year-round habitations with midden soils and/or ground stone, ceramics, or extensive lithic scatters. All of the excavated sites are located across the eastern half of the Priority Area and all but two of the subsurface investigations revealed subsurface deposits.

Site 05-04-51-00046/69/266 is a very large, dense lithic scatter previously determined eligible for the NRHP in 1985. The site consists almost exclusively of obsidian debitage, with two broken projectile points (one classified as a Silver Lake variant within the Great Basin Stemmed tradition and the other is a Humboldt series projectile point), 21 obsidian bifaces, and numerous flake tools. Test excavations and later data recovery operations were undertaken by Caltrans in 1984 and post-1988, respectively. Both efforts were addressed under a single report and addendums (R198405040320). Test excavations are addressed in Attachment 14 of the report addendum and occurred throughout the site in 1984. These excavations identified nearly 33,000 artifacts, with cultural material present up to a meter below the ground surface. Subsurface artifacts consisted of obsidian flakes, flake tools, and bifaces, with hydration dating placing the site between 3,000 and 800 years BP, with several periods of use in between those dates. However, while the data recovery plan is present in both a Data Recovery Plan document, and on page nine of the Supplemental Finding of No Adverse Effect from 1988, the results of any data recovery excavations are absent.

Two sites (05-04-52-00007 and 05-04-52-00008/00096) first underwent testing in 1981 (No report on file- cited as 'Bousacaren, Hall, and Swenson 1982' in the excavation report), then moved to data recovery excavations in 1982 and 1983, which were documented in a single legacy report (R2019050402353). The two sites represent extensive lithic scatters and the excavations resulted in the recovery of thousands of pieces of obsidian debitage at each site. Site 05-04-52-00007 yielded a single diagnostic artifact dating to the Late Archaic period along with several independent obsidian hydration dates ranging from 3,000 BP to 1,200 BP, while site 05-04-52-00008/00096 contained no diagnostic artifacts and obsidian hydration dates ranged between 1,900 BP and 1,100 BP. The maximum depth for the sites was 1.3 m and 1.4 m, respectively.

One subsurface investigation (R2020050402410), a joint effort by JRP Historical Consulting and Far Western Anthropological Research Group, occurred at the Sierra Meadows Guest Ranch (05-14-52-02486). As part of their efforts to identify historic properties within their larger Project Area, the crew placed 16 shovel test probes (STP) where prehistoric cultural materials had been noted previously by Forest Service employees. However, the test excavations were not placed within any particular site boundary aside from historic site 05-14-52-02486 and only 18 subsurface obsidian flakes were observed.

Site 05-04-52-00043/00089 underwent test excavations in 1980, and again in 1990, documented in two reports (R1981050400191 and R1991050400556). The site was determined eligible for the NRHP. Twenty-one 1 x 2 m units placed throughout the site revealed over 150,000 subsurface artifacts consisting almost entirely of obsidian debitage. Obsidian hydration dating revealed at least three prolonged periods of use, beginning around 4,950 BP and extending to 1,250 BP and possibly later.

Sites 05-04-52-00839, 05-04-52-00840, 05-04-52-00841, and 05-04-52-00843 were all excavated in 1993, primarily with 1 x 1 m test units (R1994050400378). The results revealed subsurface cultural deposits with maximum depths between 50 and 90 cm below the ground surface. Sites 05-04-52-00841 and 05-04-52-00843 underwent the most intensive testing, with 18 and 20 test units placed throughout the sites, respectively. Subsurface deposits ranged between 70 artifacts at site 05-04-52-00839, to 600 artifacts at site 05-04-52-00840, 4,275 artifacts in 05-04-52-00841, and 1,700 at 05-04-52-00843. Subsurface recoveries of diagnostic tools at the four sites ranged from Early to Late Archaic projectile points, including Humboldt, Elko, and Rosegate series. Other flaked stone artifacts found during these excavations included non-diagnostic bifaces and, often, large quantities of obsidian debitage.

Site 05-04-52-0933 is an extensive habitation site that was excavated by California State University, Long Beach archaeologists from 1970-1971. Unfortunately, the excavation report, along with the findings, is missing. The site record notes Tadlock, W. L., and G. J. Tadlock, 1972 as authors of the missing report. The site records do not contain any excavation information; however, the excavation crew stated they found ceramics, Early to Late Archaic projectile points, and other lithic tools during their surface survey. Subsequent updates in 1989 and 2020 describe that midden soils were found at depths beyond 2.3 m below the ground surface.

An updated record by G2 from 2018 for site 05-04-52-00939 documents 31 machine and hand excavation units of varying sizes placed to determine the presence of soil contamination, addressed in report R2018050402281. These test units were culturally monitored and resulted in positive subsurface findings for both prehistoric and historic artifacts in 20 of the test units. The maximum depth for these 31 test units was 48 inches. No diagnostic prehistoric artifacts were located subsurface. The 2018 update also indicates the site was tested in 2004 with a single 1 x 1 m test unit that resulted in the recovery of 35 obsidian flakes (R2019050402350). However, a thorough examination of R2019050402350 failed to identify any mention of test excavations, nor is any testing mentioned in a 2005 site update.

Sites 05-04-52-02236 and 05-04-52-02306 are addressed under one 2021 report by the Forest Service (R2021050402525), and two test excavation reports from 2021 (R2016050402054, and M. Wilson 2021-possibly R2021050402469 or another EI report that may be forthcoming). Four 50 x 50 cm STU's were placed throughout site 05-04-52-02306, and a single 50 x 50 cm STU was placed within site 05-04-52-02236. The results of the subsurface testing revealed over 1,200 pieces of obsidian debitage and no diagnostic artifacts at site 05-04-52-02306 with cultural materials found to a depth of 30 cm below the ground surface. The test unit at site 05-04-52-02236 exposed zero cultural materials and was excavated to a depth of 30 cm below the ground surface.

Site 05-04-52-00982 is a light-density lithic scatter and was excavated in 1994 (missing R1994050400378).

PREVIOUSLY RECORDED CULTURAL RESOURCES WITHIN A 0.25-MILE RADIUS OF THE PRIORITY AREA

An additional 227 previously recorded cultural resources occur within the 0.25-mile buffer of the Priority Area (Table 4). The majority of these are prehistoric sites (n = 124), while there are 80 historic-era sites, 22 multicomponent sites with both prehistoric and historic components, and one ethnohistoric site.

Table 4. Previously Recorded Cultural Resources within a 0.25-Mile Radius of the Priority Area

Forest Service No.	Trinomial/ Primary No.	Era	Site Type	Comments	Year Recorded	NRHP Eligibility
05-04-51-00035	CA-MNO-0824	P	Lithic scatter	-	?	U

Forest Service No.	Trinomial/ Primary No.	Era	Site Type	Comments	Year Recorded	NRHP Eligibility
05-04-51-00047	CA-MNO-0610	P	Lithic scatter	-	1976	U
05-04-51-00049	CA-MNO-0649	P	Lithic scatter	-	1976	U
05-04-51-00053	CA-MNO-0669; P-26-000669	P	Lithic scatter	-	1976	U
05-04-51-00055	CA-MNO-0728; P-26-000728	P	Lithic scatter	-	1976	U
05-04-51-00069	CA-MNO-0574; P-26-000574	M	P: Lithic scatter H: Refuse scatter	Extensive lithics; combined with Site 00046 and 00266 during 2021 update	1974	E
05-04-51-00075	-	P	Lithic scatter	-	1977	U
05-04-51-00222	-	P	Lithic scatter	Updated as an isolate in 2021	1980	U
05-04-51-00223	CA-MNO-0811	P	Lithic scatter	Updated as an isolate in 2021	1980	U
05-04-51-00227	CA-MNO-0813H	H	Refuse scatter	-	1980	U
05-04-51-00229	P-26-000595	P	Lithic scatter	-	1980	U
05-04-51-00230	-	P	Lithic scatter	-	1980	U
05-04-51-00232	-	P	Lithic scatter	-	1980	U
05-04-51-00234	-	P	Lithic scatter	-	1980	U
05-04-51-00237	-	P	Lithic scatter	-	1980	U
05-04-51-00266	CA-MNO-0574; P-26-000574	M	P: Lithic scatter H: Refuse scatter	Extensive lithics; combined with Site 00046 and 00266 during 2021 update	1976	E
05-04-51-00268	CA-MNO-0825	P	Lithic scatter	-	1979	U
05-04-51-00269	-	P	Lithic scatter	-	1979	U
05-04-51-00293	CA-MNO-3528; P-26-003760; P-26-005495	P	Lithic scatter	Not relocated in 2013	1979	U
05-04-51-00296	-	P	Lithic scatter	-	1979	U
05-04-51-00302	P-26-005480	P	Lithic scatter	Not relocated in 2013 (mis-plotted)	1979	U
05-04-51-00303	CA-MNO-3534; P-26-003766; P-26-005481	P	Lithic scatter	Not relocated in 2013 (mis-plotted)	1979	U
05-04-51-00304	P-26-005482	P	Lithic scatter	Not relocated in 2013 (mis-plotted)	1979	U
05-04-51-00309	-	P	Lithic scatter	-	1980	U
05-04-51-00311	CA MNO 0838; P-26-000838	P	Prehistoric lithic quarry	Not relocated in 2013 (mis-plotted)	1979	U
05-04-51-00314	-	P	Lithic scatter	-	1979	U
05-04-51-00315	CA-MNO-0839H; P-26-000839	H	Historic cabin/Residence	Granite rock structure foundation and hearth	1979	U
05-04-51-00321	CA-MNO-0845H; P-26-000845	H	Refuse scatter	-	1979	U
05-04-51-00323	CA-MNO-0846H; P-26-000846	H	Refuse scatter	-	1979	U
05-04-51-01821	CA-MNO-6162; P-26-008546	P	Lithic scatter	-	2017	U
05-04-52-00004	CA-MNO-0011; P-26-005941; P-26-005942	P	Lithic scatter	Originally part of 05-04-52-02167 and 05-04-52-02168. Separated in 2009; Relocated and recombined 2017. Original record missing	1961; 2009; 2017	U
05-04-52-00010/ 05-04-52-00053	CA-MNO-0714	P	BRM/Milling features	With lithic scatter; Excavated in 1979	1980	NE
05-04-52-00016	CA-MNO-0620	P	BRM/Milling features	With milling stones and lithic scatter	1975	U
05-04-52-00021	CA-MNO-0625	M	H: Mill P: Lithic scatter	With debris scatter	1975	U

Forest Service No.	Trinomial/ Primary No.	Era	Site Type	Comments	Year Recorded	NRHP Eligibility
05-04-52-00022	CA-MNO-0011	M	P: Prehistoric habitation H: Historic glyphs/Carvings	Mammoth Creek Caves: Pictographs, lithic scatter, BRM/Milling features, millingstones, beads, steatite bowls, manos, bones, and ceramics; historic carvings. *Noted as severely damaged	1975	U
05-04-52-00025	CA-MNO-0582	M	P: Lithic scatter H: Refuse scatter	Extensive lithics; Combined with 05-04-52-0050 in 1983	1969; 1983	E
05-04-52-00026	CA-MNO-0449; CA-MNO-0559; CA-MNO-0628; P-26-000449; P-26-000559; P-26-000628	M	P: BRM/Milling features H: Historic cabin/Residence	With extensive lithics and historic refuse; Numerous updates and SHPO involvement; Tested in 2009	1986	E
05-04-52-00044	CA-MN0-0879	P	Lithic scatter	Not relocated in 2010	1979	U
05-04-52-00045	CA-MNO-0880	P	Lithic scatter	-	1979	U
05-04-52-00047	CA-MNO-0626	P	?	-		?
05-04-52-00048	CA-MNO-0035; CA-MNO-0869	M	P: Lithic scatter H: Refuse scatter	Updated to include small can scatter in 2021	1978	U
05-04-52-00049	CA-MNO-0011	P	Lithic scatter	Later combined with site 05-04-52-0004	1979	U
05-04-52-00050	CA-MNO-0582	M	P: Lithic scatter H: Refuse scatter	Extensive lithics; Combined with 05-04-52-0025 in 1983	1969; 1983	E
05-04-52-00060	CA-MNO-0770	P	Lithic scatter	-	1979	U
05-04-52-00061	CA-MNO-0091	P	Lithic scatter	-	1979	U
05-04-52-00064	CA-MNO-0094; P-26-000094	P	Lithic scatter	Tested in 2021	1979	NE
05-04-52-00066	CA-MNO-0089; P-26-000089	P	Lithic scatter	-	1979	U
05-04-52-00083	CA-MNO-0529	P	Prehistoric habitation	Ground stone and lithic scatter	1980	U
05-04-52-00088	CA-MNO-1202; P-26-001202	P	Lithic scatter	Excavated in 1989	1979	U
05-04-52-00090	CA-MNO-1654	P	Lithic scatter	-	1982	U
05-04-52-00103	-	H	Historic grave	Graveyard, dated 1878-1881	1982	U
05-04-52-00104	-	P	Lithic scatter	-	1982	U
05-04-52-00247	CA-MNO-3417; P-26-003602	P	Lithic scatter	Not relocated in 2009	1985	U
05-04-52-00251	-	P	Lithic scatter	-	1983	U
05-04-52-00258	-	P	Lithic scatter	-	1983	U
05-04-52-00259	CA-MNO-2140	P	Lithic scatter	-	1983	U
05-04-52-00314	CA-MNO-3540	P	Lithic scatter	-	1979	U
05-04-52-00328	-	P	Lithic scatter	-	1983	U
05-04-52-00329	-	P	Lithic scatter	-	1983	U
05-04-52-00353	CA-MNO-2174-H	M	P: Lithic scatter H: Refuse scatter	Combined with 05-04-52-0924	1983	U
05-04-52-00373	CA-MNO-2068	P	Lithic scatter	-	1983	U
05-04-52-00378	CA-MNO-1924; P-26-001924	P	Lithic scatter	-	1983	U
05-04-52-00391	-	P	Lithic scatter	-	1983	U
05-04-52-00399	CA-MNO-1980; P-26-001980	P	Lithic scatter	-	1983	U
05-04-52-00620	CA-MNO-0620	P	Lithic scatter	-	U; 1982	U
05-04-52-00827	CA-MNO-0560	P	Lithic scatter	-	1987	U
05-04-52-00830	-	P	Lithic scatter	Excavated with surface collection	1987	U

Forest Service No.	Trinomial/ Primary No.	Era	Site Type	Comments	Year Recorded	NRHP Eligibility
05-04-52-00896	CA-MNO-2423	H	Refuse scatter	Possible sheepherder camp with artifact scatter including toys made from cans	1985	NE
05-04-52-00897	CA-MNO-2424	M	P: Lithic scatter H: Refuse scatter	-	1985	U
05-04-52-00910	CA-MNO-2448	H	Historic mining	Mammoth Consolidated Mine site: 1878 structure remains and mining features	1986	U
05-04-52-00913	-	P	Lithic scatter	-	1986	U
05-04-52-00915	CA-MNO-2231	P	Lithic scatter	-	1986	U
05-04-52-00918	-	M	P: Lithic scatter H: Refuse scatter	-	1986	U
05-04-52-00921	CA-MNO-2209; CA-MNO-0666; CA-MNO-0667; CA-MNO-0672	P	Lithic scatter	Extensive lithic scatter with multiple concentrations/loci: Four separate sites combined in 2012	1976; 1986	U
05-04-52-00924	CA-MNO-2174-H CA-MNO-2445	M	P: Lithic scatter H: Refuse scatter	Combined with 05-04-52-0353	1983; 1992	U
05-04-52-00925	-	P	Lithic scatter	-	1988	U
05-04-52-00926	CA-MNO-2430, CA-MNO-2446	P	Lithic scatter	-	1987	U
05-04-52-00932	CA-MNO-0029; CA-MNO-0037	P	Lithic scatter	Two separate locations with same FS site number	1955	U
05-04-52-00969	CA-MNO-2682	P	Lithic scatter	Original record missing	1979	U
05-04-52-00970	CA-MNO-2683	P	Lithic scatter	Original record missing	1979	NE
05-04-52-00983	-	P	Lithic scatter	-	1993	U
05-04-52-00984	CA-MNO-2772	P	Lithic scatter	Excavated in 1997	1993	U
05-04-52-00985	CA-MNO-2773	P	Lithic scatter	Excavated in 1997	1993	U
05-04-52-00986	CA-MNO-2774	P	Lithic scatter	Excavated in 1997	1993	U
05-04-52-00987	CA-MNO-2775	P	Lithic scatter	Excavated in 1997	1993	U
05-04-52-00999	CA-MNO-2798	P	Lithic scatter	-	1993	U
05-04-52-01001	CA-MNO-2851	P	Lithic scatter	Not relocated in 2011	1993	U
05-04-52-01023	CA-MNO-0721	P	Lithic scatter	-	1974	U
05-04-52-01029		H	Historic Inn/Lodge/ Resort	Crystal Crag Lodge complex: lodge, 20 cabins, ancillary	1994	U
05-04-52-01035	P-26-005913	H	Historic Recreation Residences/ Tracts	Falls Recreation residence tract: 21 cabins and associated ancillary structures and features	2009	U
05-04-52-01059	CA-MNO-3267; P-26-003267	H	Historic cabin/ Residence	Twin Lakes Art Gallery/ 1924 Willard Studio and summer home with associated ancillary structures and features	1997	E
05-04-52-01071	-	H	Historic Inn/Lodge/ Resort	Woods Lodge: 24 cabins and ancillary structures and features	?	U
05-04-52-01078	-	H	Historic Inn/Lodge/ Resort	Tamarack Lodge: Large historic ski lodge, cabins and ancillary structures and features	2005	E
05-04-52-01079	-	H	Historic Inn/Lodge/ Resort	Wildyrie Lodge: cabins and ancillary structures and features	U ("1990s); 2020	U
05-04-52-01151	-	H	Historic Recreation Residences/ Tract	Lake George Recreation tract: nine cabins and associated features; *Record from 2004 uses FS No. 05-04-52-01152	2004	NE

Forest Service No.	Trinomial/ Primary No.	Era	Site Type	Comments	Year Recorded	NRHP Eligibility
05-04-52-01160	CA-MNO-0568	P	Pictograph/ Petroglyph	-	1964 (Partially Illegible)	U
05-04-52-01173; 05-04-52-02288	P-26-004917 to P-26-004923	M	Historic Recreation Residences/ Tract	Twin Lakes recreation tract: 21 residences and associated ancillary structures and features, and lithic scatter; Shares a Primary No. with 05-04-52-01199 (See below)	2007	NE
05-04-52-01194	CA-MNO-3508	H	Historic mining	Mammoth Mining Co. mine #3; numerous mining features from 1878-1980's	2000	NE
05-04-52-01195	CA-MNO-0035	P	Lithic scatter	-	1979	U
05-04-52-01199; 05-04-52-02411	CA-MNO-3832; P-26-004923	M	Historic Recreation Residences/ Tract	Falls Residence tract: residences, and lithic scatter. Updated to 05-04-52-02411 to include historic refuse in 2013; Tested in 2021	2002	U
05-04-52-02010	CA-MNO-0665	P	Lithic scatter	-	1976	U
05-04-52-02034	CA-MNO-3793	H	Historic mining	with lumber-lined pit	2003	U
05-04-52-02036	CA-MNO-3795; P-26-004265	H	Historic mining	Mine site with adit, prospects, and rock features	2003	U
05-04-52-02038	P-26-004256	H	Historic Dam	Twin Lakes Dam: 58' dam feature	2003	U
05-04-52-02039	P-26-004257	H	Historic Dam	Lake Mamie Dam	2003	U
05-04-52-02041	CA-MNO-3797; P-26-004267	P	Lithic scatter	-	2003	U
05-04-52-02101	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #6	2005	U
05-04-52-02102	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #8	2005	U
05-04-52-02103	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #9	2005	NE
05-04-52-02104	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #11	2005	U
05-04-52-02105	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #12	2005	U
05-04-52-02106	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #15	2005	U
05-04-52-02107	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #15, Employee Lodge	2005	U
05-04-52-02108	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #16	2005	U
05-04-52-02109	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #17	2005	U
05-04-52-02110	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #18	2005	U
05-04-52-02111	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #19	2005	U

Forest Service No.	Trinomial/ Primary No.	Era	Site Type	Comments	Year Recorded	NRHP Eligibility
05-04-52-02112	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #20	2005	U
05-04-52-02113	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #21	2005	U
05-04-52-02114	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #22	2005	U
05-04-52-02115	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #23	2005	U
05-04-52-02116	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #24	2005	U
05-04-52-02117	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #27	2005	U
05-04-52-02118	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #28, Shower Facility	2005	U
05-04-52-02119	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #29, Electric/phone facility	2005	U
05-04-52-02120	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #30, Shop/hilltop house	2005	U
05-04-52-02121	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #31	2005	U
05-04-52-02122	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #32	2005	U
05-04-52-02123	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #33	2005	U
05-04-52-02124	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #34	2005	U
05-04-52-02125	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #35	2005	U
05-04-52-02126	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #36	2005	U
05-04-52-02127	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #37	2005	U
05-04-52-02128	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #38	2005	U
05-04-52-02129	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #40	2005	U
05-04-52-02130	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #41	2005	U

Forest Service No.	Trinomial/ Primary No.	Era	Site Type	Comments	Year Recorded	NRHP Eligibility
05-04-52-02131	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort: Cabin #50, (ANNEX)	2005	U
05-04-52-02132	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort Fisherman's Cabin	2005	U
05-04-52-02135	-	P	Lithic scatter	-	2007	U
05-04-52-02136	-	P	Lithic scatter	-	2007	U
05-04-52-02151	CA-MNO-4625; P-26-005926	P	Lithic scatter	-	2009	U
05-04-52-02156	CA-MNO-4630; P-26-005931	P	Lithic scatter	-	2009	U
05-04-52-02157	CA-MNO-4631; P-26-005932	P	Lithic scatter	-	2009	U
05-04-52-02158	CA-MNO-4632; P-26-005933	P	Lithic scatter	-	2009	U
05-04-52-02164	CA-MNO-4637; P-26-005938	P	Lithic scatter	-	2009	U
05-04-52-02166	CA-MNO-4639; P-26-005940	P	Lithic scatter	-	2009	U
05-04-52-02167	CA-MNO-4640; P-26-005941	P	Lithic scatter	Combined with 05-04-52-0004 and 05-04-52-02168 in 2017	2009	U
05-04-52-02168	CA-MNO-4641; P-26-005942	P	Pictograph/ Petroglyph	On basalt outcrop; combined with 05-04-52-0004 and 05-04-52-02167 in 2017	1961; 2009	U
05-04-52-02173	CA-MNO-4644; P-26-005945	H	Historic cabin/ Residence	'Deer Rest Lodge': Standing stone cabin and associated refuse scatter	2009	U
05-04-52-02175	CA-MNO-4623	H	Refuse scatter	-	2009	U
05-04-52-02177	P-26-006160	H	Voorhis Boys Camp: lodge, tent platforms and associated structures and features	Voorhis Boys Camp: lodge, tent platforms and associated structures and features	2010	U
05-04-52-02185	-	P	Lithic scatter	-	2010	U
05-04-52-02188	-	P	Lithic scatter	-	2010	U
05-04-52-02191	-	M	P: Lithic scatter H: Refuse scatter	-	2010	U
05-04-52-02195	-	P	Lithic scatter	-	2010	U
05-04-52-02199	-	H	Historic privy	With refuse scatter	2010	U
05-04-52-02253	P-26-005927	P	Lithic scatter	Updated to 05-04-52-2244 in 2013 as one site comprising seven previously recorded isolates and one previously recorded site (05-04-52-2235, 2244, 2245, 2248, 2251, 2253, and 2254)	2009; 2013	U
05-04-52-02254	P-26-005927	P	Lithic scatter	Updated to 05-04-52-2244 in 2013 as one site comprising seven previously recorded isolates and one previously recorded site (05-04-52-2235, 2244, 2245, 2248, 2251, 2253, and 2254)	2009; 2013	U
05-04-52-02291	CA-MNO-2761H	H	Historic trail/ Road	Nine segments of the 'Old County Road'	1993	U
05-04-52-02292	-	H	Historic Inn/Lodge/ Resort	Tamarack Resort Ski center: single cabin	2005	U

Forest Service No.	Trinomial/ Primary No.	Era	Site Type	Comments	Year Recorded	NRHP Eligibility
05-04-52-02296	-	H	Historic Inn/Lodge/ Resort	Mammoth Mountain Inn Complex Historic District: lodging and dining facilities and associated structures and features	2011	E
05-04-52-02297	-	H	Historic Inn/Lodge/ Resort	Mammoth Mountain Chalets: 21 cabins and associated structures	2018	NE
05-04-52-02305	-	H	Historic ditch	Mammoth City 1879 water conveyance ditch	2013	U
05-04-52-02306	-	P	Lithic scatter	Dense lithics with four concentrations. Tested in 2016	2013	U
05-04-52-02312	-	P	Lithic scatter	-	2013	U
05-04-52-02317	-	P	Lithic scatter	-	2013	U
05-04-52-02320	-	H	Refuse scatter	-	2013	U
05-04-52-02321	-	H	Refuse scatter	-	2013	U
05-04-52-02334	-	P	Lithic scatter	-	2013	U
05-04-52-02336	-	H	Stone foundation remains	-	2013	U
05-04-52-02342	CA-MNO-5503; P-26-007613	P	Lithic scatter	-	2013	U
05-04-52-02346	CA-MNO-5507; P-26-007617	P	Lithic scatter	-	2013	U
05-04-52-02347	CA-MNO-5508; P-26-007618	P	Lithic scatter	-	2013	U
05-04-52-02348	CA-MNO-5509; P-26-007619	P	Lithic scatter	-	2013	U
05-04-52-02351	CA-MNO-5512; P-26-007622	H	Refuse scatter	-	2013	NE
05-04-52-02352	CA-MNO-5513; P-26-007623	P	Lithic scatter	-	2013	U
05-04-52-02353	CA-MNO-5514; P-26-007624	P	Lithic scatter	-	2013	U
05-04-52-02354	CA-MNO-5515; P-26-007625	P	Lithic scatter	-	2013	U
05-04-52-02355	CA-MNO-5516; P-26-007626	P	Lithic scatter	-	2013	U
05-04-52-02358	CA-MNO-5519; P-26-007627	P	Lithic scatter	-	2013	U
05-04-52-02359	CA-MNO-5520; P-26-007630	P	Lithic scatter	-	2013	U
05-04-52-02366	CA-MNO-5527; P-26-007637	P	Lithic scatter	-	2013	U
05-04-52-02367	CA-MNO-5528; P-26-007638	P	Lithic scatter	-	2013	U
05-04-52-02368	CA-MNO-5529; P-26-007639	P	Lithic scatter	Dense lithics with two concentrations	2013	U
05-04-52-02369	CA-MNO-5530; P-26-007640	H	Refuse scatter	-	2013	U
05-04-52-02371	CA-MNO-5532; P-26-007642	M	P: Lithic scatter H: Refuse scatter	-	2013	U
05-04-52-02372	CA-MNO-5533; P-26-007643	P	Lithic scatter	-	2013	U
05-04-52-02373	CA-MNO-5534; P-26-007644	P	Lithic scatter	-	2013	U
05-04-52-02380	CA-MNO-5541; P-26-007651	P	Lithic scatter	-	2013	U
05-04-52-02381	CA-MNO-5542; P-26-0076452	M	P: Lithic scatter H: Refuse scatter	-	2013	U

Forest Service No.	Trinomial/ Primary No.	Era	Site Type	Comments	Year Recorded	NRHP Eligibility
05-04-52-02382	CA-MNO-5543; P-26-007653	P	Lithic scatter	-	2013	U
05-04-52-02384	CA-MNO-5545; P-26-007655	P	Lithic scatter	-	2013	U
05-04-52-02385	CA-MNO-5546; P-26-007656	P	Lithic scatter	-	2013	U
05-04-52-02386	CA-MNO-5547; P-26-007657	P	Lithic scatter	-	2013	U
05-04-52-02387	CA-MNO-5548; P-26-007658	P	Lithic scatter	-	2013	U
05-04-52-02389	CA-MNO-5404H; P-26-004922	H	Refuse scatter	-	2004	U
05-04-52-02390	CA-MNO-5853H; P-26-008073	H	Historic mining	Mining site with one adit and associated tailings and debris	2014	U
05-04-52-02394	CA-MNO-5855; P-26-008075	M	P: Prehistoric lithic quarry H: Historic mining	Prospect pit; with lithic scatter	2014	U
05-04-52-02397	CA-MNO-5858; P-26-008078	M	P: Prehistoric lithic scatter H: Historic mining	-	2014	U
05-04-52-02401	CA-MNO-5861: P-26-008081	M	P: Prehistoric lithic scatter	Mining site with six prospect pits, and lithic isolate	2014	U
05-04-52-02402	CA-MNO-5862; P-26-008082	H	Historic mining	Isolated prospect pit	2014	U
05-04-52-02403	CA-MNO-5863; P-26-008083	H	Historic mining	Isolated prospect pit	2014	U
05-04-52-02404	CA-MNO-5864; P-26-008084	H	Historic mining	With adit, mobile stamp mill, and prospect pits	2014	U
05-04-52-02405	CA-MNO-5865; P-26-008085	H	Historic mining	Isolated prospect pit	2014	U
05-04-52-02411	CA-MNO-3832; P-26-004355; P-26-004923	M	H: Historic Recreation Residences/ Tract P: Lithic scatter	Falls Residence tract: residences, and lithic scatter. Updated to 05-04-52-01199 to include historic refuse in 2013	2002	U
05-04-52-02420	-	P	Lithic scatter	-	2012	U
05-04-52-02430	-	H	Historic privy	With pit depressions	2012	U
05-04-52-02431	-	P	BRM/Milling features	On two granite boulders	2015	U
05-04-52-02432	-	M	H: Historic cabin/Residence P: Lithic scatter	Structural foundations and associated features;	2015	U
05-04-52-02433	-	H	Historic wall/Fence	Isolated stone wall	2015	U
05-04-52-02434	-	H	Historic privy	-	2015	U
05-04-52-02444	-	P	Lithic scatter	-	2017	U
05-04-52-02446	-	E	Ethnohistoric Bow stave tree	Juniper tree with bow stave scars	2016	U
05-04-52-02447	-	H	Historic Inn/Lodge/ Resort	1953 Mammoth Mountain Lodge	2009	NE
05-04-52-02448	CA-MAD-2842H; P-20-003122	H	Historic trail/ Road	Reds Meadow Road, pre-1930	2016	NE
05-04-52-02449	-	P	Lithic scatter	-	2011	U
05-04-52-02450	-	P	Lithic scatter	-	2011	U

Forest Service No.	Trinomial/ Primary No.	Era	Site Type	Comments	Year Recorded	NRHP Eligibility
05-04-52-02451	CA-MNO-3234; P-26-3295	P	Lithic scatter	-	2011	U
05-04-52-02461	-	P	Lithic scatter	-	2017	U
05-04-52-02464	-	H	Refuse scatter	-	2018	U
05-04-52-02478	-	H	Refuse scatter	-	2018	U
05-04-52-02480	-	P	Lithic scatter	-	2004	U
05-04-52-02481	P-26-004921	H	Historic cabin/ Residence	Cobble/masonry structure and one can	2004	U
05-04-52-02488	-	P	Lithic scatter	-	2019	U
05-04-52-02551	-	P	Lithic scatter	-	2021	U
05-04-52-02560	-	P	Lithic scatter	-	2021	U
05-04-52-02587	-	H	Refuse scatter	-	2021	U

H, Historic; P, Prehistoric, M, Multicomponent; E, Eligible; NE, Not Eligible; U, Unevaluated

Prehistoric Sites

Prehistoric sites (n = 124) and multicomponent sites (n = 22) with prehistoric components in the 0.25-mile buffer consist primarily of lithic scatters, followed by BRM/milling sites, Petroglyph/Pictographs, habitation, a lithic quarry, and one unknown site type with a missing record. There is also one ethnohistoric site present.

Lithic Scatters

A total of 116 prehistoric lithic scatters and additional 20 multicomponent sites with lithic scatters in the 0.25-mile buffer are found mostly in the eastern and south-central areas; however, a cluster of lithic scatters are found in the northwest area, and the southern region surrounding the several lakes, southwest of the town of Mammoth Lakes, where numerous recreational residence tracts and historic mining features and mine sites occur. The areas around Casa Diablo Hot Springs, two of the large habitation sites with midden deposits discussed above (05-04-52-00839 and 05-04-52-00843), and the large obsidian quarry site (05-04-52-00024) contain large numbers of lithic scatter sites.

Bedrock Milling / Milling Features

Three BRM/milling sites occur within the 0.25-mile buffer (05-04-52-00010/05-04-52-00053, 05-04-52-00016, and 05-04-52-02431). One additional BRM/milling site comprises the prehistoric element of a multicomponent site (05-04-52-00026). Another BRM/milling feature sites is associated with habitation site 05-04-52-0022. All but one (05-04-52-00010/05-04-52-00053) BRM sites are found in the southeastern portions of the 0.25mile buffer, while 05-04-52-00010/05-04-52-00053 is located within the town of Mammoth Lakes, central to the Priority Area.

Petroglyph / Pictograph

The 0.25-mile buffer contains two petroglyph/pictograph sites (05-04-52-01160 and 05-04-52-02168). Multicomponent site 05-04-52-00022 is a habitation site that also contains petroglyphs/pictographs. Site 05-04-52-02168 is described as having pictographs on a basalt outcrop with no other associated features or artifacts, while site 05-04-52-01160 is apparently a single image on rock, although the original site record from 1964 was poorly photocopied, and a transcribed version with some missing grammar is provided along with the original record.

Habitation

There is one small habitation site, likely a temporary occupation, within the 0.25-mile buffer (05-04-52-00083), and an additional multicomponent site with a prehistoric habitation component (05-04-52-0022). Site 05-04-52-0022 or the "Mammoth Creek Caves" site contained BRM/milling features, pictographs, a lithic deposit, beads, steatite bowls, handstones, animal bone, and ceramic sherds at the time of the initial recording. It also contains historic-era carvings and is described by the 2011 cultural update as severely damaged by modern visitors and vandalism. No other information on the site exists. Additionally, prehistoric habitation sites 05-04-52-00839 and 05-04-52-00933 (discussed above as within the Priority Area) both extend to a considerable distance into the 0.25-mile buffer from the Project Area.

Lithic Quarry

One lithic quarry site is present in the 0.25-mile buffer (05-04-51-00311) and XYZ…

Other Sites

There is also one unknown site type with a missing record (05-04-52-00047) and one ethnohistoric site present (05-04-52-02446). The ethnohistoric site is comprises a juniper tree with bow stave scars located in the XYZ of the 0.25-mile buffer of the Project Area.

Historic Sites

The 80 historic sites in the 0.25-mile buffer consist primarily of inn/resort/lodge sites, followed by refuse scatters, mining resources, nineteenth and twentieth-century cabin/residences, historic privies, recreational residence tracts, road/trails, dams, a water conveyance ditch (05-04-52-02305), a late nineteenth century graveyard (05-04-52-00103), a historic wall/fence site (05-04-52-02433), and a CCC site (05-04-52-02177).

Inn/Resort/Lodge

Most (n = 34) of the 40 inn/resort/lodge sites consist of a single structure or separate components of the Tamarack Resort recorded as separate sites. The remaining six include the Mammoth Mountain Chalets (05-04-52-02297), the Mammoth Mountain Inn Complex Historic District (05-04-52-02296), the Mammoth Mountain Lodge (05-04-52-02447), the Crystal Crag Lodge complex (05-04-52-01029), the Woods Lodge (05-04-52-01071), and the Wildyrie Lodge (05-04-52-01079). Nearly all of the sites are clustered around the Mammoth lakes, southwest of the town. The Mammoth Mountain Chalets (05-04-52-02297) and the Mammoth Mountain Inn Complex (05-04-52-02296) are situated near Minaret Summit northwest of the Priority Area.

Refuse Scatter

Refuse scatters comprise 13 sites within the 0.25-mile buffer (05-04-51-00227, 05-04-51-00321, 05-04-51-00323, 05-04-52-00896, 05-04-52-02175, 05-04-52-02320, 05-04-52-02321, 05-04-52-02351, 05-04-52-02369, 05-04-52-02389, 05-04-52-02464, 05-04-52-02478, and 05-04-52-02587) and 12 additional multicomponent sites that contain refuse scatters as historic components. Several refuse scatters are located in the northeast region, clustered around site 05-04-52-00024, a dense, extensive multicomponent site with an obsidian quarry, lithic scatter, historic sawmill, and refuse deposit. The others are also clustered around the Mammoth lakes, southwest of the town.

Mining

There are nine historic mining sites within the 0.25-mile buffer, including the 1878 Mammoth Consolidated Mine (05-04-52-00910), a Mammoth Mining Co. mine spanning nearly 100 years of operation (05-04-52-

01194), and various historic mining extraction and prospecting sites (05-04-52-02034, 05-04-52-02036 05-04-52-02390, 05-04-52-02402, 05-04-52-02403, 05-04-52-02404, and 05-04-52-02405). Additionally, there are two multicomponent sites with historic mining extraction and prospecting components (05-04-52-02394 and 05-04-52-02397). Many of the mining sites are also clustered around the Mammoth lakes, southwest of the town.

Historic Cabin/Residence

The 0.25-mile buffer of the Priority Area contains five late nineteenth- and early twentieth-century historic cabin/residence sites (05-04-51-00315, 05-04-52-01059, 05-04-52-02173, 05-04-52-02336, and 05-04-52-02481) and two additional multicomponent sites with historic cabin/residence components (05-04-52-00026, and 05-04-52-02432).

Privy

Three of the historic sites in the 0.25-mile buffer consist of privies (05-04-52-02199, 05-04-52-02430 and 05-04-52-02434). One of these sites has an associated refuse scatter (05-04-52-2199), one also contains pit depressions (05-04-52-2430), and the other consists solely of a privy feature (05-04-52-2434).

Recreational Residence Tracts

The 0.25-mile buffer contains three twentieth century recreational residence tracts (05-04-52-01151, 05-04-52-01173/05-04-52-02288, 05-04-52-01199/05-04-52-02411). The recreational residence tracts are also clustered around the Mammoth lakes, southwest of the town.

Other Historic Sites

There are eight additional sites in the 0.25-mile buffer that consist of two road/trails (05-04-52-02291 and 05-04-52-02448), two dams (05-04-52-02038 and 05-04-52-02039), a water conveyance ditch (05-04-52-02305), a late nineteenth century graveyard (05-04-52-00103), a historic wall/fence site (05-04-52-02433), and a CCC site (05-04-52-02177).

CHAPTER 3. GIS ANALYSIS AND DEVELOPMENT OF THE SURVEY AREA

G2 used ArcGIS Pro 3.0 to conduct a GIS analysis of all the inventory and site information provided by INF. The analysis included an in-depth look at all previous survey area coverage, survey transect intervals, year of inventory, and overlapping inventory areas to determine which portions of the current Priority Area received adequate survey coverage and what areas need to undergo new archaeological investigations. The results of the analysis indicate that portions of the previously surveyed areas have received multiple cultural investigations; however, some of these areas were not completed with adequate survey coverage (i.e., less than 25 m transect intervals). Areas which were surveyed more than 20 years ago from the time of this analysis, regardless of survey transect intervals, and which never received any subsequent investigation were considered inadequate. Of the total 10,723-acre Project Area, 6,238 acres have received prior adequate survey coverage, while 4,485 acres require further cultural investigation (Table 5).

Table 5. G2 GIS Analysis Results

Analysis Conducted from GIS Data	Acres
Raw GIS Data - Previous Survey Coverage (total includes overlapping inventories):	20,162
Raw GIS Data - Adequate Previous Survey (< = 20 years; 0-25 m transect intervals):	13,664
Processed GIS Data - Adequate Previous Survey (< =20 years; 0-15 m transect intervals) within the Priority Area:	6,238
Acres to be Excluded from the Current Priority Area:	6,238
Acres to be Surveyed (i.e., 2023 Survey Area):	4,485
Processed GIS Data - Slope Analysis > 30-degree slope	220
Total 2023 Survey Area:	**4,265**

G2 also conducted a GIS slope analysis to determine which areas within the final 4,485-acre Survey Area would be safe for a pedestrian survey crew to access. It was determined that those areas with slopes greater than 30 degrees would be eliminated. To determine this new Survey Area, two one-third (10 m) Digital Elevation Model (DEM) raster sets were acquired from the United States Geological Survey (USGS) data webpage (USGS 2023). The two raster sets depict the east and west areas of Mammoth Lakes, and were utilized to calculate slope. As floating point pixel raster layers, they were first converted to integer pixel types using the 'Int' tool, then the 'Slope' tool was used to achieve an intermediate slope raster layer depicting all of the slope degrees within a given pixel size for the entire region. This intermediate slope layer was next clipped using the 'Clip' tool to the 4,485-acre Survey Area, then re-ordered in 'Classify Symbols' under the layer's symbology to depict slope in an easily referenced legend. The field in the attribute table 'gridcode' for these clipped intermediate slope layers (for both the east and west areas) expresses the degree of slope (depicted as multiplied by 1,000 due to conversion during the integer pixel conversion process). Next, these clipped layers were converted to polygons using the 'Raster to Polygon' tool, and re-classified again in 10 classes of equal interval for degrees 0-10, 10-20, etc. Next, by using the 'Select by Attributes' function, the 'gridcode' field was selected and all rows representing slopes below 30 degrees were highlighted. The 'Clip' tool was then used to create a new polygon layer for both the east and west areas representing areas with slopes less than 30 degrees. These functions were carried out twice for both the east and west areas, and as a final operation, the 'Merge' tool was used to merge the two layers defining the final Survey Area at 4,265 acres (see Table 5).

CHAPTER 4. ARCHIVAL RESEARCH FOR THE SURVEY AREA

G2 conducted archival research including examination of pertinent historic General Land Office (GLO) plat maps, topographic quadrangles, and historic aerial photo single frame imagery available through USGS EarthExplorer. Records related to land ownership, mine claims, and water rights were also examined.

Maps

A total of seven GLO Plat maps dating between 1857 and 1929 were examined. Several unnamed trails and roads were depicted within the Survey Area, as well as several named routes including the "Mono Lake Trail," "Lake Marys Hiway," "Von Schmidt's Trail," and "Dickison's Toll Road" (Table 6). Additionally, seven historic topographic quadrangles dating between 1901 and 1963 were examined (Table 7). These maps depict a variety of historic resources and features within the Survey Area including structures related to Camp High Sierra and Mill City, a ski lift and ski tow, Mammoth Mountain ski lodge, a utility line, a gravel pit, a trail, and a transportation network including U.S. Route 395, California State Route 112, and multiple unnamed roads.

Table 6. Resources Depicted on Historic GLO Plat Maps within the Survey Area

Township	Range	Year	Resources	Section(s)
3S	27E	1879	Mono Lake Trail	27
			Trail	33
			Mono Lake Trail	27
		1882	Trail	29, 33
			Road	35, 36
		1968	Lake Marys Hiway	33
			Transportation Route	34
3S	28E	1857	Von Schmidt's Trail	29, 32
4S	27E	1879*	Dickinson's Toll Road	2, 10
		1885*	n/a	
4S	28E	1857	Trails	2, 5
		1929	n/a	n/a

*Note: The 1879 Subdivision of Sections and Diagram and 1885 Diagram plats do not depict any resources within the Survey Area. These two maps depict mining claims within Sections 9, 10, 15, and 16 of T4S, R27E.

Table 7. Resources Depicted on Historic USGS Topographic Maps within the Survey Area

Quadrangle Name	Year	Scale	Resource	Township	Range	Section(s)
Mt. Lyell, CA	1901	1:250,000	Transportation Route	3S	27E	31
			Possible Structure	4S	27E	20
Mt. Morrison, CA	1914	1:250,000	Deadman Trail	3S	27E	21, 27
			Transportation Routes	3S	27E	33, 35, 36
				3S	28E	29, 30
				4S	27E	2, 4
				4S	28E	2, 3, 4, 5 10, 11
Mariposa, CA	1947	1:250,000	CA State Route 112	3S	27E	26, 33
				4S	27E	4, 9
			U.S. Route 395	4S	28E	2, 3, 4

Mt. Morrison, CA	1953	1:62,500	Transportation Routes	3S	27E	10, 11, 15, 16, 21, 22, 27, 35, 36
				4S	27E	4, 9, 10, 12
				4S	28E	2, 3, 10, 11
			U.S. Route 395	4S	28E	2, 3, 4
			Camp High Sierra (Structures)	3S	27E	33
			Utility Line	3S	28E	29, 30, 32
			Structures	4S	27E	2
			Mill City (Structures)	4S	27E	9
			Ski Lift	4S	27E	4
			Ski Tow	4S	27E	4
			Gravel Pit	4S	27E	12
Devils Postpile, CA	1953	1:62,500	Mammoth Mountain Ski Lodge	3S	27E	31
			Transportation Routes	4S	27E	4, 9
			Structures	4S	27E	9, 16
Mariposa, CA	1957	1:250,000	U.S. Route 395	4S	28E	2, 3, 5
			Transportation Routes	4S	27E	1, 2, 29, 32
				3S	27E	15, 16, 21, 27, 22, 31, 33, 35, 36
			Lodge	3S	27E	31
Mariposa, CA	1963	1:250,000	CA State Route 112	3S	27E	34, 36
				4S	27E	4, 9
			U.S. Route 395	4S	28E	2, 3
			Transportation Routes	3S	26E	25
				3S	27E	29, 30, 31, 33

Aerial Imagery

Historic aerial imagery available from USGS EarthExplorer revealed one single frame from 1954 (Entity ID AR1VDL000010001) showing the area north of the town of Mammoth Lakes, and one from 1965 (Entity ID AR1261950010017) showing the area east of U.S. Route 395 near Casa Diablo Hot Springs. However, neither revealed any historic features within the Survey Area and/or the scale of the images (greater than 1:24,000) was not sufficient for detailed identification.

Mining Claims

Mining Claim Geographic Index Reports were generated using the BLM's Mineral and Land Records System (MLRS) database, which provided a list of both active and closed mining claims in the area by Section. While GLO Plat maps depict mining claims in the vicinity of the Project Area as early as 1857 (see Table 6), the MLRS reports provide information on historic mining claims in the vicinity of the Survey Area beginning in 1929. In Section 9 of Township 4 South, Range 27 East (T4S, R27E), lode claims were located in 1929 (Sierra Nos 1-4), the 1940s (Sierra Fraction and Sierra No. 6), and 1957 (North Slope and North Slope No. 1), and in Section 16 of T4S, R27E, the Washington and Washington No. 1 claims were located in 1966. However, none of these claims appear to be located within the Survey Area. Finally, several placer claims were located in the 1930s by Magma Power Company in T3S, R28E near Casa Diablo Hot Springs. These claims may be within the Survey Area, but additional archival research is needed to determine the exact location of the claim block(s).

CHAPTER 5. RESEARCH THEMES

This chapter outlines the research themes that will guide the current inventory and provide a context for evaluating identified cultural resources for NRHP eligibility. Some themes address the study of archaeology in eastern California, while others are more specific to the archaeology of the Mammoth Lakes area. All themes have been developed specifically for the site types identified within the Project Area using the historic context provided in the INF Assessment Topic Paper (Appendix A). The INF Assessment Topic Paper outlines the cultural and historic context of the INF, locating resources within a timeframe of past human activity and considering the "complex interactions and interrelationships between Native American and Euro-American cultures in historic and modern times" (INF 2013:1).

NATIONAL REGISTER OF HISTORIC PLACES ELIGIBILITY: CRITERIA FOR ASSESSMENT

In general, cultural resources more than 45 years old may be considered eligible for listing if they possess several, and usually most, of the seven aspects of integrity—location, design, setting, materials, workmanship, feeling, and association—and meet one or more of the criteria:

- Criterion A: associated with events that have made a significant contribution to the broad patterns of American history
- Criterion B: associated with the lives of person significant to our past
- Criterion C: embodies the distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic value or represents a significant and distinguishable entity whose components may lack individual distinction
- Criterion D: has yielded or may be likely to yield information important in prehistory or history

While it is often not possible to make firm NRHP eligibility recommendations based on survey-level data, the current effort will use these guidelines in preparing recommendations to assist the INF in future planning efforts regarding the ESCCRP Priority Area.

PREHISTORIC THEMES

Prehistoric Chronology

Chronology is one of the most important general research themes to which any prehistoric site can contribute. Age estimates provide a foundation for the reconstruction of prehistory, at both regional and local levels, by allowing archaeologists to place a given site or group of sites within specific temporal and evolutionary trajectories. In the course of archaeological survey projects, time frames for occupations at prehistoric sites are normally determined by: 1) inferring ages for "time-sensitive" or temporally "diagnostic" artifact types (e.g., projectile points, beads, ceramics) based on cross-dating and previous chronological studies; 2) by generating relative age estimates through programs of obsidian sourcing and hydration analysis; 3) by examining micro-spatial relationships between artifacts and/or features (e.g., superposition, association); and 4) through basic geomorphological interpretation. Although prehistoric sites are best dated when multiple lines of chronological data are available, such evidence is usually scarce in survey data; thus, temporal estimates are often limited to implications drawn from a single type of inference. For this reason, prehistoric sites containing time-sensitive materials are frequently recommended as NRHP-eligible because they can be at least roughly placed in time and associated with past adaptive changes in settlement, subsistence, and technology.

The presence of obsidian artifacts at prehistoric sites can be useful to the identification of occupational histories and in evaluating NRHP eligibility, as both diagnostic and non-diagnostic obsidian items can be subjected to sourcing and hydration analysis for the purpose of generating relative age estimates. Archaeological sites that contain multiple lines of chronological evidence in the form of projectile points and statistically significant samples of obsidian suitable for hydration studies can provide sufficient information to address possible function of the site and its association with the known regional chronology, settlement patterns, subsistence strategies, and technological patterns. Therefore, a site that retains integrity and possesses a sufficient amount of time-sensitive materials is more likely to be recommended significant because of the potential to yield additional information related to the prehistory of eastern California (Criterion D). A site with a limited assemblage or that is highly disturbed would most likely be recommended not eligible for inclusion in the NRHP under any evaluation criteria.

Research Questions for Prehistoric Chronology

- What kinds of diagnostic artifacts occur at prehistoric sites?
- Do prehistoric sites have obsidian surface assemblages of sufficient size and quality for future sourcing and hydration studies?
- Can we identify single-component artifact deposits or discrete activity areas at prehistoric sites through the identification and classification of diagnostic artifacts?
- Is there any spatial patterning to diagnostic artifacts of certain temporal signature(s)?
- What is the occupational history of prehistoric land use in the Priority Area and how does it fit within the timeframe of regional adaptations?
- Do sites provide evidence for occupations of varying intensity through time?
- Does occupation of the Mammoth Lakes area correlate with shifting environmental conditions?
- Do diagnostic artifacts reflect long-term changes in adaptive strategies?

Data Requirements

- Spatially discrete archaeological deposit
- Presence of one or more time-sensitive artifacts (e.g., projectile points, ceramics, beads)
- Presence of obsidian assemblage suitable for sourcing and hydration analyses
- Evidence of single-component deposit and/or discrete activity area

Prehistoric Lithic Procurement, Use, and Conveyance

Patterns of lithic procurement and use reflect prehistoric modes of local and regional land-use, basic technological needs, and the physical requirements of flaked stone tool production, all of which shared a functional relationship within the context of settlement-subsistence systems. The composition of flaked stone assemblages, as indicated by the kinds of tools they contain, differences in the state or condition of those tools, the nature of associated flaking debris, and the kinds of raw materials present in distinct tool classes, can reveal much about how different tools were made, used, and/or discarded. Aspects of lithic assemblage composition also have implications for subsistence practices, diet, and residential mobility.

Any reconstruction of prehistoric toolstone acquisition strategies must begin with an intimate knowledge of local geology and hinges on the ability to visually identify distinct types of lithic material in raw (unused) form, among quarrying wastes, and as various finished/nearly completed tools. Although not normally available for use at the survey level, the process of fingerprinting geochemical sources of obsidian and basalt is possible using X-Ray Fluorescence (XRF) Spectrometry or other methods of trace-element analysis. In areas where lithic material sources are reasonably well-known in terms of their spatial extent, abundance, and quality, we can analyze flaked stone assemblages produced during subsequent stages of lithic reduction (e.g., testing and quarrying; secondary shaping and preform manufacture; tool finishing) to see how lithic materials were collected, how they were moved across the landscape (and in what forms),

and what kinds of treatments they were subjected to at places of waste production and discard. When such materials are associated with or include dateable artifacts or remains, we can often identify spatio-temporal trends in lithic acquisition and use that may have involved direct procurement, trade, or scavenging and re-use.

The proximity of a variety of obsidian sources (e.g., Casa Diablo [Lookout Mountain, Prospect Ridge, Sawmill Ridge], Obsidian Dome, Mono Craters, Mono Glass Mountain) (Northwest Research Obsidian Studies Laboratory 2011) suggests a high probability that most flaked stone tools and debris in the Priority Area will originate from these sources. Future obsidian studies on flaked stone assemblages from sites in the Mammoth Lakes area may further our understanding of toolstone preference, trade, and travel/foraging routes in this area. Sites that contain good quantities of obsidian artifacts (20+) and retain good integrity will likely be recommended eligible under Criterion D for their ability to provide useful data about past lithic procurement, use and conveyance.

Research Questions for Prehistoric Lithic Procurement, Use, and Conveyance

- What kinds of high-quality toolstones occur at prehistoric sites within the Priority Area?
- Were any extralocal lithic materials brought to Priority sites?
- Is there any evidence of toolstone quarrying in the Priority Area?
- What kinds of tools were produced from different lithic materials?
- Do flaked stone assemblages show any hints of toolstone exchange (e.g., importation of large quantities of foreign lithic material)?
- Are there obvious differences in the ways local and extralocal lithic materials were treated (i.e., basalt vs. obsidian), as reflected by discard rates, modes of conservation, or attempts at recycling?
- Can sites provide a variety of tools and/or debitage for obsidian sourcing and hydration analyses?

Data Requirements

- Spatially discrete archaeological deposit
- Flaked stone assemblage with variable and identifiable lithic profiles
- Presence of one or more time-sensitive artifacts (e.g., projectile points, ceramics, beads)
- Presence of obsidian assemblage suitable for sourcing and hydration analyses

Prehistoric Settlement and Subsistence

In general, Great Basin and eastern California archaeologists hold that prehistoric settlement patterns underwent a shift to logistic mobility at the Middle-Late Holocene transition, in which human groups began to occupy "central places" from which to access a greater variety of resource areas. This new strategy involved the establishment of residential bases, satellite camps, and temporary resource processing sites, and resulted in the formation of a more variable archaeological record than in earlier times. This change is perhaps best indicated by the establishment of many brief, task-specific occupations within landscapes and environments that had not been previously exploited to any real extent. High-altitude hunting stations, upland root camps, and lowland seed camps are good examples of these kinds of sites, positioned away from residential bases and reflecting the exploitation of specific food resources. In parts of the Great Basin and eastern California where human populations grew dense during the Late Holocene, this settlement shift intensified as foraging ranges decreased and became more geographically circumscribed. Human groups frequently revisited older sites, often to exploit the same subsistence resources using different approaches, but also to take advantage of any raw materials (e.g., toolstone) that had been left behind in suitable quantities. Evidence of communal big game hunting can also be found in eastern California near Mono Lake (Arkush 1986, 1995) and elsewhere during this time. These sites encompass stone game drives and hunting blinds that indicate that prehistoric populations were targeting the area for big game hunting (Halford 1998).

There is little doubt that plant foods and a greater variety of small game became increasingly critical to basic subsistence throughout the Middle and Late Holocene. The development of pinyon exploitation is perhaps the best and most oft-cited example in the western Great Basin, but other shifts in subsistence involved the bulk processing of seed grasses, the increased consumption of roots, and an increase in the communal hunting of small game, particularly rabbits. The advent of new extractive methods and processing technologies during Late Holocene times provides a rough temporal signature in the archaeological record, as indicated by the use of bedrock seed-grass threshing floors, the development of green-cone pinyon exploitation, the appearance of ceramics, and the increased use of mortars and pestles.

In the Priority Area, a prehistoric site may be eligible for the NRHP under Criterion A if it is associated with a known location of ceremonial or cultural importance to the Northern Paiute; under Criterion B if it is closely associated with important individuals from Northern Paiute oral tradition; and under Criterion C if it has features that are significant representations of prehistoric or ethnohistoric construction techniques, unique or rare use of space, or has features or characteristics that exhibit the work of a master. This might include isolated rock art panels or portable rock art, game traps, hunting blinds, or domestic structures. In addition, a site might be considered significant under Criterion D if it contains multiple lines of chronological evidence, surface features (house, hearth, cache), midden deposits, or if it has the potential for intact buried cultural deposits that may yield significant information to the prehistory of the region.

Research Questions for Prehistoric Settlement and Subsistence

- Do sites reflect long- or short-term occupations?
- Are there concentrations of ground/battered stone tools anywhere in the Priority Area? If so, what kinds of landscape settings do these tools occur in?
- Is there any evidence to suggest that subsistence resources were collected from local habitats or were brought in from outside areas?
- Do we see evidence of site re-use? If so, what kinds of sites appear to be re-occupied and what sorts of activities are repeated?
- Is there evidence of big game hunting such as game traps and hunting blinds in the Priority Area? Are these features associated with artifacts such as projectile point accumulations?

Data Requirements

- Spatially discrete archaeological deposit
- Presence of ground/battered stone tools in good physical condition
- Direct evidence of on-site food processing such as hearth features, faunal remains, charred paleobotanical remains
- Diagnostic and/or dateable artifacts

HISTORIC THEMES

Hydraulic Mining and Milling

Property types associated with hydraulic mining within the Priority Area may include anything associated with the process or extraction of gold from a hydraulic mine. These may include the mines themselves, and any associated structures (i.e., stamp mills to break up cemented gravels, sluicing systems, a system to remove the debris, tunnels and drifts, stock piles, and waste rock piles). Other associated resources include ditches, flumes, dams, reservoirs, and other resources associated with the conveyance of water to the mine site. Remains of hydraulic mining and milling systems may be eligible for inclusion in the NRHP under Criterion A if they date between the 1850s and 1860s for their association with the early development of hydraulic mining in the region, while sites that date from the 1870s to 1884 would be significant for their

contribution to the advancement of hydraulic mining techniques and engineering. Some sites that date after 1884, when the hydraulic mining boom declined in the region, may be important on a local level for their role in the continuation of hydraulicking on a much smaller scale. However, after 1893, hydraulic mining declined in the Sierra Nevada, and sites dating to this time period are unlikely to be significant under Criterion A because the hydraulic mining industry no longer contributed meaningfully to the region's economy.

Hydraulic mining and milling sites may be eligible under Criterion B if an important person has *directly* participated in the operation and the main achievement for which they are most well-known (and for which they made a significant contribution to the history of the region, state, or country) is directly associated with the site. Also, the site must retain physical integrity relative to that person's timeframe. Integrity on an archaeological level is sufficient if the features and artifacts clearly represent the operation. Sites may be eligible under Criterion C if they are outstanding examples of a typical hydraulicking operation. Because most equipment and buildings were removed when a hydraulic mine was abandoned, integrity is usually on an archaeological level. Hydraulic mining sites may be eligible under NRHP Criterion D if they hold a high likelihood of yielding important information upon further study. However, in general, few hydraulic mining sites are expected to qualify under Criterion D as buried archaeological deposits are usually absent, and nearly all sites lack intact buildings and structures.

Research Questions for Hydraulic Mining and Milling

- Do the physical characteristics of the mining resource (i.e., dam, ditch, flume) provide information concerning its construction and maintenance?
- What materials and equipment were used to build and maintain the resource and does this exemplify an adaptation to local environmental conditions?
- Were individual branch roads and power/communication lines built to specific mining operations?
- Was the system designed, planned and constructed by engineers or are amateur construction methods evident?
- Was the mine site and its facilities connected to a wider area via communication or transportation networks to facilitate economic development?
- What can the various mine sites tell us about differing patterns of development within the region?
- Is there evidence of new mining-related technologies or improved techniques for hydraulic mining?
- Did the natural environment impact the routing, construction, and operations of the mining property, and how did the builders of the resource react to these environmental constraints? Is there any evidence of innovative construction techniques, such as methods of dealing with rough terrain?
- Is there any evidence of work camps associated with the mining site or associated resource that contain domestic debris or other remains that can inform on gender, ethnicity, or social status of construction crews?

Data Requirements

- Identifiable site types
- Diagnostic and/or dateable artifacts
- Intact artifact deposits and features that retain horizontal and vertical integrity
- Available archival data

Transportation Systems

Transportation sites in the Priority Area may include segments of emigrant trails, toll roads, railroad grades, or paved routes. Remains of transportation systems may be eligible for inclusion in the NRHP under Criterion A because of their association with a significant event in local and/or regional history. Roads that were built by, or that are specifically associated with persons of major importance in national or regional

history may be eligible for inclusion in the NRHP under Criterion B. Constructed roads that embody distinctive characteristics of engineering, or construction techniques, may meet NRHP Criterion C. Like all historic resources, historic significance must be accompanied by sufficient physical and visual integrity so that the structural or technological importance of properties is recognizable. Integrity considerations are particularly applicable to historic roads, simply because most roads continue to be used, changed, and altered over time. While their location (i.e., route) remains essentially the same, appearance, alignment, and other integrity factors have often been compromised to the degree that a road is no longer recognizable as historic. Finally, sites that contain key data required to address scientific or historical research questions may be eligible for listing in the NRHP under Criterion D. Very few constructed roads embody archaeological data or other historical information that are not immediately apparent. However, there are many sites and features associated with a road or transportation system that do have the potential to yield important data not available in the historical record.

Research Questions for Transportation Systems

- How did the road develop and what are its archaeological and geographic parameters?
- Do artifact assemblages characterize different types of maintenance camps?
- Do road grade characteristics reveal information pertaining to historic route design, construction, or maintenance?
- How do characteristics of a road grade and/or its associated sites and features reflect different adaptations and uses over time?

Data Requirements

- Identifiable infrastructure
- Diagnostic and/or dateable artifacts
- Concentrations of intact artifact deposits that retain horizontal and vertical integrity
- Available archival data (e.g., GLO Plat maps, topographic maps, road maps, land patents)

Utility Systems

Utility systems in the Priority Area include transmission or telegraph lines. Such features are a part of larger systems that transfer power from a generation source to the consumer. Early systems were constructed in support of industry, and to a lesser extent the public (Johnson 2006:62). Utility systems are often the result of planned, large-scale, financed projects, with the scale and complexity of these arrangements increasing with time. Some electrical and communication lines in California and Nevada were developed under these conditions. Many utility systems were small, localized endeavors, however, serving a specific area or industry. The use of small-scale electrical systems started in the 1880s and became widespread by the 1910s (Johnson 2006:62). As with trails and roads, the integrity of location and setting are important to the NRHP-eligibility of utility lines. Integrity of design and workmanship may also be important, as the results of historic or contemporary maintenance and use may not be consistent with methods employed when the system was developed. The removal or realignment of poles, the collection of insulators, and the dismantling and removal of equipment can also affect the historic integrity of a utility line or compromise its integrity of location, setting, feeling, and association (Johnson 2006).

Research Questions for Utility Systems

- Do the physical characteristics of the utility line provide information concerning its construction and maintenance?
- What equipment was used to build and maintain the utility line?

- Were individual utility lines built to specific mining operations by operators, a regional entity (power companies, county road departments), or both?
- Was the system designed, planned, and constructed by professional engineers or are amateur construction methods evident?
- How did the utility line connect the mines and facilities it serviced to a wider area and facilitate economic development?
- What can utility lines tell us about differing patterns of development within the Survey Area?
- Is there evidence of mass-produced catalogue equipment or were improvised items used?
- Did the natural environment impact the routing, construction, and operations of the utility system, and how did the planners and builders of the system react to these environmental constraints?
- Were any innovative construction techniques used, such as in dealing with rough terrain?
- Is there evidence of maintenance to the system, such as discarded tools, empty wire spools, replaced or fixed poles and, if so, are the repairs made in the same fashion as the initial construction methods?
- Is there a mixture of types of materials used (i.e., insulators or guy wire materials?)
- Is there evidence of the line being dismantled for relocation or recycling?
- Is there any evidence of work camps associated with the utility line that contain domestic debris or other remains that can inform on gender, ethnicity, or social status of construction crews?

Data Requirements

- Identifiable site types
- Character defining features
- Diagnostic artifacts

Recreation/Tourism

Historic recreation/tourism sites within the Priority Area may include settler-era or early-twentieth-century cabins or structure foundation remnants, seasonal recreational residence tracts, recreational or vacation lodges, or town sites. Additionally, forest development and administrative sites, as well as recreation activities are evidenced in the Priority Area by historic Forest Service structures and a CCC summer camp site. Sites related to recreation/tourism may be eligible for inclusion in the NRHP under Criterion A because of their association with a significant event in local and/or regional history. Similarly, structures or buildings built by or specifically associated with persons of major importance in national or regional history may be eligible for inclusion in the NRHP under Criterion B. Historic architecture or sculptures that embody distinctive characteristics of engineering or construction techniques may meet NRHP under Criterion C. Like all historic resources, historic significance must be accompanied by sufficient physical and visual integrity so that the structural or technological importance of properties is recognizable. Finally, sites that contain key data required to address scientific or historical research questions may be eligible for listing in the NRHP under Criterion D.

Research Questions for Recreation/Tourism

- Do historic buildings or objects of cultural significance represent the main attraction at a recreation or tourism locale?
- Have the main attraction at a recreation or tourism locale played a pivotal role in local or regional history?
- How does the level of infrastructure development reflect its source of funding? Are there examples of historic federally-funded facilities as well as privately funded buildings?
- Is there evidence of different socioeconomic groups visible in artifact assemblages that might reveal what groups of people visited the area and when?

Data Requirements

- Identifiable structures and buildings
- Diagnostic and/or dateable artifacts
- Concentrations of intact artifact deposits that retain horizontal and vertical integrity
- Available archival data
- Integrity

Water Conveyance Systems

Water conveyance systems generally consist of linear causeways (ditch, canal, drain, lateral, flume, etc.) that can be constructed of a variety of materials, including simple excavated sediment with berms, or wood/concrete/brick/metal/plastic-lining, or any combination. They can also include storage and/or diversion dams and accessory/auxiliary features, such as pipes, culverts, bridges, water meters, control gates, drops, or screens. Many historic water conveyance systems remain in use, but perhaps for different purposes, or have aspects of integrity altered through maintenance and improvement activities. These issues have been addressed and researchers agree that exceptions can be made with regard to certain aspects of integrity, contribution, and significance of individual components if the entire system is significant (Bowyer 1996; Hardesty and Buhr 2000; Young 1999).

Remains of water conveyance systems may be eligible for listing on the NRHP under Criterion A because of their association with a significant event in local and regional history. Such systems that were built by, or are specifically associated with persons of major importance in national or regional history may be eligible for listing on the NRHP under Criterion B. Constructed systems or auxiliary features that embody distinctive characteristics of engineering, or construction techniques, may meet NRHP Criterion C. Like all historic resources, however, historic significance must be accompanied by sufficient physical and visual integrity so that the structural or technological importance of properties is recognizable. Integrity considerations are particularly applicable to water conveyance systems as they are maintained, altered, or improved upon over time. Because of these modifications, integrity aspects should focus on setting, location, and association, as well as design and feeling, since materials and workmanship are often compromised. A resource may be eligible for listing on the NRHP under Criterion D if it contains data that can address scientific or historical research questions.

Research Questions for Water Conveyance Systems

- What technologies were used to construct the water conveyance system and how does this change over time?
- Can the function of the system be determined based on observable information?
- Do work camps exist and do they contain domestic debris that can inform on gender, ethnicity, or social status of construction crews?

Data Requirements

- Identifiable infrastructure
- Diagnostic and/or dateable artifacts from discernable work camps
- Concentrations of intact artifact deposits that retain horizontal and vertical integrity
- Available archival data (e.g., GLO Plat maps, topographic maps, road maps, land patents)

Ranching/Sheepherding

Ranching/sheepherding sites within the Priority Area include arborglyph sites which are distinctive property types associated with Basque sheep ranching. Carving on aspens has been an almost universal Basque sheepherder tradition since the late nineteenth century. Basque arborglyphs are a record of the

presence, skills, and experiences of individual sheepherders that historically occupied seasonal camps near aspen or other groves of trees. Because the arborglyphs are a living resource, their numbers are dwindling as the trees succumb to age, fires, development, disease, and vandalism.

Historic sites related to ranching/sheepherding may be eligible for listing in the NRHP under Criterion A for their role in a region's settlement and economic development. Arborglyphs potentially eligible for inclusion in the NRHP under Criterion A should be recognizably Basque, French, or Spanish and be clearly associated with the development of sheep ranching and herding as a historic event, and the participation of Basques in that event. Those consisting simply of dated initials are unlikely to meet Criterion A or any other NRHP criteria. Arborglyphs directly associated with a prominent Basque rancher or historic ranching family may be NRHP-eligible under Criterion B. Basque arborglyphs that represent the artistic work of a master carver may be NRHP-eligible under Criterion C. It should be noted that some arborglyphs have an aesthetic value separate from any historical significance, and may reflect an artistic vernacular that, to date, has not been well documented in the study of art and art history (Mallea-Olaetxe 2000). Properties meeting Criteria A, B, or C must retain sufficient integrity to convey their significance; for example, most or all of their original design/layout must be intact or at least recognizable, along with features that illustrate the activities conducted at the site. To be eligible under NRHP Criterion D, sites or "collections" of Basque arborglyphs must have the potential to address research topics related to the history of regional Basque sheep ranching and herding.

In general, most NRHP-eligible arborglyph sites would be of medium or large size (25 or more glyphs), at least half of which are readable and more than 50 years of age. Historic Basque arborglyph sites with little research potential would consist of fewer than 15 to 25 glyphs, having mainly initials/names and dates, poor integrity, and few themes/characteristics. The carver's name might be unknown or illegible, and artistry is absent or minimal. The site would generally be isolated or very small, and there would be minimal need to consider beyond the specific locale within a grove to the entire grove or set of adjacent groves within a drainage.

Research Questions for Ranching/Sheepherding

- What agricultural activities are represented by sites and features in the Priority Area?
- Can agricultural sites or features be associated with a particular ranch(s), and what role do they play in the structure or landscape of that ranch?
- Do ranch-related sites or features provide important information about undocumented ranching activities in the region?
- Can agricultural sites, features, or artifact deposits contribute information on changes in land use patterns, economic strategies, or technology utilized at a historic ranch or grazing allotment?
- Can artifact deposits associated with agricultural sites reveal important information about ranch occupants or their activities?
- Did historic-era ranchers engage in other subsistence or leisure activities such as freighting, woodcutting, hunting, or mining?
- Is there evidence of specific ranching-related activities taking place at the site, such as use as a line camp?
- Can the arborglyphs be dated?
- Can arborglyphs be associated with Basque ranching families and their herders?
- Can the spatial relationship between base ranches and mountain pasture sites be ascertained?
- Do arborglyphs reflect intensity of grazing in the Priority Area?
- Do arborglyphs provide information about a sheepherders lifestyle, working conditions, or world views?

Data Requirements

- Identifiable site types
- Diagnostic and/or dateable artifacts
- Intact artifact deposits and features that retain horizontal and vertical integrity
- Available archival data

CHAPTER 6. FIELD METHODS

SURVEY APPROACH

The 4,265-acre Survey Area will be surveyed by a team of archaeologists in parallel transects spaced 15-20 m apart within the practical limits of safety, topography, vegetation, water, or other constraints. Survey of unnavigable steep terrain (slope > 30 degrees) where suspected site locations (e.g., rock shelters, quarries, game drives, hunting blinds, mining adits, trails, roads, logging features) may occur will be surveyed as practical. GIS slope analysis resulted in the omission of 220 acres; however, potential sites within this area may be inspected if they can be safely reached. Any deviations from the survey methodology will be discussed with the INF Archaeologist. Survey reports will accurately depict and describe precise methodologies employed, including description, rationale and mapping for any areas not surveyed (e.g., impenetrable brush, wetlands, cliffs), and actual survey transects shall be documented with GPS.

SITE RECORDING

Per INF guidelines, an archaeological site is defined as a locus of purposeful and interpretable prehistoric or historic human activity separated by 20 or more meters that generally exhibits at least one of the following: a) one or more features with or without associated artifacts; and/or b) an occurrence of cultural materials in densities sufficient to indicate purposeful human activity (at least one item per square meter and in no case less than ten artifacts). Due to local sources of obsidian and the large quantity of obsidian debitage in the region, the INF defines a prehistoric lithic scatter as greater than ten artifacts of unmodified debitage (flakes only). Sites extending beyond the Survey Area boundaries will be fully recorded except for linear sites such as historic roads and trails, which will be recorded to the INF boundary or an intersection with another road. All newly identified cultural resources will be recorded within the Survey Area, documented on Department of Parks and Recreation (DPR) site forms, and mapped to sub-meter accuracy using a Trimble Geo7X global positioning system (GPS) unit in North American Datum 1983 (NAD 83). Two site overview digital photographs will be taken at each site (in at least two directions), and any artifact concentrations or features will be photographed at least once. All diagnostic artifacts at prehistoric sites will be photographed, as will samples of diagnostic artifacts at historic sites. No artifacts will be collected during the inventory.

All previously documented NRHP-eligible and unevaluated cultural resource sites (historic properties) in the Priority Area not documented or visited in the past ten years will be inspected and updated. Inspected sites will be completely examined, with at least broad-scale observations made for portions of the site extending beyond the survey area, unless otherwise negotiated with the INF. If existing site records meet current documentation standards, and no appreciable changes or significant new information is found, then a concise site update containing only pertinent information to supplement the existing record is needed (e.g., information about current condition, additional diagnostic artifacts or features located, current photographs, information relating to the assessment of effect or protection recommendations, adjusted shapefiles, additional sketches or maps). If these conditions are not met, then comprehensive site documentation will occur. Historic properties recorded or updated within the past ten years need only be inspected if current documentation does not meet standards, new information or data is found, or information for assessing the effects of the current undertaking is lacking. Sites previously determined ineligible for listing on the NRHP need only be examined and updated if reconsideration of previous determinations based on new information or changed conditions is recommended. When these latter two types of inspections occur, the same documentation procedures described above will apply.

ISOLATE RECORDING

Isolated occurrences comprise one or a few lost or randomly discarded artifacts or extremely low densities of artifacts dispersed over large areas (typically at densities of less than one item per square meter). Isolates meet no criteria for listing in the NRHP.

ORGANIZATION AND EQUIPMENT

Ms. Dayna Tinsley will serve as Principal Investigator and oversee all aspects of the project. Ms. Cydney Lanthier will be Field Director, supervising and directing all phases of the fieldwork, including completing DPR site forms, organizing field rotations, and organizing crew and other crew leads. As noted in the Survey Approach, the crew will conduct an intensive field inventory (i.e., 15-20 m wide transects). Ms. Lanthier will be in direct communication with Ms. Tinsley at all times and will provide frequent status updates to Ms. Laurel Lueders, INF Archaeologist.

All crew members will carry adjustable declination compasses, hand-held GPS units (Garmin etrex unites, and Garmin GPSmap 60CSx), and various recording equipment, including pin flags, flagging tape, and field forms. Each crew will also be equipped with a digital camera with at least 16-megapixel size capability and a Trimble Geo 7x Series GPS receiver with sub-meter accuracy to fully document and accurately map each site. All sites will be plotted on Project maps in Zone 10, NAD 83; Pathfinder 5.1 will be used for post-processing, and ArcGIS Pro 3.0 to manage the data.

QUARTERLY REPORTS

G2 will submit quarterly reports to Ms. Laurel Lueders by the 15th day of the month following the quarter. The report will contain information regarding the acreage surveyed, the number of site types recorded, and preliminary NRHP evaluations. Any major disturbances observed, or interesting finds will also be discussed.

EMERGENCY MEASURES

G2 is committed to workplace safety. Our team maintains up-to-date companywide safety plans to ensure our employees are safe in the office and in the field. Field safety will be the responsibility of the individual, field supervisors, and company. Field crews will be given a project packet prior to the initiation of the fieldwork. This packet will include project information, the location and address of the nearest hospital or medical center and contact information for supervisors and appropriate INF personnel. Individual crew members will be expected to have appropriate clothing including hats, boots, and water containers to reduce risk of injury. Field supervisors will hold daily meetings where safety concerns are discussed. These concerns will include tripping hazards, traversing slopes, and weather, as well as potentially dangerous animals and insects. During these meetings work activities for the day will be discussed and the crew will establish start and end times and establish a post-field day meet time. While conducting the survey, crew members will communicate with radios and if possible, cell phones. G2 will facilitate day-to-day safety by providing five-gallon containers for drinking water, as well as radios; to facilitate fire prevention, our vehicle will be equipped with 1.5-pound Class A/B/C fire extinguishers, shovels, and a five-gallon jug for water. No unauthorized fires will be started by G2 crews. Smoking by crew members will only be allowed during breaks and only if the crew member is sitting in the middle of a dirt road away from any combustible material. Cigarette butts will be completely extinguished and disposed of as trash. G2 crews will inform INF personnel (via text or email) of their daily work locations during each field session. In the event of a wildfire, crews will have radios but can also be reached via cell phone. If cell phones do not work in the Survey Area, Ms. Lanthier will carry a Garmin inReach satellite communicator with two-way text capability to remain in contact with INF and G2 office personnel as needed.

In the unlikely event of an injury, the field supervisor will assess the injury and take actions that are appropriate to the injury. If appropriate, emergency services will be contacted for assistance. If the injury is minor, and non-life threatening, the field supervisor will administer first aid. Depending on the nature of the injury, the injured person may be transported to the nearest hospital or medical center for further evaluation. Following attending to the injured individual, an accident report will be filled out and the supervisor notified.

G2 Archaeology Contact Information

- Dayna Tinsley (PI): 775-815-3060
- Cydney Lanthier (Field Director): 707-273-2219
- Garmin inReach Satellite Communicator: 201-740-6502 (text only)
- G2 Archaeology (Reno Office): 775-420-5030

Closest Hospital/Medical Center

- Mammoth Hospital, 85 Sierra Park Rd, Mammoth Lakes, CA 93546: 760-934-3311 (Open 24 hours)

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Appendix A – INF Assessment Topic Paper

INYO NATIONAL FOREST ASSESSMENT TOPIC PAPER (NOVEMBER 2013)

Chapter 13. Assessing Cultural Resources and Uses

Introduction

Cultural resources are defined in the Forest Service Manual (FSM) as "An object or definite location of human activity, occupation, or use identifiable through field survey, historical documentation, or oral evidence" (USDA Forest Service 2008:21). Cultural resources include prehistoric, historic, archaeological, or architectural sites, structures, places, or objects and traditional cultural properties. In this chapter, cultural resources include the entire spectrum of resources managed by the Forest's Heritage Resources Program. Incorporating academic and traditional views of cultural resources into the cultural resources management practices and policies of the Inyo National Forest (Inyo NF or Forest) is part of the ongoing evolution of the Forest's Heritage Resources Program.

Cultural resources frequently consist of nonrenewable materials that are subject to irreparable disturbance or destruction. These fragile resources have the potential to yield unique information that shed light on the lifeways and past practices of peoples, societies, and cultures. Many of these resources are susceptible to naturally occurring disturbance agents (e.g., organic degradation and erosion), but proper management can often slow or arrest potential adverse effects.

Process and Methods

Scale of Assessment

The scale of this assessment will be primarily limited to the Inyo National Forest administrative boundaries. The Forest is the traditional homeland of Native American Tribal communities and entities (see Chapter 12) whose ancestors occupied the area at the time of first contact with Euro-American settlers, some 150 years ago.

Information Sources

The following sources provided baseline data for this assessment:

1. Inyo National Forest, Heritage Resources Program INFRA database
2. Inyo National Forest, Heritage Resources Program geospatial database
3. Inyo National Forest, Heritage Resources Program site records
4. Inyo National Forest, Heritage Resources Program archaeological reconnaissance report records

Cultural and Historic Context of the Forest

Traditionally, the significance of a cultural resource has been viewed as the product of its cultural or historic context. In essence, the context locates the resource within the timeframe of past human history. Consequently there has been a tendency to categorize Native American cultural resources as "prehistoric" and Euro-American resources as "historic" or "modern." Unfortunately, this view of the

past tends to overlook the complex interactions and interrelationships between Native American and Euro-American cultures in historic and modern times. Many of the tribal communities associated with the lands of the Inyo National Forest continue to live, work and practice traditional lifeways within their ancestral territories. The following cultural context for the Inyo National Forest provides a brief portrait of the contribution of all Americans to the record of the human past found in this magnificent landscape.

Native American Resources

The lands of the Inyo National Forest represent a cultural ecotone, connecting the cultures of the Great Basin with those of central California. For an area possessing an extremely rich record of the human past, the Forest has received proportionately little systematic archaeological and historical research. The following discussion generally follows (except where noted otherwise) the Forest's Cultural Resources Overview and represents a very preliminary understanding of Native American cultural resources on the lands of the Forest. The large-scale adaptive strategies (Archaic divisions) cited below are generally accepted for the cultures of the Western Great Basin, although specific time spans of the chronological subdivisions can vary based on individual interpretative preferences.

Pre-Archaic/Paleo-Indian Period (prior to 5,000 B.C.)

During the full glacial period the climate was cooler and wetter, with a glacier complex covering much of the Sierra Nevada. The White Mountains were also extensively glaciated, although glaciation was restricted to the drainages of the eastern escarpment. During this period Owens Lake was filled to an elevation of 3,740 feet, while Lake Russell (Mono Lake) stood at intermediate levels with a surface elevation averaging around 6,725 feet (Benson et al. 1990). After the last glacial maximum a warming and drying trend began.

In North America the culture of this time is often referred to as Paleo-Indian. Obsidian hydration studies seem to support an early Holocene occupation of the region dating back 12,000 –13,000 years. The lithic technology of the late Pleistocene and early Holocene consisted of fluted points, Great Basin Concave points and stemmed Silver Lake or Lake Mojave points. Little is known about the people from this time, though they are thought to have been nomadic with a pattern of subsistence adapted to the climatic conditions of the time including the procurement of now-extinct megafauna. Several isolated finds and a few sites, support the use of the Forest and vicinity during this period (Willig et al. 1988, Basgall 1988, Dillon 2002, Johnston et al. 2007).

Early Archaic Period (5,000 – 2,000 B.C.)

The middle Holocene climatic period was once thought to have been characterized by continent-wide drought conditions. More recent research suggests that while conditions were warmer than earlier times, these conditions did not rise to the level of drought. The lifeways of the early to middle Holocene are often termed "Archaic." In the Owens Valley the middle Holocene phases of human occupation are termed Little Lake in the eastern Sierra and Lamont on the Kern Plateau.

Little Lake Phase

Patterns of land-use during the Little Lake phase appear to be similar to those practiced in the early Holocene. Sites from this time are generally small to medium-sized and suggestive of high mobility. At least seven obsidian sources on the Forest were utilized as well as a number of sources for other types of toolstone. Greater use of plant foods is suggested by an increasing appearance of milling equipment. Milling implements tend to consist of highly portable, thin milling slabs. Archaeological faunal remains

suggest the use of fish, reptiles and mammals ranging from rabbits to deer. Interestingly, there is little evidence that pinyon pine was utilized during this time period, at least at lower elevation sites.

Lamont Phase

Sites from the Lamont phase appear to represent forays by hunting parties seeking large game at higher elevations though some pinyon gathering may have occurred as well. All told, the faunal remains and the milling equipment from this period suggest a broad-spectrum diet. There is some thought that warm, dry conditions during this period may have made the pinyon-juniper uplands of the southern Sierra more attractive. Technologically, this phase is distinguished by Pinto points and the utilization of basalt for flaked-stone tools.

Middle Archaic Period (2,000 B.C. – AD 500)

The transition from the middle to the later Holocene is marked by cooler, wetter conditions sometimes labeled as the Neoglacial. The middle Archaic phases are the Newberry in the eastern Sierra and the Canebreak on the upper Kern.

Newberry Phase (Eastern Sierra)

There is evidence that the Newberry phase may further be broken down into early and late subphases. What is known of the early Newberry suggests that the high degree of residential mobility continued, with a gradual expansion of subsistence activities. In Owens Valley there is a shift from site locations from riparian areas to locations that are in the modern desert scrub (Bettinger 1989). The beginning of prehistoric exchange systems is another development of the early Newberry, particularly of obsidian derived from the major quarries. In terms of milling equipment, there is evidence of increased formality and diversity of milling equipment. By the late Newberry specialized site categories are found which include seasonal residential camps, more ephemeral large sites with unbalanced assemblages, quarries and stone working camps, seed procurement and processing camps, hunting camps, and equipment caches.

Canebrake Phase (Kern Plateau)

The Canebrake Phase, like the Lamont Phase, seems to have been affected by climatic conditions. Higher elevations were increasingly occupied and the economy appears to have shifted towards a greater exploitation of pinyon nuts as well as the harvesting of various bulbs and seeds. Flaked-stone technology is marked by a transition to Elko, Sierra Concave-Base, Elko and Humbolt Concave-Base projectile points. Milling equipment consists mainly of handstones and metates. Considerable evidence suggests an extensive aboriginal occupation of upland pinyon areas appears. Pinyon base camps and temporary stations in upland areas have been interpreted as evidence of settlement, exploitation of pinyon nuts, hunting, and harvesting bulbs and seeds (McGuire and Garfinkel 1980).

Late Archaic (AD 500 – Euro-American contact)

The late Archaic phases in the eastern Sierra are the Haiwee (AD 500 – 1300) and the Marana (AD 1300 – Euro-American contact). On the Kern Plateau, these phases span the same time periods and have been named Sawtooth and Chimney, respectively. Climatically, wetter periods were punctuated by drier periods, the most notable being the Mediaeval Warm Period (~AD 900 – AD 1,200) followed by the Little Ice Age (~AD 1,500 – 1,800). The Late Archaic saw a marked culture change in the western Great Basin, including a shift to the use of the bow and arrow as well as the appearance of high elevation village sites in the White Mountains. The Numic Expansion appears to have occurred across the western Great Basin during the Late Archaic. (Numic is a branch of the Uto-Aztecan language family. It includes seven languages spoken by Native American peoples traditionally living in the Great Basin, Colorado River basin, and southern Great Plains.) While there are a number of competing hypotheses regarding the

distribution of the Numic people during this time, there is some general consensus that they probably originated in the southwestern Great Basin and spread across the Great Basin relatively late in prehistory.

Haiwee and Marana Phases (Eastern Sierra)

The settlement patterns that began in the Newberry phase continued in Owens Valley and Mono Basin during the Haiwee phase along with increased use of the uplands of the Sierra Nevada and the Inyo-White Mountains range. A major change noted along the Sierran front is a drop-off in the production of large bifaces. Some studies suggest that the introduction of the bow and arrow accounts for the archaeological observation of a reduced production of large bifaces. Groundstones in Owens Valley also becomes more expedient, with most made of local fieldstone. There are a few occurrences of bedrock milling features (BRMs) in the Owens Valley from this time, in contrast to the Sierran front country in Long Valley and the Mono Basin where the numbers of BRMs indicates incorporation of acorn (acquired through trade) into the diet. Bettinger (1989) has proposed that the intensive use of pinyon began after AD 600 in central Owens Valley, as shown by the appearance of upland pinyon camps in the Inyo Mountains at this time. The introduction of irrigation around 1,000 years ago may have resulted in decreased big game hunting and a decreased use of upland and desert scrub hunting camps.

The Late Archaic also saw an increased use of marginal environments after AD 600, a finding suggestive of resource intensification in the late Archaic. The use of kutsavi (brine fly pupae) may date to this period as well. The utilization of piagi (Pandora moth larvae) occurred later in the Haiwee, following a volcanic eruption 600 years ago that leveled the existing forest and established new habitat for the moth. Both Long Valley and Mono Basin have evidence of pronounced west interaction between the people of the western slopes of the Sierra and the people of the eastern Sierra and Great Basin.

Historic Native American/Ethnographic Period

Contact

The earliest contact with Euro-Americans in the eastern Sierra and western Great Basin likely occurred in the 1820s as trappers began canvasing the western Great Basin and California for beaver. In 1827, Jedediah Smith's trapping party passed through the region. Seven years later Joseph R. Walker and his party traversed the region looking for an all-season route across the Sierra Nevada. In 1846, Walker returned, leading part of General John C. Fremont's Third Expedition across Walker Pass. In 1852, a military detachment under Lieutenant Tredwell Moore pursued Chief Tenaya and his band through Tuolumne Meadows and into the Mono Basin, probably following the aboriginal trail down Bloody Canyon (Daily Alta August 26, 1852). Euro-American involvement with the eastern Sierra (i.e., the eastern slope of the Sierra Nevada and western edge of the Great Basin) was largely transitory prior to the discovery of gold on Dog Creek in 1857 (DeDecker 1993: 15). With the goldfields of California shifting towards industrialization, small discoveries such as Dog Creek attracted prospectors to the eastern Sierra in the late 1850s. Although contact between the native cultures of the region and the Euro-American miners tended to be benign during these years, the growth of settlements resulted in establishment of a nascent ranching industry which threatened the traditional patterns of subsistence in the region.

Owens Valley Indian War

The growth of the mining industry in the eastern Sierra created a tremendous demand for supplies (McGrath 1984:17). The niche represented by the Owens Valley, however, was already at carrying capacity—the influx of Euro-America settlers meant that lands and resources critical to the Paiute

economy were encroached upon (ibid). In the fall of 1861, the Paiute began to push back, targeting cowboys and ranchers, but apparently ignoring miners and prospectors whom they regarded as little threat (McGrath 1984:18). However, the severe winter of 1861-62, forced many Paiute groups to begin stealing cattle for survival (McGrath 1984:21). Cattle theft led to resumed hostilities, with Joaquin Jim rallying the Paiute against the ranchers (ibid). Reacting to the gathering of Paiute forces, miners and settlers began to congregate at Putnam's ranch on Independence Creek (McGrath 1984:23). On March 21, 1862, settlers from Independence Creek attacked a Paiute encampment near the Alabama Hills, killing several men with their first volley (ibid).

The brewing conflict in the Owens Valley triggered a response from the military; on April 4, 1862, a detachment of troops under Lieutenant Herman Noble passed through Aurora en route to Owens Valley (McGrath 1984:26). Several violent encounters followed (ibid). During the summer, Lt. Noble and his detachment scoured the valley, destroying Paiute food caches (ibid). A military outpost was established some two miles north of Putnam's ranch (Fort Independence) (ibid). By the end of July, 1862, many Paiute leaders had surrendered and the region was fairly quiet (McGrath 1984:31). In the fall, gifts and rations were distributed to some 400 Paiute (ibid).

In March of 1863, hostilities resumed with several parties of prospectors being attacked (McGrath 1984:33). However, two months later, with over 100 men killed and many of their food caches destroyed, many Paiute bands surrendered at Fort Independence (McGrath 1984:39). In July, some 900 Paiute, escorted by a detachment of 70 cavalrymen, were sent to San Sebastian Reservation near Fort Tejon (McGrath 1984:40). The relocation effort failed in part because of the resistance of the people themselves but also because of their increasing economic importance to the Euro-American settlers as a source of labor.

Postwar period – 1863 to the 20th century

The latter half of the nineteenth century was a time of major economic transition as the native people of the eastern and southern Sierra began incorporating Euro-American materials into their traditional lifeways and patterns of subsistence. To use the example of the Mono Basin, beginning the 1860s and early 70s the Mono Lake Kutzadika'a began working for wages at the ranches, farms, mines, and logging operations of the area (Arkush 1989). Archaeological sites from this period reflect both continued use of traditional food-processing and dietary practices as well as the presence of a wide range of Euro-American goods. To some extent Euro-American material was incorporated into traditional lifeways—for example, a number of shards of glass from sites of this period show flake scars indicative of their use in place of more traditional toolstone such as obsidian.

Historic-Period Resources

Mining

The history of mining on the Inyo National Forest has never been fully synthesized though several mining districts on the forest were the subject of studies between 2010 and 2012. As result of these studies a very general outline of the founding and proliferation of the eastern Sierra mining industry has emerged—many data gaps have yet to be addressed.

Discovery

In 1827, Rocky Mountain Jack and Bill Reed, members of Jedediah Smith's trapping party, discovered gold in Mono Basin and spent a week prospecting there (Angel 1881: 21; Wedertz 1978: 13). Their discovery made little impression, however, and saw no follow-up. In 1852, soldiers under Lt. Moore

reportedly gathered ore samples in Bloody Canyon while pursuing Chief Tenaya's band. However, the trans-Sierran mining industry wasn't founded until Cord and Mary Cordst discovered placer gold on Dog Creek (now known as Virginia Creek), a few miles north of Mono Lake in 1857 (DeDecker 1993: 15). Two years later discoveries on the crest of Conway Summit, the ridge which divides Mono Basin from Bridgeport Basin, led to the founding of Monoville (DeDecker 1993: 15).

Proliferation

With the discovery of the Esmeralda Mining District in 1860, the mineralogical exploration of the eastern Sierra began in earnest. In 1864, *Holt's Map of the Owens River Mining Country* depicted mining districts stretched across the length of the White and Inyo mountains, and into the Coso Range. By the end of the decade the mining industry had begun to penetrate the Sierra crest in a number of localities ranging from Kearsarge Peak in the south to Bloody Canyon and Tioga Pass to the north.

Industrialization

In the 1870s industrial methods and technology began to be applied in many mining districts of the region. Industrial methods and technology, coupled with capital, were viewed as necessary adaptations to the conditions set by the environment. While the components at individual mining sites were drawn from a common pool of technology, their installation and operation represented a specific and unique adaptation to the environment. Highly capitalized industrial approaches were not always the key to success. In a number of mining districts scale was a more adaptive approach to the minerals present. The mining industry often boomed and busted in inverse proportion to the national economy—during periods of financial uncertainty the mining industry tended to boom as investors put their money into more traditional safe havens.

Periods of war also drove the mining industry—the early development of the mining industry of the Great Basin, particularly of the Comstock and Esmeralda (Aurora) was driven in part by the exigencies of the Civil War. In the 20th century the mining of strategic metals such as tungsten and mercury was encouraged by wartime government subsidies. The Pine Creek tungsten deposits were discovered, for example, in 1916 during a time when the commodity value of tungsten was artificially elevated by the First World War (Kurtak 1997:23). However, when the war ended in 1918, the commodity value of tungsten fell and the emerging Pine Creek industry was idled (Kurtak 1997:28-9). In the late 1930s, as war clouds hovered over Europe and the Japanese invasion of China disrupted the importation of tungsten from the Far East, the United States began again to support the tungsten mining industry (Kurtak 1997:41). In 1939 the Strategic Metals Act actively subsidized the industry (Kurtak 1997:41). Similar patterns of subsidization were evident at other localities as well. The mercury mining industry on the Inyo also saw subsidization during the Second World War.

Logging

Unlike the forests on the western slopes of the Sierra, the logging industry of the Inyo National Forest tended to be cast in a supporting role to the mining industry. By the 1860s the booming mining industry that centered around Bodie and Aurora created a tremendous demand for forest products—timbers for the mines, lumber for the town, and fuel wood for the town and the mills (Wedertz 1978: 153). In 1861 sawmills were established on Mill Creek and Lee Vining Creek. To the south, the growth of Cerro Gordo in the southern Inyo Mountains fueled the establishment of a logging industry in the Sierra near Horseshoe Meadow. In 1873 Colonel Stevens erected a sawmill on Cottonwood Creek and constructed a flume to carry the lumber to the shore of Owens Lake (Likes & Day 1975: 41). By the mid-1870s the growth of Bodie had driven the establishment of mills on many of the streams leading from the Sierra (Kelly 2011). In the early 1880s capitalists in Bodie constructed a railroad (see below) to the Jeffrey pine

forest on the south shore of Mono Lake (Myrick 1962:307). There they established Mono Mills, one of the largest sawmills in the region (Myrick 1962:309). On a smaller scale, the Great Sierra Consolidated Silver Mining Company constructed a sawmill on the upper reaches of Lee Vining Creek to supply lumber for the company's town of Bennettville (Kelly 2010). Fluctuations in the mining industry were reflected in the ebb and flow of the logging industry. In the early 1890s, for example, Mono Mills was largely idled as the mining industry of Bodie slowed. Apart from Mono Mills, the logging industry of the Forest has yet to receive systematic historical or archaeological study.

Railroads

Two narrow-gauge railroads operated on lands now administered by the Inyo National Forest: The Carson and Colorado and the Bodie Railway and Lumber Company. The following discussion largely follows Myrick (1962).

Carson and Colorado

In 1880 a consortium of capitalists including H. M. Yerington and Darius O. Mills of the Virginia and Truckee Railroad organized the Carson and Colorado Railroad Company to build a narrow gauge railroad from the Carson River near Carson City to the Colorado River near Fort Mohave. Among the attractions to the owners were the booming mining camps of Candelaria and Bodie as well as new mining districts at Silver Lake and in Lida Valley. By April of the following year the rails had reached the new town of Hawthorne. By July of 1883, following a change in routing, the rails had reached the town of Hawley (renamed Keeler) on the eastern shore of Owens Lake. Darius Mills visited the end of track that month and famously remarked "the railroad was built either 300 miles too long or 300 years too early." In 1900, Collis P. Huntington purchased the railroad in 1900 and added it to the Southern Pacific system. Several months later Jim Butler's mining strike in what would become Tonopah made Huntington's move seem prescient—by the next year the railroad was packed with traffic for the booming camp. In 1910 the long-awaited connection with Southern California was completed with the Southern Pacific constructing a standard gauge branch north from Mojave, ultimately connecting with the Owens Valley Branch at Owenyo (northeast of Lone Pine). Despite the connection, the generally quiescent mining industry of the 1920s and 30s, coupled with the proliferation of highways, led the Southern Pacific to begin abandoning stretches of railroad. By 1960 traffic on the remaining stretch between Laws and Keeler had diminished to the point of abandonment.

Bodie and Benton

In 1881 H. M. Yerington (of the Virginia and Truckee and Carson and Colorado railroads) partnered with R. N. Graves, Seth Cook and Daniel Cook to build a railroad connecting Bodie with the Jeffrey pine forests located to the south of Mono Lake. Despite the labor issues associated with the use of Chinese workers, by October trains were running and a large sawmill had been constructed at Mono Mills, a few miles from the south shore of Mono Lake. In May of the following year, grading commenced on an extension to Benton where the line would connect with the Carson and Colorado Railroad. However, the extension was abandoned without explanation two months later. By the mid-1880s the mines of Bodie began to bust—in 1890 the town's population had shrunk from a high of 5,000 to a small community of 500. The activity of the railroad declined during these years and was dormant from 1890 through 1893. It resumed operation in 1893, supplying fuelwood and lumber. In 1906 the railroad and logging operation was sold to Charles E. Knox. While the railroad continued to supply wood to Bodie, diminished returns and the closure of the Standard Mine in 1914 made the railway untenable. In September of 1917 the California Railroad Commission granted permission for abandonment.

Ranching

In the early 1860s ranchers began driving stock into the region from the Central Valley (McGrath 1984: 17). As noted earlier, grazing animals directly threatened traditional patterns of subsistence (ibid). With the cessation of the Owens Valley War, and with the continually developing mining industry across the region, ranching became firmly established. By the end of the 1860s ranches had been established across the Owens Valley and were springing up in Fish Lake Valley as well (Sacramento Daily Union, November 17, 1865). With the formation of the Inyo Forest Reserve in 1893, administration of public land grazing in the region became a priority for the agency. Grazing continued to be one of the forest's priorities through World War II and some areas of the forest continue to be grazed. Archaeologically, the ranching industry is represented by "cow camps" and dendroglyphs (tree carvings) associated with Basque herders. The ranching industry on the Inyo has received very little archaeological or historical study. However, given the role of the ranching industry in the early settlement in the region the resource type is a key area of needed research in the region.

Hydropower

The history of hydroelectric systems of the Inyo National Forest have not as a whole received a systematic study, though the historical contexts of some individual plants have been prepared. The following discussion is at best a thumbnail sketch of the industry in the eastern Sierra and generally follows Diamond and Hicks (1988) and Myers (1986).

The Inyo National Forest was home to some of the earliest hydroelectric systems in California. As early as 1891, mining companies such as the Jackson and Lakeview Company were installing hydroelectric systems to provide power for their mining operations. In 1904 the Nevada Power, Mining and Milling Company was organized to construct a hydroelectric system at Bishop Creek with the goal of supplying power to Tonopah. By September of the following year the project was completed. Two years later the company was reorganized as the Nevada-California Power Company. In 1910, the Pacific Power Company was organized to provide power to Bodie and a number of mining camps in western Nevada. The company's power plant was located on Mill Creek near Lundy. The Jordan Plant, as the company named their power house, went into service in January of 1911. Two months later it was almost completely destroyed by an avalanche. Despite the disaster, the company swiftly located a safer location and the replacement power house was in operation before the end of the year. In May of 1915 the Pacific Power Company began construction of the Rush Creek Hydroelectric Project near June Lake. The plant was completed in 1917, just as the Pacific Power Company and the Nevada-California Power Company merged into the Nevada-California Electric Corporation. Following the merger, the company began construction of a hydroelectric system on Lee Vining Creek. Two power houses were built on Lee Vining Creek, with the last completed in 1923. The following year the company built a new transmission line to interconnect the plants on Mill, Rush, and Lee Vining Creeks. During the 1930s and early 40s the company had vigorously competed with the Imperial Irrigation District—a competition which had fueled the expansion of its hydroelectric properties in the eastern Sierra meet expanding markets. In 1941 the Nevada-California Electric Corporation became the California Electric Power Company. In 1964 the company merged with Southern California Edison.

Recreation- Stock Packing, Recreation Residences, Resorts

Packing

Stock packing across the Sierra Nevada arguably began in the 1820s with the passage of fur traders.[1] In the 1840s the U.S. Army began to make forays into the range accompanied by pack trains. By the mid-1850s a number of pack routes were being surveyed across the central Sierra, many of which followed aboriginal trails. Among these early trails was the Mono Pass Trail through Bloody Canyon (not to be confused with the Mono Trail to the south). In the 1860s the Jordan and Hockett trails were constructed. Mining discoveries in the Inyo Mountains also resulted in the proliferation of pack trails such as the Forgotten Pass Trail which was constructed in the 1870s to connect the mining camp of Beveridge on the east side of the range with the Owens Valley. With the involvement of the army in the management of the forest reserves and national parts of the Sierra Nevada during the 1890s, pack trails became a critical network for the management of public lands. A number of trails such as those over Old and New Army passes date to this period. In 1914 the army withdrew from managing public lands, leaving management of the trail system to the Forest Service and National Park Service.

The late 1860s saw the emergence of recreational packing in the Sierra. A decade later mountaineering parties were regularly utilizing pack trains in their exploration of Mount Langley and Mount Whitney regions. By 1890, pack-supported tours of the high Sierra became popular and packers on both sides of the range offered services. In the early 20th century the Sierra Club began sponsoring "High Trips" into the range utilizing extensive pack trains to haul supplies and equipment. The 1920s saw a growing interest in backcountry recreation. Pack outfits proliferated during the decade to meet the demand of government agencies faced with growing management needs in the backcountry as well as recreationalists drawn to the backcountry. By 1936 the Inyo listed 22 permitted pack outfits on the east side of the Sierra. The war years significantly curtailed recreation in the Sierra including packing—in 1942 the Inyo listed only nine permitted pack outfits. Those surviving outfits mostly depended upon government contracts such as supplying Civilian Conservation Corps (CCC) projects. Following the war, the pack industry saw some degree of resurgence. However, many pack outfits found it difficult to earn a living and a number of long-term operators sold out in the 50s and early 60s. See Chapter 9 for a discussion of current stock packing opportunities.

Recreation Residences

The 1890s saw an emerging interest in the recreational use of public lands.[2] An important thread in this "back to the land" movement was the concept of summer or vacation homes sited on public lands. While the various mining laws offered some avenues for individuals to construct homes under the guise of mining claims, the title to such homes was tenuous. In 1899, the Mineral Springs Leasing Act of 1899 authorized the Secretary of the Interior to issue permits for tents or dwellings for recreationists visiting such springs. These permits were renewable each year subject to the approval of the issuing officer. In 1905, Gifford Pinchot issued *The Use of National Forest Reserves: Regulations and Instructions.* The "Use Book," as it came to be known, addressed a variety of aspects of recreational use of the national forests including the permitting of summer homes on forest land.

In 1915 Congress provided greater clarification to the issue of recreation residences with the passage of the Occupancy Permits Act of 1915, which allowed the Forest Service to issue permits for a period of up to 30 years. Under the Occupancy Permits Act, forests were given responsibility for locating and

[1] The discussion of pack trails is generally drawn from Jackson (2004).
[2] The discussion of recreation residences follows Hudlow (2009).

surveying potential recreational sites and controlling their development. During the 1930s the agency began to increasingly emphasize campgrounds over recreational residences. In 1944 the Forest Service issued a document titled *Forest Land Problems in California* which set the agenda for the region's post-war policies. The projected growth in recreation called for increased planning and for orderly expansion of the recreation program. However, the emphasis was more frequently focused on camping areas, rather than the development of summer homes. In the 1950s the agency ceased to issue new permits for the recreation residence program. On the Inyo National Forest, 27 recreation residence tracts were established before 1968 when a moratorium was issued on the recreation residence program nationwide. While some tracts have been recorded as cultural resources, a study of the recreation residence tracts of the forest as a resource type would fill an important data gap. See Chapter 11 – Private Uses, and Chapter 14 – Land Uses, for current information related to recreations residences.

Resorts

Paralleling the growth of recreation residences and the packing industry in the Sierra was the establishment of high-country resorts on public lands. Among the earliest of these resorts was Tioga Pass Resort, constructed between 1916 and 1928 by Russian immigrant Al Gardisky. Resorts offered many of the recreational opportunities as backcountry packing, but more amenities. Additionally, the proliferation of automobiles fueled the growth of the resort industry. The resort industry as a whole has yet to see any significant study on the Inyo and is an area of needed research.

Forest Service Administrative History

On February 14, 1893, the Sierra Forest Reserve was established and placed under the administration of the Department of the Interior. The Organic Act of 1897 established the statutory basis for administering the forest reserves. Between 1899 and 1901 the "East Side" of the Sierra Forest Reserve was administered as a separate unit. In 1905 President Roosevelt transferred administrative responsibilities for the forest reserves to the Department of Agriculture. Six months later, Roosevelt appointed Gifford Pinchot to administer the newly created United State Forest Service. Pinchot introduced the concept that public use of federal lands could contribute to the "common good."

On May 25, 1907, President Theodore Roosevelt created the Inyo National Forest by Proclamation when he withdrew 221,324 acres of land from the Sierra Forest Reserve. In July of the following year two Executive Orders radically transformed the configuration of the Forest Service in eastern California—Executive Order 898 transferred land from the Inyo, Stanislaus, and Tahoe National Forests into the newly proclaimed Mono National Forest while Executive Order 899 transferred administration of 1,350,537 acres from the Sierra National Forest to the Inyo. The following year additional lands were added to the Mono National Forest. In 1910 the Kern National Forest was established, encompassing much of what is now the Mount Whitney Ranger District. In 1920 the Inyo National Forest began to assume its present configuration when the lands of the Kern National Forest were divided between the Sequoia National Forest and the Inyo. During the 1930s the Forest Service was authorized to use the Civilian Conservation Corps (CCC) to build needed facilities and infrastructure. On the Inyo, crews from CCC camps at Death Valley, Lone Pine and Mammoth provided labor. In 1942 the Mono National Forest was dissolved with its lands being transferred to the Inyo in 1945 as the Mono Lake Ranger District.

Known Cultural and Historic Resources

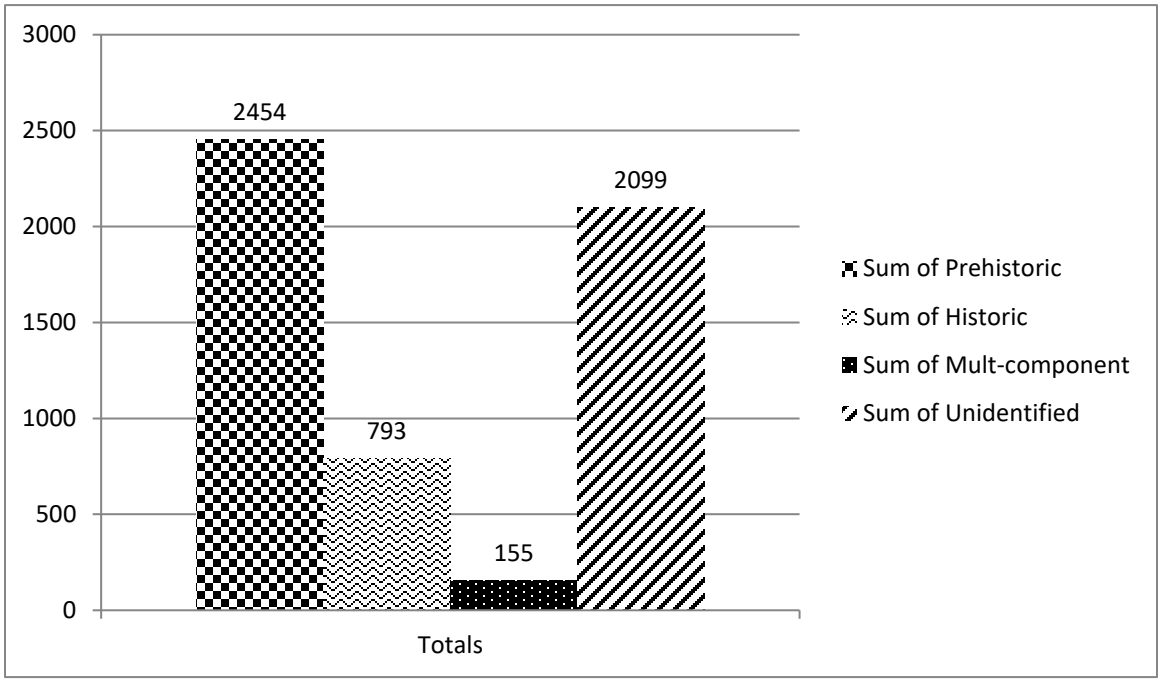
The following section summarizes the current condition of cultural resources identified to date within the Inyo National Forest. The information presented here is based primarily on data pulled from the

Forest's INFRA database. Where applicable this information has been augmented with recent data from the Forest's Heritage Resources Program.

Inventory of Known Cultural Resources

Presently, the Inyo National Forest manages 5,501 known cultural resources (Figure 1; Table 1). As noted above, the Forest categorizes these sites based on chronological components, historical significance, and condition. Native American resources are classified as prehistoric, while historic sites are typically those associated with the historic period described in the previous section. "Multicomponent resources" are those resources which encompass both Native American and Euro-American cultural material and features.

Figure 1. Summary of known cultural resources on the Inyo National Forest



Prehistoric Resources

There are 2,454 prehistoric resources managed on the Inyo National Forest, representing approximately 45% of the total.

Historic Resources

To date, 793 historic-period resources have been identified on the Inyo National Forest, representing approximately 14% of the total. Currently three historic districts have been recorded in the agency's INFRA database. Additionally, a number of historic districts associated with the mining industry have been tentatively identified but have not been formally recorded or nominated.

Multiple-Component and Unidentified Resources

Of the remaining known resources, 155 are recorded in the INFRA database as multicomponent sites while chronological data for 2,099 sites are not available.

Table 1. Summary of cultural resource assets by resource type.

Resource Information		Resource Type			
Total Assets	**5501**	**Prehistoric**	**Historic**	**Multi-component**	**Unidentified**
Sites	5501	2454	793	155	2099
Districts	3	0	3	0	0
Isolate	388	70	41	0	277
Unidentified	3	0	0	0	3

Projected Total Number of Cultural Resources

Estimating the total number of cultural resources on the Inyo National Forest is complicated by the fact the Forest has not been fully surveyed for cultural resources. Additionally, many of the early archaeological surveys of the forest were conducted using standards and methods that are no longer considered professionally adequate. Many of the un-inventoried areas are located in remote locations where the Forest has historically implemented few undertakings. Given these caveats, and based on the large percentage of the Forest that has received little or no archaeological survey, it seems reasonable to estimate that the Forest could be home to 10,000 to 15,000 cultural resource sites.

Condition of Known Cultural and Historic Resources

This section addresses the significance and physical condition of known cultural and historic resources in the Forest's current inventory.

Cultural Resource Significance under the National Historic Preservation Act

The National Historic Preservation Act of 1966, as amended (NHPA), identifies federal agencies' mandates regarding historic preservation. The NHPA implementing regulations (36 CFR 800) established the process for identifying cultural resources, evaluating significance of the resources, and determining the effects of federal undertakings on cultural resources. Under the NHPA, federal land-management agencies, like the Forest Service, are required to analyze and consider the effects of their actions on cultural resources and to ensure that the public, Indian tribes, and other interested parties are notified and given the opportunity to comment. Federal agencies are responsible for evaluating the significance of cultural resources and determining whether or not those resources are eligible for listing on the National Register of Historic Places (NRHP). The criteria used in the evaluation process are provided in 36 CFR 60.4. Those resources for which significance has not been formally determined are treated as if they are eligible for listing until such time as a formal evaluation can be completed (Executive Order 11593). The NHPA provides a limited degree of legal protection to those properties that are evaluated as eligible for listing on the NRHP. Conversely, cultural resources that are determined to be not eligible for listing are not provided protection.

NRHP eligible sites

A total of 5,501 cultural resource sites have been identified on the Inyo NF. Of that number, 244 sites have been evaluated as eligible for listing on the NRHP. Cultural sites determined eligible for the National Register are termed "historic properties" (36 CFR 800.16(l)(1)). Another 814 cultural sites have been evaluated as ineligible for NRHP listing. Approximately 81% of all cultural resources on the Forest have not been formally evaluated for NRHP eligibility. Figure 2 illustrates the ratio of eligible, ineligible, and unevaluated resources.

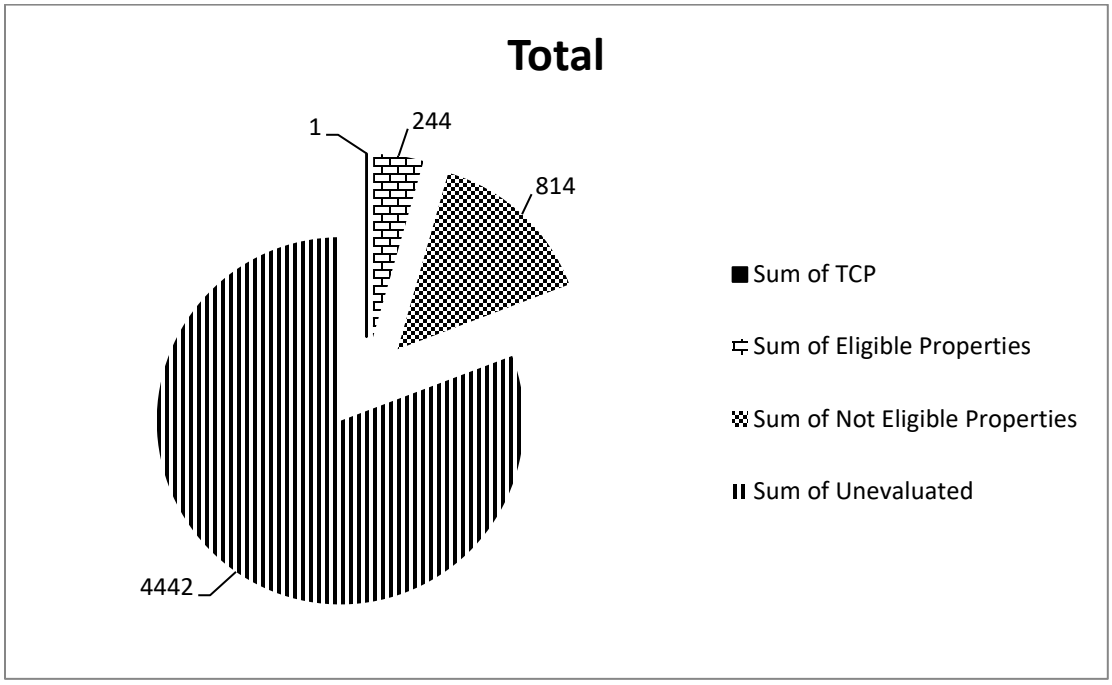


Figure 2. Ratio of eligible, ineligible, and unevaluated cultural resource assets

National Register of Historic Places (NRHP) listed sites

The Forest does not currently have any historic properties listed on the National Register. NRHP nominations for two properties, however, exist in draft form. Table 2 enumerates categories of cultural properties on the Inyo National Forest.

Table 2. Categories of cultural properties on the Inyo National Forest

Category	# Resources
Priority Heritage Assets (PHA)	28[2]
Traditional Cultural Property (TCP) Sites[1]	1[2]
Traditional Cultural Property (TCP) Districts	0
Listed Sites	0
Listed Districts	0
Eligible Sites	244
Eligible Districts	0
Not Eligible Sites	814
Not Eligible Districts	0
Unevaluated	4,442
Monuments	0
Landmarks	0
Landscapes	0

[1] See Chapter 12 for more information about Traditional Cultural Properties.

[2] These categories are all duplicated elsewhere in this table as either "eligible", "not eligible" or "unevaluated". Consequently, the total of this column is more than the total number of cultural resources sites currently documented (n=5501)

Current Condition of Cultural Resources on the Inyo National Forest

An important part of managing cultural resources is identifying their condition. The existing condition (integrity) of the resource affects its NRHP significance. Condition assessments help determine what management actions will be needed to maintain, protect, and preserve a resource. Section 110 of the NHPA requires that the Forest monitor and record the condition of cultural resources in order to ensure their preservation, where appropriate. Adverse effects are to be identified and recorded. Of the resources recorded on the forest, 2,069 resources have been noted as being disturbed while 422 have been noted as "no disturbance documented." No data are available regarding condition assessments of the remaining 3,010 cultural sites. Condition assessments, where data are available, are tallied in Figure 3, but the data reported are subject to a certain degree of subjectivity.

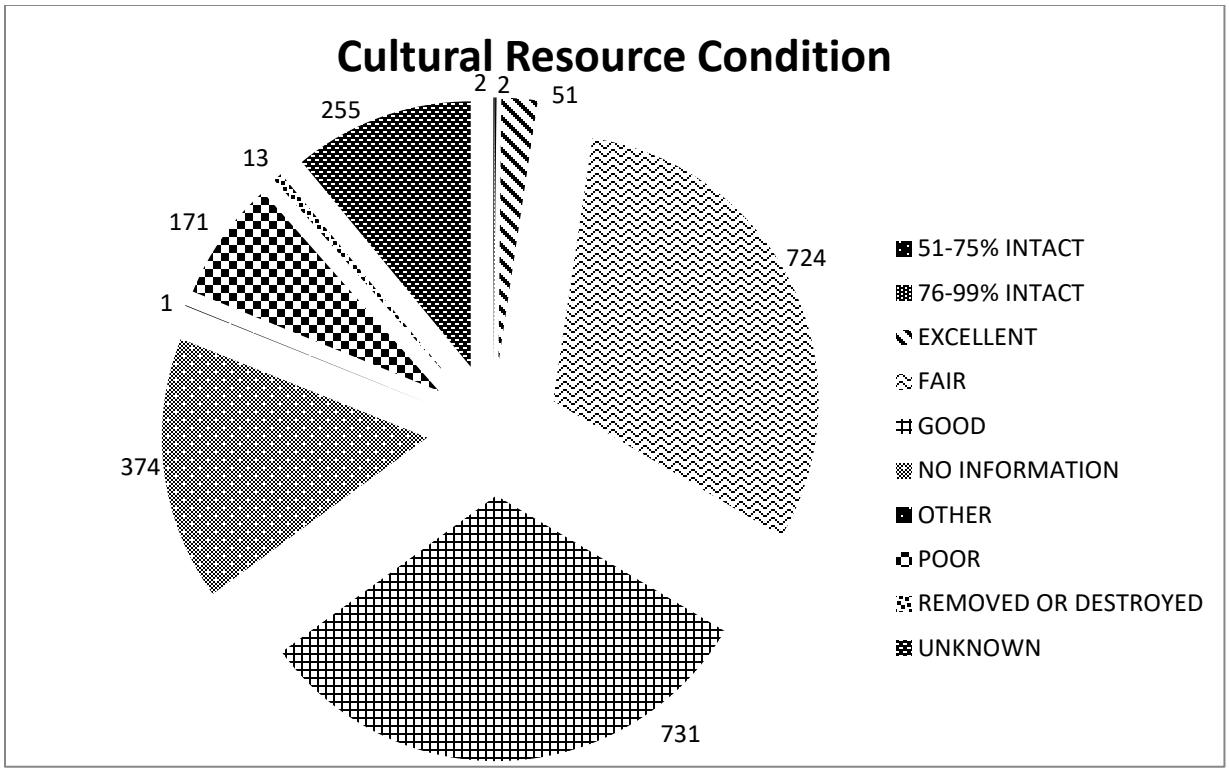


Figure 3. Summary of cultural resource condition

Historic Buildings

Currently, 192 buildings have been identified on the Inyo National Forest that are 45 years of age or older. Of these, 15 are classified as Heritage Assets while the remainder are classified as multi-use assets. Of the Heritage Assets, one has been evaluated as not eligible to the National Register. None of the remaining buildings have been evaluated as to National Register eligibility. Figures 4 and 5 tally the buildings by administrative type and age group.

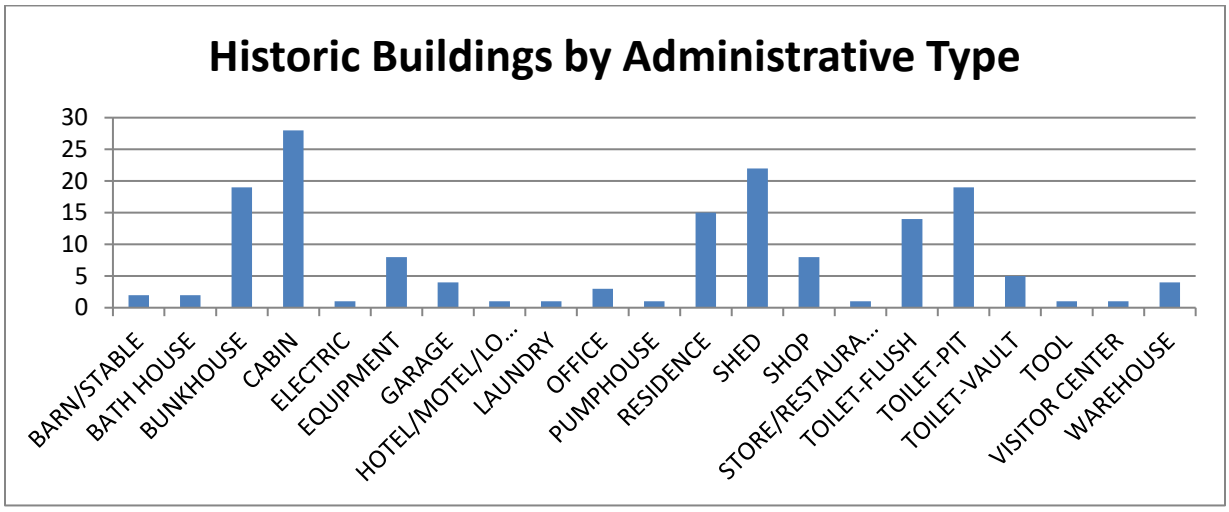


Figure 4. Historic administrative buildings on the Inyo National Forest by building type

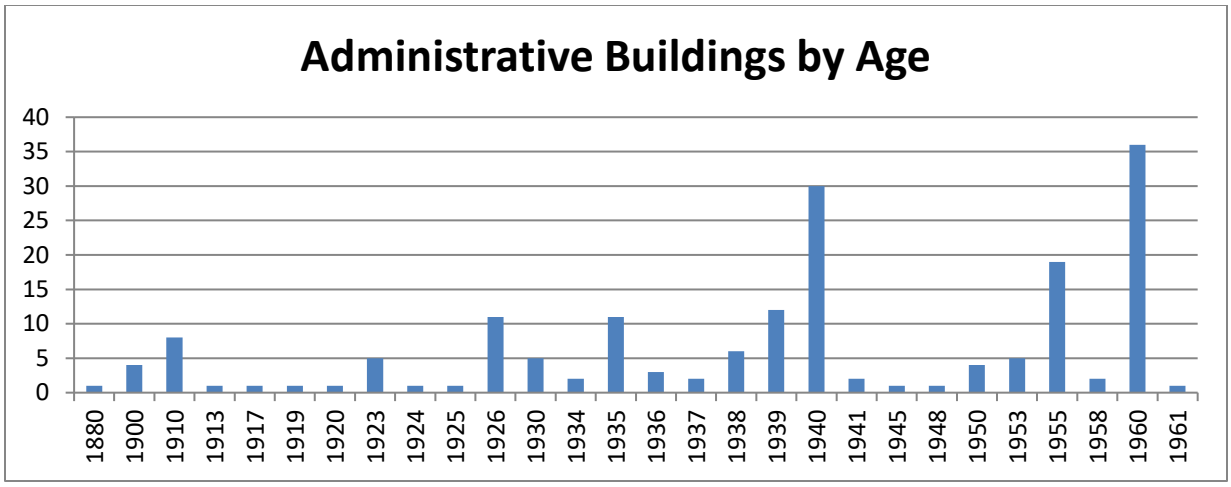


Figure 5. Age of historic administrative buildings on the Inyo National Forest

Trends that Affect the Condition of Cultural Resources or the Demand for Cultural Uses

Climate Change

While climate change has seen little study in terms of impacts to cultural resources, the phenomena appears to have the potential to affect the condition and preservation of cultural resources in at least four ways: 1) climate change has the potential to disturb cultural resources by altering erosional patterns and hydrologic regimes via changes in the timing and intensity of storm systems; 2) climate change may alter vegetation, leading to altered rates of soil development or degradation; 3) climate change may effect taphonomic processes (meaning mechanisms such as burial, decay, and preservation that affect animal and plant remains – including organic cultural materials); and 4) climate change could affect the preservation of cultural resources by elevating or reducing temperatures that are conducive to the preservation of cultural materials.

Reported Disturbance Agents

The Disturbance Agents Chart (Figure 6) displays those mechanisms that have been reported in the Forest's INFRA database. Common disturbance agents include recreation (including off-highway vehicle use, camping, hiking, etc.), livestock grazing, looting/vandalism, forest-permitted projects, and natural erosion. Over the next 10-20 years, many of these same disturbance agents are expected to continue to pose a threat to the condition and integrity of cultural and historic resources.

Data presented in Figure 6 cannot be interpreted without some degree of discussion. It is important to note that these data have been gleaned from site condition assessments compiled over a period of 40 years. With such a large quantity of cultural resources identified, Forest archaeologists can only visit a limited number of resources annually. It is also important to note that, while quantification of the disturbance agents identified can be calculated on a presence/absence basis, qualitative assessments involve more subjectivity and require a more detailed dataset. The Cultural Resources Condition chart illustrated in Figure 3 demonstrates that a small percentage of the sites for which there are data have actually been assessed with conditions considered "Poor" or "Removed/Destroyed". In many cases, the impacts noted have been relatively minor; nevertheless, the impact was worth noting.

The data enumerated below also disregard NRHP site significance (discussed above). For the majority of sites, NRHP evaluations have not been completed. Existing NRHP data suggest that an estimated 30% of the cultural resources identified on the Forest are eligible for the NRHP. Consequently, impacts to resources ultimately determined not eligible for the NRHP may be of lesser concern.

Two agents, in particular, have been identified as potential threats to cultural resources: roads and off-highway vehicle use. Roads are identified as the most common disturbance agent. Much of the damage noted to archaeological sites by road construction, however, was a product of actions conducted prior to enactment of the National Historic Preservation Act in 1966. Prior to 1966, roads were frequently built in locations that bisected existing archaeological and/or historical sites. Since 1966, federal agencies have been instructed to assess the effects of road construction (and other undertakings) on significant cultural properties, but that law is not retroactive to pre-existing conditions. The intent is to minimize future disturbances.

Off-road vehicle use is also identified as a frequent agent responsible for damage. Illegal off-road use continues to be a concern, but in 2009 the Forest established a designated road and trail system across the Forest for public motor vehicle use. That system was developed with extensive input from the Heritage Resources Program in an effort to minimize any additional disturbances to cultural resources due to motorized vehicles. Forest Service law enforcement officials will, to the degree that budgets and resources permit, continue to monitor vehicle use across the Forest in an effort to discourage unauthorized activities that could damage cultural and natural resources.

Benign Neglect is identified as a disturbance agent for a relatively small quantity (n=13) of the cultural resources currently identified on the Forest. This mechanism is more likely associated with historic structures and buildings. The Forest rarely has the resources necessary to develop and implement preservation or conservation programs for these historic properties—some of which are highly visible and popular with Forest visitors. While budgets are expected to be reduced even further in the near future, the Forest will need to take advantage of opportunities to partner with private organizations to ensure the long-term preservation of these important historic resources.

Recreational Use

One of the interesting phenomena of the recreational use of public lands is that many of those natural characteristics which have attracted past human use of the land (e.g. shade, water, foodstuff, shelter, fuel, viewshed, etc.) are those which attract modern recreationalists. Consequently, recreational activities often occur in or adjacent to cultural resources. Some effects of recreational use are benign (e.g. hiking on a historic trail) while others significantly damage or destroy those attributes of a resource that contribute to its historical significance (e.g. ground-disturbing campfire ring construction). Additionally, the detritus of recreation—the refuse and human waste deposited by recreationalists—has the potential to introduce modern materials into the archaeological record of a cultural resource, thus impacting its ability to convey information of past human activities.

Looting/Vandalism

Archaeological and historical sites are sometimes targets of looting and vandalism. Removing archaeological deposits from their historic or stratigraphic (specific soil layers) contexts destroys the potential for scientific analyses and interpretation. Vandalism is a more complicated phenomenon that has at least two expressions: 1) casual vandalism associated with recreation (e.g. tagging boulders or carving initials in an aspen) and 2) deliberate vandalism or looting of a resource. The first of these is a product of convenience and spontaneity and, while it can be damaging or destructive of cultural

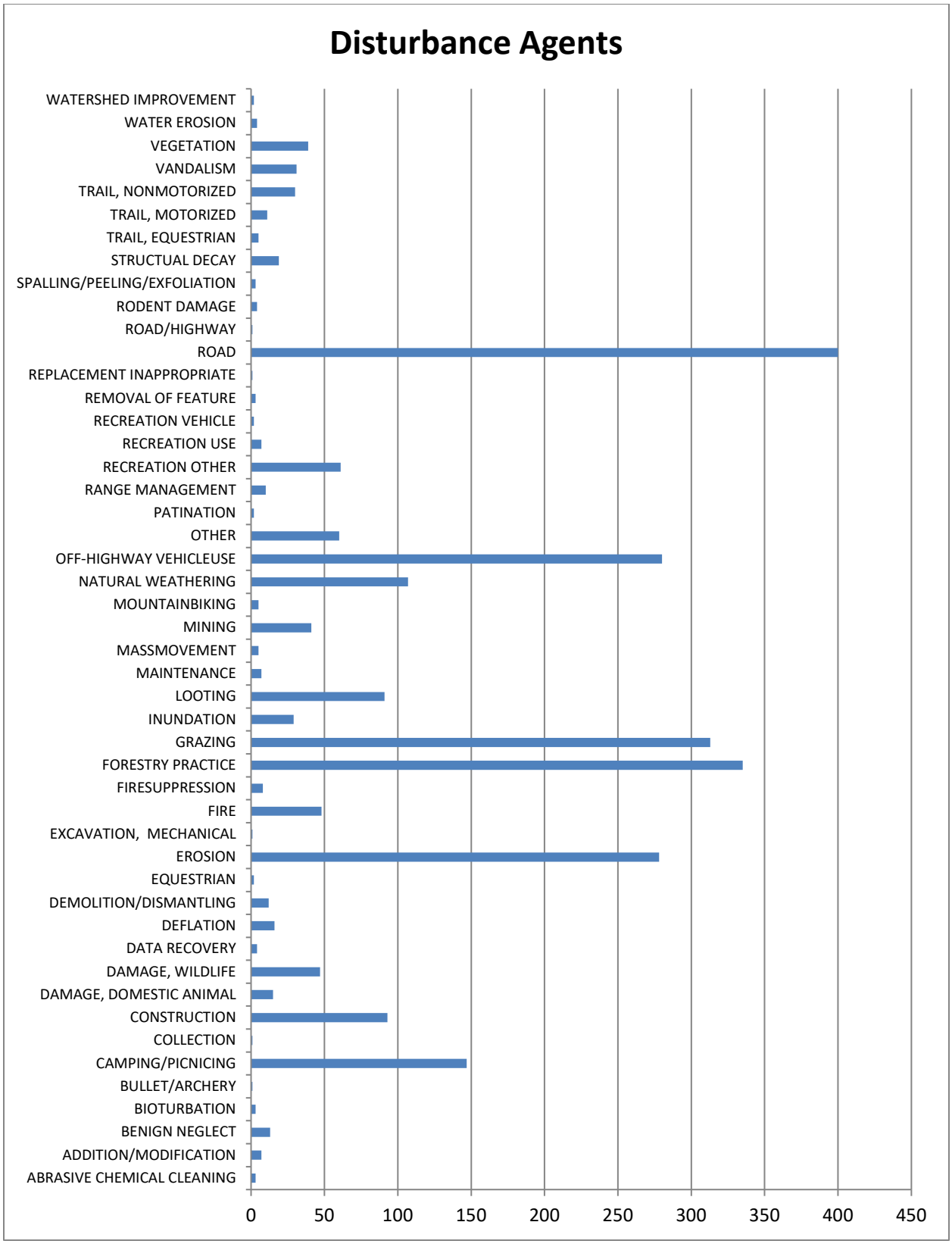


Figure 6. Reported cultural resource disturbance agents, INFRA database

resources, the *goal* of the activity is rarely destructive. The second deliberately targets the resource with malicious intent—for example, the desecration of a sacred site to demoralize an individual or group.

It is difficult to accurately quantify trends in the frequency of looting and vandalism of archaeological and historical sites because limited resources constrain the number of sites that can be monitored each year. Anticipated decreases in annual budgets and staffing shortfalls are expected to further restrict the Forest's ability to conduct regular condition assessments. Looting and vandalism is expected to continue at steady or increased rates, but the Forest's ability to properly identify these cases and assess the effects on cultural resources is expected to be further hampered.

Unauthorized Marijuana Cultivation

Like recreation, marijuana cultivation is associated with many of the features sought by past humans—shade, shelter, and water. Consequently, marijuana grow sites often are located in or adjacent to cultural resources. The cultivation of marijuana is ground-disturbing and can damage or destroy the archaeological deposits and features of a cultural resource. Additionally, eradication efforts are themselves ground-disturbing and can potentially impact cultural resources.

Native American Traditional Use

Native American traditional use of cultural resources poses an interesting conundrum for cultural resource management. Cultural resources are often perceived as static representations of the human past—in other words a snapshot in time of materials or places that are no longer utilized. However, it should be recognized that the archaeological record is dynamic—the product of continual use over a period of years, decades or centuries. Consequently, it can be difficult to assess the impact of continued traditional use of a resource. A simple rubric for assessing effects looks at the ability of the resource to convey its narrative of the past—if modern traditional use does not alter that narrative then the impact is likely benign. If, however, that use introduces non-traditional elements, or is ground-disturbing then it likely poses an impact to the resource.

Recreation/Heritage Tourism

As with Native American traditional use, heritage tourism is a complex issue. On the one hand, exposing the public to the value of cultural resources can encourage their preservation. Conversely, many cultural resources consist of sensitive archaeological deposits and features that may be irreparably damaged by recreational visits, regardless of the good intentions of the visitors. Additionally, heritage tourism exposes cultural resources to an increased risk of looting or vandalism. Regulating heritage tourism can be difficult—the agency cannot exclude heritage tourism from particular areas without running the risk of disclosing the locations of cultural resources (which is prohibited by Section 304 of the National Historic Preservation Act and Section 9 of the Archaeological Resource Protection Act).

Contribution of Cultural Uses or Resources to Social, Economic, and Ecological Sustainability

The management of cultural resources identified on the Inyo National Forest may have the following scientific, cultural, and socio-economic implications and/or contributions:

- Archaeological deposits serve as archives of scientific data documenting past climatic conditions;
- Archaeological deposits serve as the only source of scientific data documenting past human adaptations to climate change;

- Archaeological deposits, historical records, and traditional ecological knowledge provide baseline information for ecological restoration/sustainability projects;
- Cultural resources provide socio-economic enhancement to rural communities by offering opportunities for employment and income from heritage tourism and recreation;
- Cultural resources can provide socio-economic benefits to Tribal communities and local governments by providing opportunities for heritage tourism and recreation;
- Cultural resources provide religio-political enhancement to tribal communities by providing opportunities for traditional ceremonies and religious practices that strengthen the community's sense of place and self;
- Cultural resources are a primary component of the INF's mandated trust responsibility to Indian Tribes.

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