Wildfire Adapted Missoula

Heritage Report

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for:
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Introduction

This report discusses the results of the Lolo National Forest Heritage Program's evaluation of potential impacts to cultural resources older than fifty (50) years that may be caused by the proposed actions of the Wildfire Adapted Missoula (WAM) Project. All materials referenced herein are maintained by the Heritage Program, Lolo National Forest (NF) in Missoula, Montana.

Cultural resources can span both precontact and historic temporal periods, and may include buildings, structures, sites, areas, and objects of scientific, historic, or social value. They are irreplaceable, nonrenewable resources documenting the legacy of past human use of the area currently administered by the National Forest System (NFS).

The purpose of the Heritage Specialist Report is to identify proposed activities that have the potential to affect cultural resources on the landscape; whether they are previously identified or not. Mechanical thinning/harvest can impact cultural resources on or below the ground surface. Widespread understory burning, depending on intensity, can impact wooden structures or components of archaeological features (e.g., cabins, headgates, flumes, fences, corrals, etc.). The goal of the WAM cultural resource inventory will be to identify previously recorded cultural resources, likely not visited since their initial recording in the 1980s-1990s and to locate any new cultural resources not previously known and to ensure their protection, if necessary, during project implementation.

Relevant Laws, Regulations, and Policy

Regulatory Framework

The primary legislation governing cultural resource management is the National Historic Preservation Act (NHPA) of 1966 (amended in 1976, 1980, and 1992). Federal Regulations 36 CFR 800 (Protection of Historic Properties), 36 CFR 296 (Protection of Archaeological Resources), and Forest Service Manual 2360 (FSM 2360, Heritage Program Management) provides the framework for consultation, identification, evaluation, and protection of cultural resources on NFS lands.

In Montana, the Forest Service conducts cultural resources reviews of proposed actions in accordance with the "Programmatic Agreement Regarding Cultural Resources Management in the State of Montana by the USDA Forest Service" (U.S. Department of Agriculture 2015). Stemming from this Programmatic Agreement is the "Site Identification Strategy Prepared for the Bitterroot, Flathead, and Lolo National Forests" (U. S. Department of Agriculture 2003), a predictive modeling method used to help identify cultural resources on the Lolo NF.

Furthermore, the 1986 Lolo NF Forest Plan identifies specific standards that are required for cultural resources in different Management Areas (MA) across the Forest. The Forest Plan Standards for Heritage resources, although not robust, provide framework for identifying and protecting historic trails within a project area. The Heritage Program refers to the Forest Plan for all projects to ensure that decisions are consistent with established standards for management of significant cultural resources.

Desired Condition

Desired conditions for heritage resources within the project area include visits by the Lolo NF Heritage Program to all previously recorded cultural resources to assess condition. All recorded sites within the project area will have been evaluated for the NRHP. Private land boundaries and stream buffers further provide protection from implementation activities.

Regardless of current land ownership, the Confederated Salish and Kootenai Tribes of the Flathead Nation (CSKT) have cultural ties to the area. Four previously recorded cultural resources are precontact in origin, consisting of small chips of flaked basalt and jasper. We have been asked at the request of the CSKT that we do not perform shovel testing on the unevaluated precontact sites within the project area. Therefore, it is necessary to establish an arbitrary boundary around any precontact sites within proposed project units to ensure they are 'flagged and avoided' during project implementation.

Topics and Issues Addressed in This Analysis

Issues

The most common issue typical for Heritage Resources during scoping is whether the Lolo NF Heritage Program follows NHPA legislation on NFS lands. This is documented in the Project File.

Resource Indicators and Measures

Table 1. Resource indicators and measures for assessing effects

Resource Element	Resource Indicator	Measure (Quantify if possible)	Used to address: P/N, or key issue?	Source (LRMP S/G; law or policy, BMPs, etc.)?
Cultural Resources	Previous survey in project area	28 surveys 19,000 acres	No	Lolo NF Heritage Program files
	Previously recorded sites in project area	55	No	Lolo NF Heritage Program Files
	Area needing survey	High (0-10% slope) and medium (11-30% slope) probability areas within units	No	NHPA, Lolo NF SIS, R1/SHPO PA
	Site leads/new sites identified during survey	Five site leads; Three new sites recorded to date	No	NHPA, Lolo NF SIS

Methodology

Section 106 Review methods include literature searches, Tribal and Montana State Historic Preservation Office (MTSHPO) consultation, and field reconnaissance.

Literature review for the WAM project includes: research of site records, previous survey reports, manuscripts, and publications located at the Lolo NF Heritage Program, the Missoula Public Library and the University of Montana Mansfield Library; online examination of historic Government Land Office (GLO) records; and, a review of the National Register of Historic Places (NRHP) for Missoula County.

The Site Identification Strategy (SIS) for the Forest (U. S. Department of Agriculture 2003) in conjunction with a Geographical Information System (GIS) database slope and hydrology analysis will assist in predicting site probability within the project area. GLO records, available online by the Bureau of Land Management (BLM), assist in identifying historic records of trails, homesteads, and mining claims.

Discussions regarding the WAM Project were initiated in March of 2019 with a visit to the CSKT Tribal Historic Preservation Officer (THPO). In November 2019, the Lolo NF East Zone Archaeologist discussed the project with the Nez Perce THPO. The Nez Perce Tribe has expressed interest in two portions of the Lolo NF, and the WAM project area along Highway 12 outside of Lolo, MT to Lolo Pass is within the Nez Perce area of interest. We will continue to consult with the CSKT and Nez Perce Tribal Preservation Department for purposes of both Section 106 and NEPA.

SHPO discussions occurred in March 2020, with a file search request from their office conducted in 2019. On February 28, 2020, the Lolo NF initiated consultation with SHPO, informing them of the Lolo NF's decision to phase consultation as per 36 CFR 800.4(b)(2). Formal evaluations of eligibility to the NRHP for previously unevaluated historic cultural resources within the WAM Project boundary would occur prior to project implementation, emphasizing the Focal Treatment Areas (FTA) in order of implementation. Field survey, if necessary, would occur ahead of implementation in FTAs. Section 106 reporting would result in a finding of No Adverse Effect to Historic Properties as per 36 CFR 800.4(d)(1).

Pedestrian survey of the project area was initiated in 2020, focusing on areas of high probability for cultural resources (slopes <20% and within ¼ mile of permanent water sources) according to the Lolo NF SIS. Medium (>20% slope) probability areas would receive variable survey based on location (U. S. Department of Agriculture 2003).

Spatial and Temporal Context for Effects Analysis

Effects Analysis Boundaries

The spatial boundaries for analyzing the direct, indirect, and cumulative effects to Heritage resources coincide with the current project boundary, also known as the Area of Potential Effect (APE) for cultural resources. Given that project actions would be retained within the boundary, little to no potential exists for cultural resources outside to be affected during implementation.

The temporal boundaries for analyzing the direct and indirect effects typically occur during project implementation due to the potential of inadvertent damage caused to cultural resources by mechanical equipment. Vegetation removal can expose previously unknown cultural resources, which can be beneficial or detrimental. Benefits of exposure allow us to understand more about historical uses of the area by recording new cultural resources. On the other hand, exposure of previously unknown cultural resources can attract the interest of the public, increasing the potential of looting and vandalism (indirect effect).

Affected Environment

Precontact Context

Roughly 10,000 years of hunter-gatherer land use has resulted in occupational sites, lithic scatters, rock cairns, burials, game drives/traps, and culturally modified trees throughout the Lolo NF. Occupational sites are usually limited to the major river drainages such as the Bitterroot and Clark Fork Rivers. In addition, hunter-gatherers frequented higher elevation mountainous areas during the summer months, such as those along the Idaho/Montana State line or the Cabinet/Coeur d'Alene divide. On the Lolo NF, permanent, year-round habilitation sites (like pit houses or tipi rings) have yet to be found.

Precontact travel routes were developed, and usually were restricted to major creek drainages as well as saddle and ridge systems. These higher elevation areas provided hunter-gatherers with a wide range of

resources, from roots, seeds and berries, to deer, elk and mountain sheep ((Frison 1991); (Munger 1993); (McLeod and Melton 1986)).

In western Montana, the final draining of glacial Lake Missoula around 12,000 years ago marks the likely earliest human occupation in the area, as it is assumed not possible prior to glaciation (Nelson, Ciani and MacDonald 2013). Very little evidence of this Paleoindian Period (12,000-8,000 before present (BP)) exists in Montana west of the Continental Divide. By the end of the Paleoindian Period, the 'megafauna' (e.g., wooly mammoth, mastodon, saber tooth tiger) became extinct.

The Archaic Period is separated into three categories based on climate type and projectile point typology. The Early Archaic (8,000-5,000 BP) is characterized by the 'Altithermal', a continental drying trend. The atl atl replaced the spear as the weapon of choice (McLeod and Melton 1986), as indicated by side or corner notched projectile points from this time period. The Middle Archaic (5,000-3,000 BP) was wetter and cooler than its predecessor, favoring conditions for increasing animal populations, including bison on the Plains (Nelson et al. 2013). The Late Archaic (3,000-1,000 BP) sees an uptick of communal hunting and banding as seen by the archaeological presence of traps, bison jumps, stone tipi rings and circles, more common in eastern Montana. Trade items such as lithics from far off places, pottery and decorative items are also present at archaeological sites. Ridgeline trail systems afforded native people to travel long distances for trade and hunting purposes. Large, corner notched projectile points, known as 'Pelican Lake', are indicative of this time period.

The Late Prehistoric period follows the Archaic periods, and spans about 1,500-300 years BP. The beginning of this period is defined by adaptation of the newest hunting technology, the bow and arrow (Nelson et al. 2013). It appears that mobility increased, motivated by seasonal game and foraging availability.

Historic Context

Rattlesnake Area

Lewis and Clark mention crossing Rattlesnake Creek on their 1806 return journey east. In 1858, John Mullan surveyed the area while constructing a military road from Fort Benton, MT to Walla Walla, WA. (Montana Power Company 1975; Rattlesnake Valley PTA 1983).

William 'Bill' Hamilton ran an Indian trading post near the mouth of Rattlesnake Creek from 1858-1864 (Hamilton 1900; Griswold and Larom 1954; Rattlesnake Valley PTA 1983). In the early 1870s, a small, slummy community by the name of 'Shacktown' sprung up along the west bank of the creek (Rattlesnake Valley PTA 1983).

In 1863, Missoula's founding fathers Christopher Power Higgins and Frances Lyman Worden with David Pattee formed the Missoula Mills Company. A sawmill and a grist (flour) mill were constructed adjacent to the creek, using its water to transport logs downstream and power the plants (Montana Power Company 1975); Musslman 1975;;(Martin 1988, Rattlesnake Valley PTA 1983).

The Rattlesnake Watershed was the sole source for drinking water for the city of Missoula for many decades.

As the Northern Pacific Railroad made its way into Missoula in 1883, it brought a 'crescendo of demand' (Musslman 1975) for railroad ties. Land in the Rattlesnake and Marshall drainages were parceled off for the railroad company to ensure plentiful pine trees for railroad ties (Montana Power Company 1975). Upwards of 20,000 logs were floated down Rattlesnake Creek.

Settlers began to move into the Rattlesnake as a result of the 1862 Homestead Act as early as the 1880s. What began with a wood cutting economy blossomed into small farms, ranches, dairies, and agriculture. People made a living cutting wood, trapping, hog farming, raising dairy cows, planting orchards, selling ice, and even producing goat cheese feta. A school was built near the confluence of Spring and Rattlesnake Creeks, operating from 1907-1930. Exploratory mining of limited extent and profitability was conducted. A lime kiln also provided lime for construction purposes in Missoula (Comer 2005). The population of the upper drainage peaked at 142 people in 1910.

The Forest Service also had a stake in the Rattlesnake drainage after 1906. By 1911, a phone line ran from the valley to the Franklin Guard Station, and up and over the ridge to Gold Creek (Comer 2005). Montana Power purchased the water system in 1929 with a vested interest in Rattlesnake Creek. By 1936 most residents had sold their land to the power company, with one year to move their possessions off the land. Any remaining buildings left were destroyed. By 1937, Montana Power Company had purchased all the private land in the upper drainage west of the creek in order to protect the watershed (U.S. Department of Agriculture 2012b).

Rock Creek Area

Until the early 1860s the area remained relatively unsettled by non-Indians. Euro-Americans eventually made their way west as the lust for gold drew prospectors into unmined drainages including Rock Creek. In the early 1870s surrounding valleys drew an ever-increasing number of miners and associated towns sprung up around the lodes they created. Philipsburg, located in the drainage east of Rock Creek, became the commercial center of activity in the area. The Northern Pacific Railroad's arrival at the mouth of Rock Creek in 1883 connected the drainage with the outside world, making homesteading more viable here (Olson 1990).

The town of Quigley, located about 9 miles south of the mouth of Rock Creek, is a shining example of a typical 'boom and bust' mining town. Established in 1896, about 400 people flocked to this area under false pretenses. Within a year most of the people were gone. Some stayed and established residences in the area (Olson 1990).

Recreation became a huge component of the valley, as it provided prime habitat for cutthroat and bull trout, deer, elk, moose and predators. Later came the Forest Service presence and associated administrative sites with the establishment of the Missoula National Forest in 1906. As one can imagine, the Homestead Act of 1912 brought more families to the area in search of their own patch of farmland. The current Rock Creek Road was constructed in the mid -1920s, providing access through the 50-mile long corridor. Today, the Rock Creek drainage is predominantly public land with private parcels in the northern and southern ends as well as a small parcel of private residences in its center, about 15 miles south of the Clark Fork River (USDI 2004).

Highway 12 Area

The Lolo Trail National Historic Landmark (NHL) and two National Historic Trails (NHT), the Lewis and Clark and Nez Perce, exist within in the Highway 12 corridor.

The Lolo/Nez Perce/Lewis and Clark Trail, on the west side of Highway 12, is a route that has been used extensively by Native American groups, mainly the Nez Perce and Flathead to travel between the salmon-rich rivers of Idaho and the buffalo-rich plains of Montana. It was also used in Historic times; most notably by Lewis and Clark in 1805 on their way to the Pacific and on their return journey the following year (McLeod 1984). The trail was also used by miners when the gold rush hit near Deer Lodge, MT in 1862. Although a more direct route than other options, it was considered a secondary route due to the

rugged terrain (McLeod 1984). Homesteading arrived near Lolo in the late 1860s, MT and a good wagon trail led 6 miles up the valley.

Rising hostilities between whites and non-treaty Nez Perce continued through the 1870s (McLeod 1984). The Nez Perce used the Trail to flee the whites, avoiding General Howard's 'Fort Fizzle' (just west of Lolo, MT) and headed south through the Bitterroot Valley only to meet up with the army at the Big Hole Battlefield.

Blue Mountain Area

In 1805 and 1806, Lewis and Clark traveled in the area during their journey from Missouri to the Pacific Coast and back. In June 1806, on their return home, the Corps of Discovery split into two parties at Traveler's Rest (~7 miles to the south in the town of Lolo). Lewis followed the 'Nez Perce Road to the Buffalo', through the Hellgate Corridor and along the Blackfoot River towards Great Falls. Clark continued south through the Bitterroot Valley (Ambrose 1997, DeVoto 1953). A portion of the National Historic Trail (NHT) skirts the northeast end of the project area, along the Bitterroot River.

Logging and homesteading are represented after the turn of the century. Around 1910, logger Ed Hayes operated in camps in both the Hayes and O'Brien Creeks (Lolo History Committee 1976). Hayes constructed a "chute" along the Hayes Creek Canyon to facilitate the movement of logs from up the canyon to the nearest railroad tracks, and it has been presumed that Hayes also operated a sawmill within the immediate area (USDA, 2010).

The Homestead Act of 1892 brought residents along Hayes and Deadman Creek. By 1910, warranty deeds were issued to HD Maclay and family. In 1939, the land issued under authority to the Forest Service (24MO1783 site form).

The Blue Mountain area was part of the old Fort Missoula Military Reservation and was reserved for use by various army Constituents. In 1942, the Missoula Chamber of Commerce purchased the land from a private owner and gave it to the Army for use as a training area. The Army used the site for small arms and artillery training as well as land navigation training. Four separate fire ranges existed within the training area, including small arms, hand grenades, rifle grenades and 3.5" rockets (Weston Solutions 2013). On November 5, 1952 President Harry S. Truman signed Executive Order 10403 that transferred 4,869 acres of the Military Reservation at Blue Mountain to the Lolo NF, with the Army still continuing to use the area for training until 1992 under a Memorandum of Agreement (Weston Solutions 2013).

Military training activities and cattle grazing caused additional impacts. Maclay Flats, above an abandoned stream channel of the Bitterroot River, became the site of a ponderosa pine plantation in the late 1960s. Cross county vehicle travel had caused extensive soil damage and indiscriminate shooting caused critical public safety hazards. Abandoned car bodies littered the recreation area (81 car bodies were removed in 1964). Garbage dumps and litter from shooting, picnicking, and parties were common. The recreation area was a mess. In 1975, a number of civic groups joined the Forest Service in a major cleanup effort (U.S. Department of Agriculture 2012a).

In 1986, the Forest Service completed the Blue Mountain Recreation Plan to address the problems with motorized use, shooting and cattle grazing mixed with hiking, biking, and sledding in the area. Military target/training shooting was discontinued. It put in place an action plan to restore eroded roads and trails and included travel management to stop indiscriminate off-road vehicle travel. In 1992, cattle grazing ceased, and the MOU with the Army was terminated. An aggressive weed control program began, and the 18-hole folf course was established. Over 41 miles of trails exist within the Recreation Area, including the Maclay Flat Interpretive Trail, developed in 1988. Most activities are limited to day use; however, camping is permitted in the upper (west) end.

Starting in 2008, the Department of the Army identified this site for investigation of removal of munitions in areas with potentially unexploded ordinance that could potentially harm the public. For the next eight years, a complete remediation occurred, including metal detection to locate and remove lead ammunition. A target backstop berm and riser and detection and removal of lead shell casings (Department of the Army 2017). This portion of the Blue Mountain Recreation Area has been rehabilitated.

Within the WAM Project Boundary/APE, the Lolo NF Heritage Program has conducted 45 cultural resource surveys between 1976-2020, covering 10,751 acres of ground. As a result of these surveys, 56 sites have been recorded. Forty-one (41) have been evaluated to the NRHP, resulting in 21 that are NRHP-listed or eligible. Twenty (20) sites are NRHP-ineligible. The remaining 15 are unevaluated for the NRHP.

Table 2. Resource indicators and measures for the existing condition

Resource Element	Resource Indicator (Quantify if possible)	Measure (Quantify if possible)	Existing Condition
Heritage Resources	Pedestrian field survey of areas not previously inventoried	Slopes in high and medium probability for cultural resources (0-35% slope)	Unknown now (see Implementation Guide)
	Listed sites	Need site visit	2
	NRHP Eligible Sites	Need site visit	19
	Unevaluated Sites	Need to be NRHP evaluated	15
	NRHP Ineligible Sites	Do not need site visit	20

Environmental Consequences

No Action

There are no effects from 'No Action". Cultural sites are non-renewable resources. Continued natural weathering and deterioration cannot be avoided. All heritage resources are subject to these natural processes; regardless of this project's implementation, these sites will continue to naturally decay.

Heritage resources are also subject vegetation encroachment. Dense ingrowth tends to accumulate in and around historic wooden structures, mining tailings piles and ditches. Furthermore, tree mortality and deadfall and catastrophic wind or fire events can instantly damage these sites.

Alternative B - Modified Proposed Action

Because Resource Protection Measures are included, there would be no effects on heritage resources from the project. Vegetation thinning would open the landscape, helping to restore the hillsides surrounding the Missoula Valley to its historic appearance. Thinning near cultural resources can also increase the site's visibility to the public, leading to possible looting and vandalism.

Summary

Section 106 review for the Blue Mountain FTA included literature review, SHPO and CSKT consultation, relocation of existing cultural resources to conduct condition assessments and determine the effect of the proposed project's activities on historic properties. Field survey was conducted to the terms the Lolo NF SIS (2003) and was modified as needed where conditions warranted.

Field reconnaissance of the Blue Mountain FTA occurred during the summer of 2020. Within the 5,074-acre project boundary 1,361 acres were surveyed for the project.

Project monitoring is planned with timber, silviculture, and fuels specialists during and/or following implementation to ensure protection of historic properties 24MO0103- Hayes Creek Logging Camp and 24MO1783- Historic Orchard. Implementation procedures for the Blue Mountain FTA include strict instructions to cease work in the event of an inadvertent discovery.

Montana SHPO concurred on this project on February 24, 2021.

Compliance with LRMP and Other Relevant Laws, Regulations, Policies and Plans

Using a combination of literature review and research, field survey, 'windshield' reconnaissance, predictive modeling using the Lolo NF Site Identification Strategy, the Lolo NF Heritage Program has completed the analysis, ensuring the WAM Project would have No Effect to Historic Properties as per 36 CFR 800.4.(d)(1).

Acronyms

APE- Area of Potential Effects

BP- Before Present

BLM- Bureau of Land Management

CSKT- Confederated Salish and Kootenai Tribes of the Flathead Nation

FSM- Forest Service Manual

GIS- Geographic Interface Systems

MTSHPO- Montana State Historic Preservation Office

NF- National Forest

NFS-National Forest System

NHL-National Historic Landmark

NHPA- National Historic Preservation Act

NHT- National Historic Trail

NRHP- National Register of Historic Places

PA- Programmatic Agreement

SIS-Site Identification Strategy

THPO- Tribal Historic Preservation Officer

WAM- Wildfire Adapted Missoula

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